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FOREWORD

This issue of the Scientific Papers of the Silesian University of Technology the "Organization and Management" series is devoted to issues relating to the mutual influence of the humanities and social sciences on technology and technological development. It concerns the relationship between ethics, technology and society. Volume 183 contains scientific articles covering current topics related to the development of modern society, science and technology. Most of them are articles of an interdisciplinary nature, but also articles strictly related to management and quality sciences.

The published works are the result of scientific research conducted by teams of scientists from Poland and other European countries. Doctoral students and representatives of the business community also presented their research here. The clash of theory with practice gives an interesting cognitive perspective, so I encourage you to read the articles and carefully analyze the thematic scope. The articles concern both the human condition in the modern world and social and technological development. They refer to the latest development trends. They present the authors' original views, present empirical research, and propose model solutions to emerging problems.

I encourage you to familiarise yourself with the contents of the presented issue of Scientific Papers and establish scientific cooperation in research areas of interest to you.

Aleksandra Kuzior

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HUMAN RIGHTS – FACTS AND MYTHS

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Purpose of the study: Indication of the essence – value, universality and necessity of being which are human rights. Drawing attention to the changing reality - what human rights were supposed to be and what they are in reality. Drawing attention to the fact that the great achievements devoted to human rights become fiction, illusion and illusion, and myths and optimistic ideas as well as wishful thinking are not able to remove paradoxes.
Project/methodology/approach: The research method is the analysis of historical sources and legal, scientific studies of interdisciplinary scope, supplemented by the observations and experience of the author. The research procedure included the analysis of information sources, a review of Polish and foreign literature, an analysis of scientific studies in the field of: general history, law, philosophy, sociology, religion, theology, psychology of others, the method of analysis and synthesis and logical deductive reasoning in the time space yesterday – today – tomorrow – always.
Conclusions: Human rights are the basic norms to which each of us is entitled to the very fact of being human. Man as a value - a rational being has always been aware that his existence depends on others. Creating new generations of human rights, adopting new conventions, adopting resolutions and debating seem to be empty talk about the fact that nothing has happened, that it cannot or should not be done. In a situation where man's life is worth less than economic and political interests, and the world enters the realm of mysticism, usurpation and delusion, man has no guarantee of respecting his rights. All regulations, regardless of which authorities they come from, what area they concern and how many people they apply, are only a determinant of how it should be, not how it should be, because it is worth it.
Originality/Value: There are no more important issues than human rights. All over the globe there are people who are affected by human rights. The presented research, suggestions, conclusions and analyses provide practical and theoretical clues – what human rights are and what they should be, how these rights are not respected and why. Emphasising that human rights issues boil down to debating, consulting and creating a vast, intricate and incomprehensible law, which in principle cannot be enforced. Why does humanity need a seemingly universal law that does not work, can do little and only promises a lot. It seems less important to the average person to give rights a universal and inalienable character. What is more important is its certainty and effectiveness, especially when a person expects it from the law.

Keywords: Law – man – facts and myths.

Article category: scientific work.

Introduction

If we believe that man, as a rational being, realizes that his existence depends on others, why does he act against others and against himself? What human rights and human rights can be said when there are daily attacks on one another, armed conflicts drag on for years and defenceless people die, there is a shortage of water and medicines, slavery reaches the highest rates in the history of the world because the slave has never been so cheap, hunger, poverty and violence are the order of the day, prostitution and drug trafficking are untouchable, School shootings are commonplace, and priests call for humility and prayer for a better tomorrow. Without awareness of coexistence and the resulting dependencies, without respect for freedom taking into account the natural state, little will change. An animal in a free state kills for survival, man kills without inhibition – all for power, commerce and pleasure.

If we believe that people are equal, free, free in the choices they make, then who needs total surveillance, collecting and collecting information about everyone and everyone? So what if according to the Universal Declaration of Human Rights, human rights are basic norms enjoyed by each of us, resulting from the very fact of being human, e.g. the right to life, freedom of speech, association or the right to education; the source of all rights and freedoms is the dignity of every human being, and human rights are **universal** – they are the same for every human being, regardless of values, views or religion; **natural** – they exist independently of the will of the authorities or the law, the state only creates a system of their protection; **inalienable** – no authority can take them away from us, they cannot be renounced; **inviolable** – exist independently of the authority and cannot be arbitrarily regulated by it; **natural** – we have them because of humanity, not because of someone's decision or bestow; **indivisible** – they all constitute an integral and interdependent whole, although to a small extent these rights are respected in their pure form.

If we believe that *ius est ars boni et aequi* (from Latin law is the art of what is good and right), one of the main sentences of Roman law, which finds its reference in many European legal orders, is respected and fulfilled by humanity, then why so many contradictory human behaviors and uncertainty that it is not known whether the law is an illusion or reality. People say and believe that the law is supposed to safeguard justice, to be a guarantee in situations in which the law does not work at all, acts selectively and opportunistically or against themselves. Is the law for man or man for the law?

Why does man need such laws, which are seemingly haughty, universal and omnipresent, and which do not work and only seemingly protect and defend man?

Theory of being in outline

Being is the basic philosophical concept of ontology and metaphysics, understood by philosophers over the centuries in many different ways, as absolute, purely intentional, ideal, intentional, necessary, thoughtful, real, although individual philosophies confirm or deny the existence of particular categories of beings (Stępień, 2001).

Parmenides, the creator of the first definition of the concept of being, says that being is and non-being is not. To the question "what exists?" Parmenides replied: "everything" (Stróżewski, 2004, p. 23).

Plato says that some things exist in this way and others in another. In addition, he pointed out that not necessarily those things to which we ascribe existence on the basis of sense experience are necessarily those that truly exist. He introduced the problem of defining what really exists (Reale, 2008).

Aristotle defined the field for metaphysics and ontology as a science dealing with being as being and non-being, he introduced the term substance – that which exists in the first sense of the word "exist", and in opposition to it the term accidents. Being is a general concept, because everything that is being. Being is an indefinite concept, because its content is an abstraction of particular features. Being is an indefinable concept, because there is no genus to which this concept belongs (Krokiewicz, 1974).

In St. Thomas Aquinas the idea arose that the possibility of its existence can be considered a necessary and sufficient condition for being a being. If we recognize the identity between the expression "being" and the expression "that which exists in any way," then we can distinguish between two aspects of being: emotional and existential being. Everyone agrees that nothing in this world is absolute goodness, love or beauty, but nevertheless we have an idea of these values as perfect, realized in the highest degree, and we have them because there is a being who possesses them in the highest degree, e.g. the good of man (Barron, 1996).

Porphyry claimed that the starting point was a concrete object. By means of the negation of its name we obtain a species, and as a result of the negation of a species, a genus, etc., up to the most general concept of being (1959).

If we assume that human rights are a universal value and fall within the ontology of social being, then in the first place we should answer the question of what social being is. According to John Rawls, the ontology of social being is a theoretical individual that takes into account the values sought by Aristotle, St. Augustine, St. Thomas, Th. Hobbes, G.W.F. Hegel and many others (Bocheński, 1986). Every person has an equally indisputable claim to a fully adequate system of equal fundamental freedoms and values. A solution whose area of action covers the whole world can be described as humanity. "Public Good" is a game that has numerous counterparts in everyday life (Grzelak, 2006).

In a global society, we have much more opportunities, but we also have greater needs and greater difficulties in reaching an agreement. If we assume that a system of equal values and principles is equivalent to the principles of justice, equality and solidarity in relation to structures more general than a single state, then it would be necessary to examine to what extent these values and principles influence the factor synthesizing nations to be humanity and their rationalism (Wenar, "John Rawls", 2021).

For many centuries, the historical dispute about the theory of being has been about what is real, visible, tangible, and what is invisible and elusive. This dispute, essentially unresolvable, is known in the controversy between materialism and idealism (Tyburski et al., 2002). E.L. Mascall points to the intelligibility of the mysteries of faith and the existential concept of being, according to which being is that which has the act of existence (Kingston, 1966). According to Mascall, material things are accessible to man in a primal, more clear, direct and certain way than one's own "I". The affirmation of the existence of a necessary being is the only way to rationally explain the existence of beings. To deny the existence of a necessary being would force us to accept an intrinsically contradictory view, namely that contingent beings exist despite the non-existence of being which is the necessary, or even the only possible reason for their existence (1968). The contingency of the world, or that "the world might not exist", presupposes as a condition of its reasonableness the Christian doctrine of creationism. As L. Velecky has argued, the philosopher either believes in God and then tries to prove his existence, or he does not believe and tries to prove his non-existence (Zuberbier, 1988)[1]. The key issue seems to be to ask the question: is the world rational in itself or only for the human mind? Does man have such a method that provides a rational explanation of this question? As Nielsen argued, "the explanation of why the world exists by reference to the absolute is ineffective or unfounded" (Kowalczyk, 1975, p. 38). No being, as Mascall emphasized, explains the existence of the world more than the world explains itself. The understanding of God's creative relationship to the world is to serve not so much to discover the raison d'être of the world as to a theistic interpretation of it (Farrer, 1964, 1972).

Today there is no need to wonder why the world exists. Knowing the motive or purpose of God in making the decision to create the world seems impossible to achieve, because only God knows the answer and it is he who can give it to man, for example, in the form of some revelation (Gilson, 1958, 1965, 2003). According to Mascall and St. Thomas, it is not so much a question of unraveling the ultimate mysteries, but rather of pointing out where they are.

Man does not appreciate the fact that he occupies a special position in the world. The essence of his being is not who he is, but who he can be, and therefore uniqueness consists in constantly becoming and developing the inner world. "When we ask about man, the problem is not his indisputable animality, but the riddle of what he actually does because of and despite

[1] Natural reason, devoid of supernatural grace, is a fiction that does not really exist. Hence, one cannot speak of philosophical cognition as being based solely on the "natural faculties" of cognition.

his animality, what he does with it and what he does in spite of it" (Heschel, 2018, p. 4). Man perceives multiplicity and diversity in the world, and human egoism results m.in from the fact that man perceives in the world a great difference between himself and the other. There is only one essence of the world, and that is the all-encompassing irrational will to be and the drive. Man can afford to say *no* to his interests and selfish desires, but does he realize it?

Abraham Joshua Heschel argues that the tragedy of modern man stems from the fact that he is a being who has forgotten the question: who is man? Whether contemporary disputes, mainly political ones, will allow us to define and validate our moral conviction, establish a universal system of human values and duties – will be decided by the future.

One can argue about the origin of the world, but why? What is the result of this and what would it change? It was long ago established that the cradle of civilization is Greek philosophy, Roman law, and the Christian religion, and that every completed philosophical system should have a general theory of existence—the science of being, the general science of knowledge, and the general science of values. Without the philosophy of the Greeks, Roman law and the Christian religion, it would be difficult for me to understand the foundations of our civilization and culture, it would be difficult to build a future on values. What can the law really do? It seems that maybe not much, because it is not the law that can, but man through the law, provided that he wants. Man "is worth only as much as the matters he deals with are worth" (Stabryła, 2005, p. CI).

There are people who deal with the affairs of others because they live from it, there are those who, under the auspices of great socially noble projects publicized in the media, do their business for public money, there are also those who do nothing, although they criticize everything and everyone. There are also those who do heroic work in the service of others, whom we do not know by name and surname. The moral of this is that apart from the idea of man to man, man to man, everyone has his own private interest in it, the difference is that for the majority it is a material interest, and for a few an intellectual and spiritual interest. The world of existence of the future is a world of comparable consciousness among people, the perception of reality without eternal unjustified reservations and mysteries.

Myth theory at a glance

According to the *PWN Dictionary of the Polish Language*, "myth" is a story about gods, demons, legendary heroes and supernatural events, which is an attempt to explain the eternal issues of being, the world, life and death, good and evil, and the destiny of man. A story embellished with invented details about a character or an event. A false opinion of someone or something recognized without proof. The myth responds to the basic human drive, which is the

desire for meaning, which for many people remains and is the most reliable source of knowledge (Napiórkowski, 2018).

Before the emergence of philosophy, there was common knowledge, religious beliefs, moral convictions, art, and legends among people. The key questions of man were answered mainly by religion, which was associated with myths, poetry and mysticism. The earliest Greek, Roman and Chinese poets collected and passed on to the next generations old stories about gods and deities ruling the world and people, and about how the world came into being and why it is the way it is (Krokiewicz, 1959).

The ancient myth, despite the interest of various scientific disciplines in it, has not lived to see an unambiguous and consistent definition and probably will not wait, because the myth will always remain only a myth.

In antiquity, two methods of interpreting myth were initiated – allegorical and historical. French Enlightenment rationalists discredited him, believing him to be incredible creations of unenlightened minds. Herder put it on a par with philosophy and poetry, and Creuzer drew attention to the possibility of a symbolic interpretation of myth (Dammann, 1957). The last view prevailed in the study of myth until the mid-nineteenth century. The discovery of Sanskrit and ancient Near Eastern civilizations made natural, astral and astronomical interpretation of myth possible. At that time, numerous schools dealing with this phenomenon from the sociological, psychological, phenomenological and structuralist sides were also established. Each of these theories tried to show in its perspective the various functions of myth, especially ontological, soteriological and semantic, although none of them exhausts the essence of the phenomenon to the end.

The concept of myth has become common in use. Currently, myth can be found not only in literature, mainly sacred, but also in genetics, all kinds of structures, ideologies, doctrines, politics and economics, thanks to which it gains a universal dimension, and also regains the lost "existential reality".

Mircea Eliade claimed that the myth "is the story of 'creation', the account of how something came into being, began to be". The myth speaks only of what actually happened, of what manifested itself in a clear way (1998, p. 11). As Eliade points out, the medieval millennial movement, the colonization of America, and utopian movements have a restorative structure. The scholar finds a nostalgic longing for paradise *in myths containing coincidentia oppositorum*, divine myths, human androgyny, in the conceptually advanced mystical doctrine of East and West, in the unconscious layers of the psyche described by Carl Gustav Jung (1998)[2].

[2] Cf. Rega, A. (2001). *Man in the World of Symbols. Mircea Eliade's Philosophical Anthropology.* Kraków, pp. 113-114.

Artur Rega in his work Man in the *world of symbols. Mircea Eliade's philosophical anthropology gives* seven functions of myth: it is the absolute basis of social life and culture; it provides models for all meaningful human activities; it gives meaning to the world and human life; it has an educational function; it expresses metaphysical and theological convictions; it allows one to read and understand the sacred message; it provides man with the means by which he can free himself from the terror of his own transience" (2001, p. 105).

Unlike legends and fantastic stories, myths are treated by their followers as true stories, an intrusion of the sacred into sensory reality and role models that secular stories do not possess (Eliade, 1997).

In every society there are many myths, they are a common phenomenon and an element of culture. Myths affect society, causing concrete actions. A myth exists when it influences specific social actions, and over time, other myths are created around the myth (Szacka, 2009). As Ernest Cassirer rightly pointed out, myths arise mostly in crisis situations.

According to Vilfredo Pareto's concept, if the people to whom the myth is addressed believe in it, it will become an important element of their daily activities. They will consider it completely true, justified and rational. Roland Barthes drew attention to the sphere in which myth works – communication that makes myth arise, disseminate, change. The myth of messianism, as Tadeusz Biernat noted, contains and strongly exposes three ideological threads: the idea of sacrifice, faith in providence and optimistic treatment of dialectics (1989).

In the context of reasoning, myth is considered to be something untrue, something that replaces real knowledge is associated with fiction. In the context of valuation, myth refers to emotions and is based on them, it is an attempt to refer to reality. It was risky to assume that a myth could be positive in some sense. If it presents some "false" reality, one cannot talk about the positive effects of a false presentation of reality (Domański, 1999, p. 164).

Law – illusion or reality

Ius est ars boni et aequi (from Latin law is the art of what is good and right) – this is the essence of Roman law, which finds its reference in many European legal orders and not only. According to the Bible, man is protected by God's law and should be protected by human law. The ideal of law and justice, guided by the ethics of the Old Testament, was the defense of the weaker by legislation. *Be concerned for justice, help the oppressed, give justice to the orphan, stand up for the widow!* (Is 1:17; cf. Dt 24:17) (Ahern, 1984). *Do the law and justice, free the oppressed from the hands of the oppressor, and do not oppress the stranger, the orphan and the widow* (Jer 22:3; cf. Jer 21:12) (Grabska, 1978).

Ancient Greece and Rome were convinced of the divine origin of laws, which guaranteed the "naturalness" of law.

For Empedocles, the law was an expression of truth and goodness, which are self-evident, which do not need to be learned, and therefore the law is something universal.

Plato believed that law and the state are related to the concept of man. The philosopher made the essence of justice dependent on compatibility with nature. The changing earthly reality participates only in the immutable contents of ideas. The contents of the changing world have no value in themselves, they are only a reflection of the true values contained in ideas (1958).

Aristotle deduced the concept of law from the existential structure of man – law is revealed in man through his inclinations and actions. The human soul strives for what is good. The evaluation of what is good is given by reason. In turn, the quality of man, which distinguishes him from other living creatures, is the ability to distinguish good from evil, justice.

Marcus Tullius Cicero affirmed that the true law is the right reason, according to nature, everywhere spread, constant, eternal, which imposes duties, forbids deception, which does not in vain command or forbid the honest, and does not move the dishonest, commanding or prohibiting. This right cannot be abolished, partially repealed or completely removed from its force.

Thanks to Roman jurists, a definition of natural law was introduced: "The law of nature is that of which nature teaches all living things."

Ius in the tradition of Roman law is a set of legal norms (public and private law) and the rights of someone. As a result of the organization of societies, the understanding of law as "lex" (from Latin *legere,* ligare*, eligere*) developed and became widespread, i.e. as a norm of conduct. The establishment of legal norms became a necessary factor organizing a given community.

In order to understand the very essence of law, it is first necessary to look at the concepts of *ius* and *lex* and their mutual relations. The fundamental question is whether the legal norms functioning in societies are valid only because they were enacted by the legislature, or whether these norms are justified by human nature, which is able to constitute real states of existence between people. Law as a conduct in accordance with justice (*ius sive iustum est aliquod opus*), as opposed to *lex*, which means a juridical rule binding man in his conduct, imposed on man (by himself, by society and by God). The terms *licitum* and *potestas* mean what is permitted, what is acceptable, i.e. subjective right.

Thomas Aquinas wrote: "Nomen ius primo impositum est ad significandam ipsam rem iustam, postmodum autem derivatum est ad artem, qua cognoscitur quid sit iustum", which translates: "The name ius means the right-just thing itself, which has been transferred to the art of knowing what is right-just" (Andrzejuk, 2019). Every person who uses the cognitive trait he possesses knows that what exists is real. It is the act of existence that determines the reality of each content, which, as existing, is always in itself ultimately determined and ordered to its proper action.

Thomas Hobbes in *Leviathan,* creating the concept *of philosophia civilis*, believed that man is an egoist whose goal is only his own good, which causes "the war of all against everything" (Latin: *bellum omnium contra omnes*). Man, however, has reason and this indicates that peace must be sought in order to preserve life (1954).

The eminent legal theorist G.W. Leibniz believed that the law of nature does not appear in the form of ready-made rules, but is formed and perfected by an ever better awareness of what is contained in nature, and therefore the basic legal order is based on: justice – *neminem laedere* (from Latin do not harm anyone); equality*, suum cuique tribuere* (Latin for give to each, what is due to him); *pietas* – respect for what is divine and human; honest life – *honeste vivere* (Asmus, 1968).

Jean-Jacques Rousseau took utility and justice as the basis of law, and freedom and equality as the main ethical postulates. True freedom is never self-destructive. Freedom consists not so much in manifesting one's own will as in not being subject to the will of others. A correct reading of the natural rights of man can help man to live with dignity and to develop in his humanity (1988).

Montesquieu, the author of De *l'esprit des lois* (*On the Spirit of Laws,* vols. I-II, Warsaw 1927), published in 1749, was the first to examine law in a historical context and on this basis stated its variability and relativity as effects of physical and mental influences (Tatarkiewicz, 2007).

Kant's law is related to the realm of practical reason, where man is not dependent on empiricism and therefore has knowledge of things in themselves. In the practical field we are not in the field of necessity, but in the field of freedom and the resulting duty, that is, the sense of duty, which is reduced to the so-called moral sense. Act out of a sense of duty, so that you may always desire that the maxim of your will become a universally binding principle.

Friedrich Puchta believed that rights are rooted in the spirit of the nation, and people are carriers of these rights. Léon Duguit sought the sources of law in the rule of social solidarity, claiming that one should do everything that is consistent with social solidarity and not do what is contrary to it. Hans Kelsen argued that reality cannot be the basis of law; The only basis can be an immanent field. He adopted the hypothesis of the existence of a basic norm, which is: "one should obey the authority". Leon Petrażycki searched for the dependence of causal legal phenomena in the psyche of people realizing that someone is obliged to something and that someone is entitled to something from someone. He considered the method of self-observation, or introspection, to be the appropriate and only possible way of observing legal phenomena. Without reference to reality, the law becomes something a priori, unreal, and therefore non-existent independently of the will of the legislator, and the will of the legislator can be not only changeable, but sometimes irrational and even criminal.

Conclusion

Reality is created not only by existing subjects, it is also created by properties existing in something. The relations between subjects are also a reality. In the real world, we see four existences: existence by itself, existence in one's own subject, substantial beings, and existence between subjects. This creates reality.

Human life is made up of innumerable duties, of action, omission and abstention from an action that harms or is likely to harm another human being.

The existing legal order, closer or further to democracy, should not harm anyone, it should help, support and protect. This seems so obvious that there can be no excuse for not taking action or not stopping it.

No written law, of the highest rank, can replace the natural legal imperative, which is based on the fact that man is obliged in certain cases to act correctly or to cease acting for the sake of the good of another person, which in the legal and philosophical tradition is called the order of natural law – Latin *ius naturale* (Znamierowski, 1934).

In the life of every human being there are important, less important and unimportant actions, but in proportion to these actions there is a scale of values – the scale of good, and perhaps the scale of evil, since the construction of the world is opposites. Thomas Aquinas defined the added value of a juridical norm *(lex*): "ordinatio rationis ad bonum commune, ab eo qui curam communitatis habet, promulgata" (from Latin, disposition of reason for the common good, promulgated by the one who has custody of the community).

Law becomes law because it regulates interpersonal relations in a community for the good of man. A legal norm is nothing more than a record of the content of the law read in the nature of interpersonal relations. Natural law is more understandable and normatively acceptable to society as a whole. A norm of conduct loses its binding force and becomes a pseudo-law at the moment when it violates the personal good of man, which in the current international situation entitles us to ask: how much is such a law worth, which no one respects and bears no consequences for it? How much are people worth when they realize they are doing wrong? How much are the institutions and organizations worth, whose fear and powerlessness gradually leads to the catastrophe of humanity, perhaps in the future the destruction of civilization.

The answer seems simple – every decision, ruling, judgment and decision is worth as much as their justification is worth.

Human rights

No one today can deny that the genesis of human rights dates back to antiquity, because from that period the idea of individual rights developed. The origin of human rights must be sought above all in the Decalogue, in the ancient philosophy of Greece and Rome. The religious truths of human rights in the Bible were not systematized. Religious truths relating to historical events have been expressed narratively. The laws, views, customs, and institutions described in the Bible correspond to the views of the epoch in which they arose or functioned. The apparitions were perfected, they acquired theologically correct content. "God spoke to the state of culture proper to different epochs" (Latin: *Deus locutus est secundum culturam diversis aetatibus propriam*) (Homer, 1979).

In the Book of Genesis there are two accounts of the creation of man. "Man is the culmination of all the work of creation, all other beings were brought into existence for him and subordinated to him (...)", "... man, as the last in the series of emerging beings, is therefore the crown of creation" (Wajs, 1978, p. 1076). Dominion can be caring, caring, even servile, or imperious, possessive, selfish. Man must serve the earth, enrich it with his work, be its protector and caring steward. For many centuries, the Bible's records concerning the relationship between man and the world were read in the sense of the superiority and domination of man over the world: "man is the master, almost the owner of the world and by divine origin" (Kowalski, 1973). The Bible contains an extremely important theological command to love strangers as well as one's fellow countrymen. The Bible upholds the human rights to stable family ties (Wojciechowski, 2010).

Speaking of human rights in the Bible, one cannot fail to emphasize man's right to freedom: "Today I lay before you life and happiness, death and misfortune" (Tischner, 1983, p. 392).

In Francis Bacon's *Novum Organum* there is a sentence: "The human race has its rights over nature, which are due to it by divine grant, and has complete freedom in its use". In *New Atlantis*, "the goal of human endeavor is defined in words as far as possible of the limits of human dominion over nature". In Book VI of the Cartesian *Discourse on Method, the* goal of human activity uses the phrase: "to become masters and possessors of nature" (Wajs, 1978, p. 1076).

The foundation of the social legislation of the Old Testament is the equality in the order of dignity of all members of society. An appeal is made for justice in social life, which is the privilege of all. The equality of men in the order of inherent dignity presupposes the text: "There is neither Jew nor Gentile, there is neither slave nor free, there is neither male nor female, for we are all one in Christ" (Wojciechowski, 2010)[3].

[3] Cf. Mroczkowski, I. (1991-1992). Biblical foundations of human rights. *Studia Płockie,'No. 19-20*, pp. 49-65.

None of the studies dealing with the origin and development of the world, including the Bible, were and are not moral codes or legal codes, but books of life, books of development and survival of a being defined by humanity. Religious truths are woven into certain historical events, expressed on or through those events, and are given in narrative rather than systematized form. The laws, views, customs, institutions described in them bear the imprint of the views of the epoch in which they arose or in which they functioned or function.

The catastrophic consequences of domination in every period of civilization's development did not have a positive effect on humanity. With each age, the areas of poverty and poverty, slavery and human trafficking, the phenomenon of intolerance, the explicit subordination of one to the other, increased.

The lack of respect for man and contempt for his rights led to a situation that must have shaken man's conscience, which caused the coming of a world in which man will begin to exercise freedom of speech and belief, cease to be afraid, inequality and deprivation will disappear among people, fear of whether he will live to see tomorrow. Human rights will be protected by law, the recognition of the inherent dignity and equal and inalienable rights of people will become the basis of freedom, justice and peace in the world, which is to be guaranteed by biblical laws protecting every human being, especially people exposed to harm, which have a universal and timeless value, because they are guarded by the Law of God.

In the Middle Ages, the concept of human rights was confirmed and expanded in the writings of St. Thomas Aquinas – *Summa Theologica* (1972) and *Magna Charta Libertatum* (Latin: *Magna Charta Libertatum*) of 1215 (Janowski, 2006), published by King John the Landless.

The concept of human rights first appeared in a normative act in 1776, in Virginia, referred to as The Virginia *Declaration of Rights* (Tomczyk, 2016) and was a product of Enlightenment thought. They were understood at the time as the rights of the individual in relation to the state and society. December 2019 marked 70 years since the UN General Assembly adopted the Universal Declaration of Human Rights. This document became the basis of the treaty system of human rights protection and is the starting point for all subsequent acts devoted to the issue of observance and effective provision of human rights protection.

In the history of the world there are countless examples of the fact that man has always been subordinate to someone or something, he was worth as much as they wanted to pay for him. What is the difference between cannibalism among the peoples living in the Amazon basin and today's level of poverty, hunger, mass killing of people, in a situation in which there are no brave people, it is difficult to find decisive actions on the part of those who guard the protection of man, say that they protect and defend, and so far it has been so, it is and probably will be so.

During the so-called Cold War, the world was predictable as a rule. Despite a number of restrictions, people could plan their lives and felt probably more secure. What has happened that the current situation in the world is in no way and under no circumstances comparable to that period? What happened and what influenced that humanity is increasingly becoming

addicted, suffering from depression, many are unable to function without a personal trainer, man becomes more aggressive and demanding.

For many years, the Universal Declaration of Human Rights as a system of human rights protection was a hope for victims of persecution and repression, including people living in communist countries.

Human rights are inalienable, intrinsic, and what follows from this, since we have a progressive crisis of the idea of human rights and the institutional apparatus established to protect them. Examples of "human rights inflation" are given, the creation of new rights, many of which arouse controversy, which often contradict those previously declared. It can be seen that fundamental rights are relativised and national and international mechanisms for their protection often turn out to be illusory.

On the wave of disillusionment with the ideology of legal positivism, the Universal Declaration of Human Rights was supposed to cause a change in the way of thinking, and through its universality it was to ensure legal certainty. For decades, the system of human rights protection initiated by the Declaration has been a hope for those who have fallen victim to unjust persecution and repression, including the nations behind the Iron Curtain. It also became the model for most post-war constitutions, starting with the German one of 1949.

The Universal Declaration of Human Rights was not created in an atmosphere of calm and unity. The document, which defined the identity of the newly established United Nations, caused a number of disputes, raised doubts on the part of those who were cautious about the abstract nature of the Enlightenment concept of human rights, and their conviction by the supporters of change was not so obvious.

In the draft Declaration prepared by bishops from the United States, the argument was raised that rights are integrally related to duties and responsibilities towards the community, and including in the draft document only the dimension of powers would be ideologically motivated and in the long run could lead to a crisis of social life, which was contrary to the ideology of legal positivism, which in its basic formula proposed by John Austin assumed, that the law is the "order of the sovereign," that is, any norm that has been correctly established by the legislator.

This solution was also opposed by Gustav Radbruch, who claimed that positivism makes lawyers, as well as the nation, defenseless against cruel, criminal and evil laws. "There are principles of law that are stronger than any legal provision – a law that contradicts them is devoid of binding force – these principles are referred to as the law of nature or the law of reason" (2015, p. 11). This position served as arguments of the German courts, the Constitutional Court and the Supreme Court; was the starting point of many philosophical-theoretical and legal disputes between H.L.A. Hart, L.L. Fuller, R. Dworkin, R. Alexy and many others.

In its final wording, the Declaration defines human rights as inalienable and derives them from the dignity of the human person, which it says in the preamble is "inherent". It is clearly indicated that the attribute of dignity cannot be deprived of man by any authority, which was repeated 18 years later in the International Covenants on Human Rights.

The meaning of "human dignity" opened man to a higher order of the natural law, making it possible to distinguish between good and evil to an elementary extent. At the level of basic legal implications, there was no doubt that a system with an "anchor" in the concept of dignity is based on more than just a convention that can be changed in any way. The Declaration speaks of the "natural" character of the social community which is the family, and recalls the duties that man has towards the collective.

In the following years, many binding international agreements protecting human rights were adopted, the number of cases increased tenfold. The catalogue of human rights has been extended to include reproductive and sexual rights, group rights, and there are postulates undermining the identity of basic social institutions, including the family. According to the horizontal model, human rights are also to oblige other citizens, indicating what preferences they should follow when making decisions about their own lives.

Attempts to give further claims the character of "human rights" have revealed a number of contradictions within the system, and the relativisation of fundamental rights has deepened. Attempts to reinterpret the term "human dignity" give it a meaning that is blatantly detached from the text of the Declaration and the intentions of its creators. A new understanding of human dignity will not include every human being without exception. Human dignity is identified only with the autonomy of the will of an adult. An example of this phenomenon were the judgments of the German Constitutional Court, which stated that although the principle of legal protection of human life covers the earliest stage of its development, the principle of human dignity excludes the criminality of abortion in the first weeks after conception. A similar position was presented by constitutional courts in Canada and South Africa.

Commentary on Article 6 adopted by the UN Human Rights Committee. The International Covenant on Civil and Political Rights states that "everyone has the right to life." That provision imposes an obligation on States to ensure 'safe, legal and effective access to abortion'. The Committee sees no contraindications for euthanasia, which it describes as "death with dignity". A number of countries, including Poland, are under ideological pressure. International humanitarian aid to poorer countries is often conditional on submission to ideological dictates.

At the level of non-binding documents, one can observe a problem that John Paul II defined as "the use of human rights against man". There is a lack of response or delayed response to human rights violations: persecution of Christians, acts of Christianophobia and racism, criminal assaults and genocide, slavery, human trafficking and drug trafficking.

Human rights, devoid of values in the original sense, have become susceptible to ideological instrumentalization, procrastination. Departing from the pattern outlined by the mother, they are a means to achieve power, make a political and business career, serve to exert pressure.

This would not have been possible if some of the institutions established to defend human rights had not begun to push through the model of creating new norms of international law at their own discretion, against the interests of the Member States.

As a result of a clear increase in the awareness of societies, today it is impossible to hide and cover up irregularities, distortions and mismanagement. The fundamental shortcoming of our time is that institutions and organizations established for the protection and defence of human rights have been transformed into bureaucratic structures that serve themselves above all.

There is not a month in which a scandal does not break out, irregularities, corruption or nepotism have been revealed. Error after error. This error is one of the main reasons why these institutions are increasingly treated as bureaucratic structures that primarily serve themselves.

Europe is becoming economically irrelevant. Of the 20 largest technology companies in the world, only two are European, and American capital is unimaginably ahead of Europe. The European Union and its representatives do not learn from their mistakes. Europe seems to be forgetting the mistakes that have already weakened it once. You don't have to be a prophet to see what awaits institutions and organizations if you don't change your approach to things.

Throughout the history of the global and European institutional legal culture devoted to human rights, one of the most important areas of dispute about the essence of law has been whether its validity depends only on force or also on justice and equality. World order, like political correctness, is based mainly on standards – but what standards are we talking about? Many of the natural rights of the human being do not fit into the standards of today. Some of the rights are not adopted by modern societies, while others that are often incomprehensible are among them. Around the world, disillusionment with human rights institutions is clearly on the rise and little is being done.

For more than 70 years of functioning of the Universal Declaration of Human Rights, despite many changes and many related turbulences, at the level of basic legal implications, there has been no doubt that a system based on the concept of human dignity and the dignity of law is based on something more than just a convention, which can be freely amended, replaced and transformed according to particular needs in the political and economic area. The prototype of human rights was understood as the rights of the individual in relation to the state and society, and not the other way around, as some politicians now think (Piechowiak, 1997).

In the opinion of Fr J. Tischner, "human rights indicate what is due to man by virtue of the principle of justice. That is why these rights are called natural, innate, inalienable, inviolable, always and everywhere valid" (1998, p. 30).

According to C. Mika, the concept of human rights means specifically stratified, natural human possibilities, essentially individual, but socially determined, equal, inalienable, temporally permanent, universal subjectively, objectively and territorially always flowing from the inherent personal dignity of every human being (2000, nb. 1075).

According to A. Łopatka, human rights are rights assigned to every individual, resulting from his inherent dignity (2002, p. 13).

According to R. Kuźniar, human rights are an area of constitutional and international law, whose task is to defend the rights of a human person – an individual in an individualized way. National legislation is of greater importance for the protection of human rights, because it is closer to these rights (2000). In turn, W. Osiatyński defines human rights as universal moral rights of a fundamental nature, belonging to every individual in contacts with the state (Jurczyk, 2009). According to the author, man has been naturally equipped, among other things, with cognitive abilities, two hemispheres of the brain, one responsible for reason and the other for emotions, the whole art is to use as much reason as emotions.

Summary

Regardless of the views of which of the great of this world one would not invoke, the idea is the keynote determining the goal and direction of action in principle of every human creativity. It is a view, pattern or attitude typical of an era, culture or group of people, it is revolution and evolution, it is a state of affairs in past, present and future terms, the key element of which is art and the ability to know.

Many people at all costs follow the good they imagine, which is not good, some do not see the good at all, there are also those for whom the only good and the only value is themselves.

As a rule, human rights cease to be accepted in contemporary societies as determinants of moral, ethical and obligation standardization, and critics of negative trends of recent decades are described as populists and demagogues. Those on whom everything depends do not react decisively when the situation demands it, repeatedly downplaying the warnings and reservations of the increasingly visible disappointment with the growing alienation of international institutions. In many cases, it is forgotten and not enforced that the absolute rights of the individual are the limits of the power of the state and international organizations.

According to the creators' assumptions, the essence of human rights was to obtain the universal good, peace, harmony, the common good. And what is now?

The use of power to satisfy one's own needs has never served, does not serve and will not serve the common good, and unfortunately there are more and more such cases.

In politics, culture, economics and sport, in all areas with which man comes into contact, scandal follows scandal, sensation overtakes sensation, tragedy follows tragedy – this is the sad picture of our reality, to which we have access every day through the mass media.

Powers are shaking, for some no epoch and its achievements count, lack of respect for the achievements of civilization, parliamentarism becomes a tool for settling scores, in a relationship, democracy becomes a fiction, and monarchy a stereotype, because only

strength counts. Soon no one will respect anyone, but only fear him. This seems to be the picture for the universal value of human rights and their sad future, unless a person wakes up in time.

All over the world, man is officially disregarded. Quite often it happens that political will and so-called political correctness precede overriding goals. Many people do not have access to basic health services. In hospitals, doctors and nurses are trying their best, but the system is in terrible shape and no one has tried to fix it for decades. According to the World Health Organization WHO, the world is missing-over-10-million-medics-by-2030-r-the-number-will-increase-to-15-million. In sub-Saharan Africa alone, there is a shortage of 3.7 million doctors and midwives. In Venezuela, medical care is practically non-existent. Due to the lack of medical care, 2.5 million newborns die annually in the world.

In June 2023, due to numerous thefts of humanitarian aid, the FAO (Food and Agriculture Organization of the United Nations) and USAID (United States Agency for International Development), suspended the distribution of food in Tigray, where the war with the federal army of Ethiopia lasted until November.

Great famine in North Korea – people die of malnutrition, eat bark, abandon children and parents. In the years 1995-1999, nearly 2.5 million people died of starvation.

At that time, the highest dignitaries of the Korean Workers' Party lived in great splendor, importing luxury goods from China and Europe.

In Spain, 4 million people live in poverty, 2.4 million of whom are without financial support.

The food crisis has affected even the inhabitants of the richest countries. The British Food Foundation warned in September 2022 that almost one in five families in the UK is experiencing food insecurity, and that hunger levels have more than doubled since January 2023.

UN Secretary-General António Guterres put the Russian army on a "list of shame". Russia is responsible for the deaths of 136 children in Ukraine in 2022.

In the Haitian capital of Port-au-Prince, a group of 13 men suspected of belonging to a gang were beaten and burned alive by a mob that snatched them from the police. As of 2021, Port-au-Prince has been plunged into lawlessness and gang warfare that control 60 percent of the city.

The sheikh tortured the man, despite the evidence, he was acquitted.

In Kherson, the Russians had a torture chamber for children.

Iranian authorities vote for death penalty for protesters.

Cutting off fingers, cutting off ears, stinging in the groin and joints – this is how the Russians treat Ukrainian prisoners of war.

Massacre of prisoners of war from Mariupol.

In Afghanistan, it is forbidden for women to travel unaccompanied by close male relatives for a distance of more than 72 km. Transport companies and private carriers will be punished if they break this ban. Women without a hijab are not allowed.

A war that they had forgotten in the West. "Tigray is one big nothing". Reports from the Ethiopian region of Tigray sound like those from the war in Ukraine. Thousands killed, more than 5 million starving, children dying of diarrhea and completely cut off from the outside world. However, the West does not want to look at this dramatic situation in East Africa.

Kim Jong-un's regime ruthless for Christians. A two-year-old boy from North Korea will spend his whole life in a concentration camp because a Bible was found in his parents' house. This is just one of the many repressions that fall on Christians living under the communist regime.

Afghanistan – Women disappeared from Kabul streets. Even men in jeans are no longer there. On May 7, 2022, the interim head of the Ministry of Virtue and Vice Khalid Hanafi announced that "women in public must cover their bodies and faces" – the rules of Islam are more important than anything else. It was forbidden to educate girls above the sixth grade, admit women to universities or work in non-governmental organizations. They were ordered to wear blue burqas. Women should quit their jobs and "not leave the house unnecessarily". Women are sold as sex slaves.

In Honduras, a woman is killed every 36 hours and no one is held responsible. Violence against women is fuelled by gangs and drug cartels, poverty and corruption. The nature and frequency of killings indicate that we are dealing not only with an epidemic of violence, but even with feminicide.

In Sumatra, a woman fainted after receiving 100 lashes for premarital sex. In the conservative province of Aceh, she was sentenced to flogging by a religious tribunal along with the man who was supposed to be her lover.

In 1994, Hutu militias murdered more than a million Tutsis in a 100-day massacre. When the militants took to the streets to methodically murder their neighbors from 9 a.m. to 5 p.m., their wives, sisters and mothers did not remain passive. They stole the property of the murdered. They cooked meals for their husbands and encouraged them to further persecution.

Systemic killing of indigenous peoples of North America.

The transplant business is booming, in Brazil you can buy an eye for 500 dollars, in Turkey there are many clinics dealing with weekend transplantation, in China even organs are taken from prisoners.

Inhumane living conditions of children in the Cameroonian orphanage of the Polish monk Dariusz Godawa. There are no doctor's appointments. Children are locked up as punishment for the night in the toilet, they get one meal a day and eat leftovers from the monk's table.

The Swiss city of Basel offers a one-way ticket to the homeless. He sends them anywhere in Europe in exchange for a pledge that they will not return to Switzerland for a certain period of time.

On March 15, 2022, by virtue of the decision of the Committee of Ministers of the Council of Europe in connection with a gross violation of Article 3 of the Statute of the Council of Europe, the Russian Federation ceased to be a member of the Council of Europe. As a result,

it will no longer be possible to bring complaints against the Russian Federation to the European Court of Human Rights on the basis of the European Convention on Human Rights ("Human Rights", 2022). This will have negative consequences for the monitoring and enforcement of the relevant human rights standard on the territory of the Russian Federation and the possibility of seeking their respect. As a consequence, the Russian Federation will no longer be obliged in practice to comply with the European Convention on Human Rights, including Article 1 of Protocol No. 13 to the European Convention on Human Rights, which prohibits the use of the death penalty (Ukraine Torture, 2021, Humanitarian Impact, 2022, Russia Criminalizes, 2002, Russian Federation, 2022).

Iranian authorities aggressively dispersed demonstrations in dozens of cities across the country. Iranian police opened fire on people at a metro station in Tehran. Police officers beat women in subway cars with truncheons. The Iranian parliament has voted to impose the death penalty on all those who were detained during anti-government protests and taken into custody. According to estimates, this may affect up to 15,000 people.

The Chinese communist authorities use US-developed electronic control tools to mass surveillance of citizens so that they feel constantly under surveillance. It should be added that almost all such technologies were invented in Silicon Valley by Google, Facebook and Amazon and improved by them, and it can be considered that they were more effectively used by them in collecting data and using it to analyze and predict human behavior.

The International Court of Justice in The Hague said Russia's attack on Ukraine was illegal. A request to this effect was submitted by the Ukrainian government on 26th February. The ICJ ordered Russia to immediately refrain from hostilities. What if he does not comply with this decision? The answer seems simple – nothing.

All this entitles the author to claim that human rights in the world are not good. Despite the expansion of the universe, the seizure of nature by man, the exorbitant effects of technological thought, the widespread use of artificial intelligence, the creation of new institutions, offices and bodies, the mass creation of law, the application of which does not result much, man through greed, narcissism, conceit and arrogance based on the desire for imaginary precedence, omnipotence and domination, is either a slave to himself or a thoughtless subservient subject.

The proceeding, adoption and admission to international circulation of the next generations of human rights, as well as the next phase of technological development without tolerance, respect and recognition of human rights as spiritual and moral sanctity, and not the subordination of man by man, will not change anything for the better.

The difficulty in understanding is not the geographical sides, language, culture, customs or conditions in which we live, the difficulty is the impossibility of reaching agreement and its enforcement in its pure form, the essence of which Winston Churchill has already mentioned: "Where there is wisdom, there is no greatness, and where there is greatness, there is no wisdom".

From the formal and legal point of view, human rights are an example of institutional bureaucratization developed to the maximum with a great message, broad powers in design, mainly on paper, which many do not respect and are not responsible for, there are also those for whom these rights mean little at all.

From the institutional point of view, man has a right to something, man is guaranteed by the law for something, man is obliged by law to something, and what follows from it? It results all or nothing, because it is not the law that decides how it is, but the man who is its creator and at the same time its executor.

In order for people to behave rationally, ethically, and civilly, norms of behavior cannot be anchored only in law and religion. They must be supported by a multicultural and moral society. They must become an informal consensus that finds its origin in the public consciousness. People accept and honor what they understand, what they want, and what they respect, not what is imposed on them.

In conditions of degradation of institutions, authorities and values, every community loses moral points of reference and the ability for sophisticated reflection. It begins to accept cynicism, mercantilism and selfishness as the norm, it becomes amorphous and indifferent. The paradoxical dimension combines feelings of narcissism and humiliation, indifference to others, and at the same time the desire to obtain respect and justice from them.

The recent wars in Ukraine and Syria have exposed the weakness of almost everything, including mainly international institutions and organizations acting for and on behalf of man.

If it were not for organizations such as Caritas, the courage and spontaneity of many people coming to the aid of the war in Ukraine would have a completely different face.

In many situations, especially in the Ukrainian conflictInternational mediators proved powerless. Humanitarian law is slowly dying. The mechanisms of the Geneva Conventions do not provide for sanctions for obstructing the activities of the International Committee of the Red Cross (ICRC) (Prisoners of War Convention, 1929). The Red Cross is not allowed to enter places of detention, which is definitely provided for in the provisions of the Convention. The UN-operated system of security levers seems even less effective in conditions of clear sabotage of humanitarian law. During this time, awards and distinctions are awarded, monetary gratuities for service to humanity.

The author's reflection consists of three parts.

The first part – a man is the average of those whom he meets in life, and what kind of people he meets, this is his average.

The second part is a reminder of the message of St. Alexius: "Live honestly, do not harm others, give everyone what is rightfully due to him" (Sosnowski, 2023, p. 214).

The third part in decision-making bodies on such important issues does not have unanimity. The members of the Security Council ignore international law and the decisions of monitoring bodies. The possibility of coercion, for example against Russia, as a key player in the UN

system is unrealistic[4]. What does that mean? It means that without a radical reform of the international system of peace and security in terms of firmness and speed of action, it seems impossible to oppose such tragedies in the future, which makes the best law a fiction – boredom iuris, and this is probably not what humanity of the twenty-first century is after.

The principle of contradiction is the foundation of the world. Valid worldwide in many areas. Without contradictions, there is no division into truth and falsehood, myth, mysticism and fantasy. In many ways, the world will always be diverse, which should not directly concern human rights, which are a universal entity. The improvement of the human rights situation seems to be not the number of established institutions, bodies and organizations dealing with human rights, but the social awareness of Human Rights, their inevitability and consistency in their enforcement without exception, which is not good in many regions of the world. Wherever politics enters the court, justice comes out of the court. It is similar with human rights, where in many cases it is not ruthlessness and courage that decide, but agreements and the so-called correctness (...) at the cost of human life.

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KNOWLEDGE OF THE NATURAL ENVIRONMENT AND ITS PRESERVATION, AND THE ORIGINS OF SUCH KNOWLEDGE AMONG POLISH ADOLESCENTS

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Purpose: The aim of this article is to present the results of a study concerning the knowledge and understanding exhibited by Polish secondary and technical education students regarding the natural environment, the causes and effects of pollution, strategies of its preservation and protection, and the sources from which young people gather information about these issues.
Design/methodology/approach: The study was conducted in 2022-2023 on a group of 710 students from secondary schools and technological education schools in various Polish cities. The study was conducted using a questionnaire formulated by the author, encompassing questions designed to assess the knowledge, as well as the sources of knowledge, of the participants.
Findings: Participants exhibited the highest levels of knowledge concerning strategies for protection of the natural environment. They also showed good levels of knowledge about recently publicized issues, such as e.g., the effects of global warming. The issues which the participants turned out to be least informed on were very recent issues, or which are rarely discussed. Social media turned out to be the most important source of knowledge about environmental protection for Polish youth. School was only ranked in third place as a source of knowledge about environmental protection, scoring lower than after Internet sources such as social media and information portals.
Practical implications: Information regarding the level of knowledge and the sources from which young people gain knowledge are great importance for decision-makers in the fields of both formal and informal environmental education of young people. On the one hand, the low place occupied by schools as a source of knowledge for young people may be an indication that more emphasis should be placed on formal education on environmental issues. On the other hand, however, the great influence of online sources should not be underestimated. It would be worthwhile to take a closer look at the content of online knowledge and to enrich the offered non-formal education available on social media.
Originality/value: The presented study is one of the few studies on the knowledge about the state of the natural environment and the processes taking place within it. This knowledge is an important element of environmental awareness, in addition to practical knowledge and beliefs.

Keywords: adolescent, environmental awareness, environmental protection, environmental pollution, social media.

Category of the paper: Research paper.

1. Introduction

Knowledge about the natural environment is an important element of ecological awareness, i.e. the awareness of the existence of a specific area of phenomena associated with ecology, i.e. the science dealing with the relationship between humans and the natural environment. Environmental awareness consists of knowledge, views, and ideas about the environment (Hull, 1984). The shaping of environmental awareness is connected to the awareness of the disturbance of these relations caused by human activity and the need to undertake efforts for the preservation of the environment. Environmental awareness emerges when the issue of the relationship between man and the environment as a condition for the future development of civilization gains importance within our shared social consciousness. This means thinking about the natural environment as an element of the human world that should be protected (Picht, 1981; Meadows et al., 1973; Jonas, 1996). The social influence of ecological awareness grew rapidly in the 1960s and 1970s. In the decades following that, however, a certain degree of stagnation took hold, due to criticism from groups which consider ecological diagnoses to be too radical and catastrophic.

The situation changed in 2018 when new IPCC special reports showed the reality of the threat of a climate catastrophe in the coming decades of our century (Special Report, 2018). The increasingly real prospect of a global climate catastrophe in the coming decades makes the field within which environmental awareness can be shaped, a key issue for the future, thus determining its continued presence in social awareness. There are many publications devoted to this issue, for example, A. Kuzior has been dealing with this problem for many years (2010; 2013, 2014, 2016).

In Poland, in recent years, an increase in the interest in environmental issues related to environmental protection can be observed. A smog alert was announced in Poland in 2017. The IPCC special report on global warming and climate change published in 2018, drew the attention of Polish public opinion on these issues, which are most intensively addressed in the media. The awareness of environmental threats was accompanied by discussions about the need to take specific actions. There was a definite departure from plastic, as well as a change in the thinking and practice of waste segregation (Act of 14 December 2012 on waste). There were also subsequent pro-environmental advertising and campaigns, both social and commercial, with the participation of various celebrities.

Our knowledge and beliefs about the natural environment should influence our behavior towards it. Transmitting knowledge in this area and shaping positive attitudes, i.e. environmental education for younger children and ecological education for older students, is the duty of the Polish schools derived from the Core Curriculum in force, since the Regulation of the Ministry of National Education of May 21, 2001 on the core curriculum for pre-school education, general education in particular types of schools, and education in certain profiles in

profiled high schools, through successive regulations published on this matter in the following years.

There is a long tradition of research on the level of ecological knowledge of different generations. Many studies have focused on university students because they constitute the most dynamic group. The knowledge, opinions and interests of students determine the future of a given community to the greatest extent. Students also played an important role in the development of the environmental movement (Reich, 1976). They were the center of youth contestation in the US and Western Europe in the 1960s. Thanks to them, the issues of ecological threats were publicized. For decades, animators of ecological organizations have been recruited from among the students of Western universities. For this reason, research on the attitudes of students has played and still plays, an important role in identifying the moods and directions of thinking of future elites and opinion-forming circles.

Studies of the attitudes among university students conducted in 2016 showed a relatively similar level of knowledge among students from different faculties and from universities (Ciążela, 2018, Ciążela, 2021c). Reflection on the results concerned the reasons for such a state of affairs. Perhaps young people acquire specific knowledge about the natural environment and its protection already in high school? Maybe the main sources of knowledge of young people are different than formal education? High school youth, therefore, are another group whose environmental knowledge is worth examining.

In contrast to studies of the environmental consciousness of college students, which was treated as an element of this group's subjectivity and agency, research on the ecological consciousness of school children treated it more as an object of potential pedagogical interactions than as their own awareness and the decision-making of this group deriving from it. However, a qualitative change in the functioning of this social group is related to the development of environmental consciousness.

Adolescents at high school level stand on the threshold of adulthood and are equipped with the capacity to become progressively astute consumers who prioritize eco-conscious choices in their day-to-day activities. Moreover, these individuals are vocal advocates for significant matters, notably environmental concerns, reflecting their engagement with pivotal issues.

In this context, the participation of Polish youth in the climate strike is interesting. The international movement initiated in 2018 by the Swedish schoolgirl Greta Thunberg (Erman, Erman, Thunberg, Thunberg, 2019; Kisielewska, 2021; Markiewka, 2021) against the passivity of politicians towards global warming and climate change took the form of the Youth Climate Strike, which took place also in Poland. In 2019, it took place in several dozen Polish cities (73). Young people, mainly high school students, protested by going out into the streets (Korzeniowski, 2019). It is worth asking whether young people walking with banners such as "There's no planet B" are actually aware of the situation on Earth in terms of the state of the natural environment. Where do young people get their knowledge from? These questions became one of the inspirations for the presented study.

2. Literature review

One of the pioneering studies of environmental awareness of high school students in Poland was the research conducted in 1988-1992 under the supervision of Danuta Cichy. The research group consisted of 2966 people. 53.9% were students of general, vocational, and technical education secondary schools (Cichy, 1993). Young people were asked about their attitudes towards the natural environment, about who or what determined their attitude towards the environment, and about their understanding of the state of environmental degradation, i.e. air, water, and soil. The examined youth showed a large interest in environmental problems. Their attitude towards the environment was influenced, first and foremost by mass media, then by school and home.

The environmental awareness and knowledge of young people, has been the subject of interest of other researchers in Poland. Pupils at various stages of education, including high school and technical secondary school students, were studied by Jan Frątczak (Frątczak, 1995). Students were asked about their knowledge of such concepts as ecology, ecosystem, and biocenosis. Understanding of these terms turned out to be low. Other questions posed to the participants concerned their opinions on the threat to the environment in Poland, the threat of an ecological disaster, and the readiness of young people for pro-environmental activities, which turned out not to be very high. However, these studies were concerned more with ecological concepts and young people's beliefs than with actual knowledge about the state of the environment and the impact of pollution.

Another study on the knowledge and opinions of high school students (along with university students) was conducted by Ryszard Kowalski, Maria Obrębska and Renata Stoczkowska (Kowalski, Obrębska, Stoczkowska, 1997). The environmental awareness of high school students in Starachowice was studied by Renata Borek-Wojciechowska and Janina Malinowska (Borek-Wojciechowska, Malinowska, 2002). Students were asked about the knowledge of concepts and terms related to ecology and the environment, air, water, soil pollution, waste, and environmental protection. Students were also asked about pro-ecological attitudes. The researchers found the students' knowledge to be sufficient, and assessed their attitudes, especially towards waste management, highly.

Aleksandra Kuzior (Kuzior, 2005) studied the presence of such a component as sustainable development in ecological awareness. Analyzing curricula at various levels of education in terms of their content concerning sustainable development, she conducted a study on a group of 350 students. 61% of the respondents were middle school and high school students. All of the respondents had no knowledge of sustainable development. More than half of the respondents claimed that the environment should not be exploited in an unrestricted way, but almost half were of the opposite opinion.

Another study on the environmental knowledge, sensitivity, and pro-ecological behavior of young people was conducted by Mariusz Gajewski (Gajewski, 2007). 246 students from 3 high schools in the Lesser Poland Voivodeship and 3 high schools in the Świętokrzyskie Voivodeship were presented with a questionnaire formed of 9 questions. Among these were questions about the area with the highest regime, about issues related to the greenhouse effect, inter-species relationships, and inexhaustible natural resources. The study showed that the ecological knowledge of the participants' was in many cases at a fairly high level, but did not translate into undertaking pro-ecological actions in practice.

In 2019, a study was conducted on a group of 419 students aged between 16-19 years of age, living in the city of Bełchatów and its vicinity. The participants were asked, among other things, about their assessment of the state of the natural environment, the biggest ecological problems, both globally and in their place of residence, their perception of Poland's role in environmental protection activities, ecological awareness and behavior, sources of knowledge about environmental protection, and their attitudes towards climate change and climate strikes. The study did not test for specific knowledge, but rather the opinions and attitudes of young people towards various environmental problems. The study showed, however, i.a. an evident lack of awareness of the threat of water shortages in Poland, which indicates there is a lack of knowledge about the unfavorable situation of Poland, which, has the lowest rate of water availability in all of Europe. The study showed that the participants had an awareness of the threats related to issues such as the degradation of the natural environment or climate change. However, the young people participating in the study were not aware of threats such as the water shortages mentioned above or the depletion of natural resources. The sources of knowledge about environmental protection which these young people drew from were the Internet (74%) and social media (58%). The perception of ecological problems is therefore shaped primarily by the media. Only 44% quoted school as a source of knowledge about the environment, and schools only came fourth in the ranking. (Results of the survey of environmental awareness among young people living in Bełchatów and its vicinity, 2019).

The Report-Debutants 23, which was a survey conducted in May 2023 on a group of 1000 people aged 18-21 who can take part in elections for the first time this year, shed some interesting light on the problem. In addition to perspectives on political matters, the report presents the stances, attitudes, and values expressed by the participants, encompassing their perspectives on environmental concerns as well. Ecology was ranked as the 25th most important value out of the 29 listed. 59% of the participants were concerned by air pollution, climate change, and biodiversity loss. However, 34% of the participants declared that they were bored with talking about ecological or environmental issues all the time. According to young people participating in the study, it is the responsibility of politicians actively address and mitigate the impending climate catastrophe. 27% of participants believe that Poland’s natural environment is in a good state (this was the answer indicated by the largest percentage of participants), while 13% believed that its state is average. Only 21% of participants believed that the natural

environment in Poland was in a bad state of preservation and damage (Debiutanci'23, 2023). It can be assumed that such an assessment results from the participants having only superficial knowledge about the state of the natural environment. It would be worth investigating the level of more detailed knowledge about the environment, and the causes and effects of pollution among students.

Research on the knowledge or pro-environmental attitudes of young people has been conducted in various countries. One such study conducted in the United States indicated a low level of knowledge among students (Gambro, Switzky, 1996). In Lebanon, a study on environmental knowledge was carried out with 660 students and was conducted by means of a test. The questions in the test covered topics such as environmental pollution, waste recycling, water quantity and quality, and animals. It showed the presence of pro-ecological attitudes among the youth, but gaps in knowledge (Makki, Abd-El-Khalick, Boujaoude, 2003). There have also been more recent studies concerning the ecological knowledge of young people. In the Czech Republic, a study was carried out on both knowledge as well as on attitudes and beliefs. Over 25,000 students participated in this study. The test included questions about ecological concepts, environmental problems such as climate change, and knowledge of pro-ecological activities (Činčera, Kroufek, Bogner, 2022). Another study, focusing on the attitudes of the students, was carried out in Spain. The results of the study were intended to be used in planning environmental education. The questions in the questionnaire concerned both preferences for school teaching and non-formal education, e.g. watching documentaries, or talking about the environment with parents or carers. The study showed students' concerns about the deteriorating environment, but this did not translate into a greater willingness to learn or take action, for example through participating in pro-environmental demonstrations (Muñoz-García, Alcántara-Manzanares, Medina Quintana, 2022).

The issue of the sources of knowledge is of great interest and importance. In a study involving students of pedagogy, it turned out that social media is the main source of knowledge about the natural environment and its protection (Ciążela, 2021a). School and university, on the other hand, were indicated as a source by only a small percentage of respondents.

Besides formal education, informal education occurs. Social campaigns are a good example of this. However, previous studies have shown that awareness of environmental campaigns tends to be low (Ciążela, Tuszyńska, 2019; Ciążela, 2021b). The aforementioned study with students of pedagogy showed that the participants knew of only a few of the mentioned social campaigns which were taking a short time before the study was conducted. They also found it difficult to answer questions about the subject of the campaigns, the place where the campaigns were taking place, nor about the people participating in them (Ciążela, 2019). A study involving 250 students from various faculties showed that campaigns which the students were familiar with were those that had been running for a long time, and which are present in numerous locations (Ciążela, 2021b). In both studies, the participants claimed to remember social

campaigns which had, in fact, never existed and were invented only for the purposes of the study to be listed in the questionnaires (Ciążela, Tuszyńska, 2019; Ciążela, 2021b).

3. Materials and method

The aim of the study was to assess the level of knowledge about the natural environment and its preservation among both, general and technical secondary school students. Furthermore, the study aimed to ascertain the sources from which students acquired knowledge on this subject.

The research group consisted of 710 people aged 15-20 of age (342 women, 368 men, average age 17.22). They were students of general and technical high schools in various cities in Poland. 458 of the participants were students at general secondary schools (231 women, 227 men, average age 17.35) from the Warsaw agglomeration and the city of Toruń. 252 were technical students from Olsztyn, Zabrze, and Serock (111 women, 141 men, average age 16.97).

The first part of the study was a multiple-choice test consisting of 20 questions on the state of the natural environment, the causes, and effects of pollution, and the strategies to preserve it. The question set used in the study was the same as that used for the doctoral thesis, the results of which were published in "Zeszyty Naukowe Politechniki Śląskiej" in 2018 (Ciążela). The substantive correctness of the questions was then consulted with lecturers from the Warsaw University of Life Sciences. Following this, some of the questions were changed in order to test the knowledge of new, more current issues. Some questions have been changed to reflect more familiarity with the state of the environment, including the percentage of wild animals living in the world, rather than knowing about one particular endangered species. The question about smog was changed because of the results obtained in another study conducted with the participation pedagogy students (Ciążela, 2021a). At that time, when asked what the slogan “zero-emission” meant - an almost identical percentage of students answered that it was about emitting carbon dioxide (39.3%) and emitting gases causing smog (38.6%) (Ciążela, 2021b), which may indicate an overlap of these issues in the minds of the respondents. The questions were divided into four thematic groups.

Questions about the causes of the global ecological crisis:

6. The theory explaining "global warming of the climate" by human activity considers the following as the cause of warming: a) the creation of the ozone hole, b) the exploitation of fossil fuels leading to CO2 emissions, c) the development of nuclear energy, d) I don't know.
11. The ozone hole is the result of: a) the production and emission of freon by humans, b) the emission of CO2 by humans, c) the release of freon in the process of melting glaciers, d) I don't know

17. The causes of ocean acidification are: a) dumping plastic waste in the oceans, b) melting glaciers, c) overfishing, d) I don't know.
13. By polluting water reservoirs with sewage, humans contribute to the excessive growth of algae, which may result in: a) water hardness, b) gradual transformation of the lake into a swamp or peat bog, c) an increase in fish population, d) I don't know.

Questions about the level of environmental devastation:

5. What percentage of mammals living on Earth are wild animals: a) 4%, b) 15%, c) 23%, d) I don't know
12. What percentage of the Earth's water is drinking water: a) 1%, b) 10%, c) 33%, d) I don't know.

Questions about the impact of the devastation of the natural environment on the global ecosystem and for humanity:

1. The thawing of permafrost in Siberia and Alaska will result in: a) an increase in freon emissions into the atmosphere, b) an increase in methane emissions into the atmosphere, c) an increase in sulfur dioxide emissions into the atmosphere, d) I don't know.
8. The extinction of bees will have catastrophic consequences for humans, because: a) there will be no honey as an important component of the diet, b) the disappearance of bees will cause colonies of rival wasps to develop, c) bee-pollinated plants will disappear, d) I don't know.
10. Acidification of the oceans can lead to: a) acid rain and, as a result, the destruction of coastal areas, b) a decrease in the population of plankton and, as a result, disruption of many food chains, c) cooling of the climate, d) I don't know.
14. If, as a result of climate warming, the water level rises, the consequence for Poland may be: a) an increase in the amount of drinking water, b) a decrease in land habitation in northern Poland, c) no consequences for Poland, d) I don't know.
15. The effects of the ozone hole are manifested in humans by: a) respiratory and heart diseases, b) weakening of bones and teeth, c) skin cancers and eye diseases, d) I don't know.
16. Humanity, by causing global warming, contributes to: a) more frequent hurricanes, b) more frequent volcanic eruptions, c) earthquakes, d) I don't know.
18. Air pollution from car exhausts: a) can cause a child to be born without limbs, b) can cause brain damage to the fetus, c) poses no threat to the fetus in the mother's womb, d) I don't know.

Questions about how to counteract the ecological crisis:

2. Which of the following raw materials is considered the most slowly renewable raw material? a) oil, b) water, c) wood, d) I don't know.
3. Greenhouse gas emissions can be reduced by: a) reducing meat consumption, b) saving water, c) reducing sugar consumption, d) I don't know.

4. Transitioning from personal car usage to public transport on a daily basis by part of society: a) is enough to solve the problem environmental pollution, b) will bring some small benefits for improving the state of the environment, c) will not bring any benefits for the environment if it is not undertaken by the majority of the society, d) I don't know.
7. Striving to reduce smog is aimed at: a) combating global warming, b) improving the health of people exposed to smog inhalation, c) preventing weather changes caused by smog, d) I don't know.
9. Undertaking the program of reducing greenhouse gas emissions by only a few of the countries emitting greenhouse gases: a) will destroy the entire project, b) will reduce the effectiveness of the project, but will not make it meaningless, c) the answer depends on how many and how large emitters will participate in the program, d) I don't know.
19. Glass packaging is better than cans because a) they are easy to reuse, b) they take up less space as garbage than cans, c) they decompose faster, d) I don't know.
20. In order to decrease "power consumption": a) just disconnect the phone from the charger, b) you need to remove the charger from the socket, c) the effects of both actions are the same, d) I don't know.

The second part of the study consisted of questions about the sources from which the participants gained knowledge about environmental preservation. The list of sources included: school, television, news portals, social media, and social campaigns. Participants were also asked about their most important source of knowledge about environmental protection.

4. Results

The level of knowledge of high school students turned out to be higher than the level of knowledge of technical students. The average result obtained in the test by high school students is 13.21, and by technical education secondary school students -9.47.

Table 1.
The level of knowledge

	n	M	SD	Median	Min	Max
All	710	11.88	4.035	12	0	20
High school	458	13.21	3.298	13	0	20
Technical	252	9.47	4.137	10	0	20

The level of knowledge was not related to age. The correlation turned out to be significant, but low ($\rho = 0.115$, $p < 0.01$). In the case of high school and technical education secondary school students, there was no statistically significant correlation between age and the level of knowledge.

Table 2.
The percentage of correct answers

No.	Question	Correct answers	%
8	The extinction of bees will also have catastrophic…	618	87
19	Glass packaging is better than cans because…	589	83
14	If, as a result of climate warming, the water level rises…	586	82.5
13	By polluting water reservoirs with sewage, man contributes…	527	74
17	The causes of ocean acidification are…	510	72
15	The effects of the ozone hole are manifested in humans by…	464	65
20	In order to save "power consumption"…	462	65
2	Which of the following raw materials is considered…	440	62
7	Striving to reduce smog is aimed at…	431	61
10	Acidification of the oceans can lead to…	424	60
18	Air pollution from car exhaust…	419	59
11	The ozone hole is the result of…	410	58
3	Greenhouse gas emissions can be reduced by…	399	56
4	Resignation by part of society from using their own cars…	392	55
6	The theory explaining "global warming of the climate"…	376	53
9	Undertaking the program of reducing greenhouse gas …	356	50
16	Humanity, by causing global warming, contributes to...	344	48.5
12	What percentage of the Earth's water is drinking water…	334	47
1	The effect of the thawing of permafrost in Siberia and Alaska…	206	29
5	What percentage of mammals living on Earth…	151	21

Most students knew the answers to questions concerning the effects of the extinction of bees, glass packaging and the effects of rising water levels due to global warming. Unfortunately, students had very little knowledge of the number of wild mammals living on Earth, the effects of thawing permafrost in Siberia and Alaska, and how much drinking water is on Earth.

Table 3.
The percentage of correct answers

Question	All (710)	%	High school (458)	%	Technical education (252)	%
1	206	29	145	32	61	24
2	440	62	312	68	128	51
3	399	56	312	68	87	34.5
4	392	55	245	55.5	138	55
5	151	21	116	25	35	14
6	376	53	292	64	84	33
7	431	61	284	62	147	58
8	618	87	432	94	186	74
9	356	50	248	54	108	43
10	424	60	305	67	119	47
11	410	58	313	68	97	38.5
12	334	47	256	56	78	31
13	527	74	360	79	167	66
14	586	82.5	417	91	169	67
15	464	65	350	76	114	45
16	344	48.5	265	58	79	31
17	510	72	348	76	162	64
18	419	59	301	66	118	47
19	589	83	414	90	175	69
20	462	65	327	71	135	54

The source of knowledge indicated by the largest number of participants turned out to be social campaigns (73%). Information portals (57%) came second. School as a source of information on environmental protection was ranked only third (52%). A similar percentage of participants indicated television (37.5%) and social campaigns (36%) as sources of knowledge about environmental protection.

Students at technical education secondary schools generally indicated a smaller number of sources from which they obtain knowledge than students at general secondary schools. 79% of high school students declared gaining knowledge from social media, while in the case of technical secondary school students, it was 62%. 62% of high school students and only 48% of technical education secondary school students indicated information portals. In the case of school as a source of knowledge, it was indicated by 56% of high school students and 46% of technical education secondary school students. A higher percentage of technical education secondary school students (40.5%) compared to high school students (36%) indicated television as a source of knowledge. Almost twice as many high school students as technical education high school students indicated social campaigns as a source of knowledge about environmental preservation - 43% and 22%, respectively.

Other sources cited by study participants included:

- Internet (Internet in general);
- YouTube;
- Wikipedia;
- podcasts;
- documentaries (films/series on streaming services, e.g. Netflix);
- books;
- friends,
- parents (family);
- Center for Civic Education.

Table 4.
What are your sources of knowledge about environmental preservation?

Source	All (710)	%	High School (458)	%	Technical Education (252)	%
School	372	52	255	56	117	46
Television	266	37.5	164	36	102	40.5
News portals	406	57	284	62	122	48
Social media	519	73	362	79	157	62
Social campaigns	255	36	199	43	56	22

The highest percentage of participants indicated social media as their most important source of knowledge on environmental preservation (44%). Information portals (20%) came second. School was indicated to be the most important source of knowledge by only 16% of the participants. Television and social campaigns were indicated by a similar number of participants - 6.5% and 6%, respectively.

The highest percentage of both general and technical education high school students indicated social media as the most important source of knowledge - 45% and 42%, respectively. Information portals were rated second highest, indicated by 21% of high school students and 17.5% of technical education secondary school students. Only 17% of high school students and 15% of technical secondary school students indicated school as the most important source of knowledge on environmental preservation. 11.5% of technical education secondary school students indicated television as the most important source of knowledge, while in the case of high school students - only 4%. The situation is the opposite in the case of social campaigns - 8% of high school students and only 4% of technical secondary school students indicated them as the most important source.

Table 5.
What is your most important source of knowledge about environmental protection?

Source	All (710)	%	High School (458)	%	Technical Education (252)	%
School	115	16	78	17	37	15
Television	46	6.5	17	4	29	11.5
News portals	140	20	96	21	44	17.5
Social media	314	44	208	45	106	42
Social campaigns	44	6	35	8	9	4
Other	51	7	24	5	27	11

5. Discussion

The level of knowledge of general secondary school students turned out to be similar to that of university students (Ciążela, 2018; Ciążela, 2021c).

Question 1, which concerned the release of methane, was answered by a relatively small percentage of participants. This is probably because the issue has been publicized only relatively recently and has not yet become firmly established in the minds of the respondents.

Only 56% of participants answered question 2 correctly, namely that greenhouse gas emissions can be reduced by reducing meat consumption. The need to reduce meat consumption has recently gained more attention. Meat replacement products are also beginning to appear more widely and to be advertised. The reason for the responses might not be only due to lack of knowledge but also the deep-rooted tradition of meat consumption in Poland. The relatively low awareness of the problem with meat consumption may also be evidenced by the fact that, as stated by the authors of the Debiutanci'23 report, only 15% of participants indicated that the promotion of attitudes aimed at limiting the production and consumption of animal products is a priority issue related to environmental preservation. For the purpose of comparison, it is worth recalling that the issue of limiting deforestation was indicated by 47% of participants (Debiutanci'23, 2023).

Question 5 regarding the global number of wild animals was answered correctly by the lowest percentage of participants. This may be interpreted to mean that this issue is rarely discussed. The numerous campaigns concerning the protection of endangered species turn out to fall short of effectively raising the awareness of young people about the scale of the problem. Naming one particular endangered species of bird turned out to be less challenging for the students. The correct answer was then given by 55% of the participants (Ciążela, 2018).

Question 6 concerns the causes of global warming. In 2018, this was the question that was answered correctly by the lowest percentage of all – only 44% of participants. Now that the topic of global warming has become one of the most pressing, the proportion of people who answered correctly is higher, but not significantly so, and still lower than many other questions in this survey. The significantly higher percentage of correct answers among students at general secondary schools (64%) than among technical education secondary students (33%) is also puzzling.

Only 47% of the participants correctly answered the question about the amount of drinking water in the world. As in the previous case, there is a significant disproportion between the percentage of correct answers given by students at general secondary schools (56%) and of technical education secondary schools (31%). When the question was posed to university students it was phrased less specifically, asking whether drinking water is scarce on all continents or only in Africa, rather than asking for a specific amount. Nevertheless, only 51% of participants provided the correct answer (Ciążela, 2018). In the same vein, only 25% of the participants in the study presented in the Debiutanci'23 report indicated that the reduction of water consumption by industry, cities, or individual recipients is a priority issue related to environmental preservation in Poland (Debiutanci'23, 2023).

Only 49% of the participants correctly answered the question regarding the effects of global warming, i.e., more frequent hurricanes. This question was also challenging for the university students. Only 44.5% of university students answered it correctly, making it the question with the second lowest result (Ciążela, 2018). According to the Debutants'23 report, young people are afraid of the consequences of climate change, which include e.g., hurricanes, but also droughts, heatwaves, and floods - 33% of participants are afraid. 30% of participants are concerned about the state of the environment, and 23% about the loss of biodiversity. 72%, on the other hand, are afraid of inflation, followed by problems such as personal financial and material situations or unemployment. The authors of the report, however, point out that issues such as inflation and the increase in the cost of living, as well as e.g., the influx of refugees to Poland are also indirect consequences of an environmental disaster (Debiutanci’23, 2023).

60% of the participants correctly answered question no. 7 on smog: the fight against smog is aimed at improving the health of people exposed to its inhalation. The question about smog in the study with students concerned the effects of heating a flat with a traditional fireplace or stove. 65% of students answered correctly: heating a flat with a traditional fireplace or stove causes smog. The survey with the participation of university students was conducted before the

smog alert was announced in Poland. In the meantime, there were numerous campaigns regarding the causes of smog, so it was decided to change the question. However, the question remains to what extent young people are aware of the problem and its importance. As part of the research presented in the Debutants report, the participants were asked what points of the electoral program their ideal party should consider. Only 11% indicated that strengthening anti-smog resolutions was such a point, while a slightly smaller percentage (9%) would be in favor of complete abolition of restrictions on what we use to heat houses and apartments (Debiutanci'23, 2023).

The idea to change the question about smog resulted from an interesting result obtained in a study involving students of pedagogy. An almost identical percentage of students answered that "zero-emission" refers to the emission of carbon dioxide (39.3%) and the emission of gases causing smog (38.6%) (Ciążela, 2021b), which may indicate that these issues overlap in the minds of the respondents. Furthermore, as many as 20% of high school and technical high school students answered that the fight against smog is aimed at fighting global warming.

More than 80% of the participants indicated that sources of knowledge other than school as the most important. In a study involving students of pedagogy, the results were similar: social media turned out to be the most important source of knowledge for 55.7% of participants. Information portals came second, with a score of 44.3% (Ciążela, 2021a). A study conducted in the 1990s, before the widespread use of the Internet, also showed that school was not the most important source of knowledge for high school students. School education as a source of ecological knowledge was indicated by 40% while 85% of participants indicated the press as their main source, and 50% indicated radio broadcasts (Frątczak, 1995).

Learning from sources other than formal education can be a positive phenomenon because it shows the willingness to explore the issues on one's own. In addition, it proves that the issues are visible in the public sphere, thanks to which people interested in the subject can supplement their knowledge. The Debutants report also mentions the fact that young people draw knowledge from various sources. Online sources, such as podcasts and blogs, are more often used by men. Women, on the other hand, more often listen to information services on television, as well as gain knowledge from contacts with family and friends. In turn, social media are the most popular among young people who are still dependent on their parents (Debiutanci '23, 2023).

More numerous indications of television as a source of knowledge by students at technical education secondary schools may result from a more traditional lifestyle. It may also suggest less independent searching for information. It cannot be ruled out that technical education secondary school students are more focused on acquiring knowledge related to the particular profession for which they are preparing. Although television is currently less and less popular among young people and is taking a back seat to the popularity of the Internet, it is worth remembering that you can still find valuable documentaries on it.

The lower percentage of indications of social campaigns as a source of knowledge among students at technical education schools is puzzling. Perhaps this might be related to their places of residence, where the distribution of social campaigns is smaller. It might also be due to a lack of interest in social campaigns.

Social campaigns are a source of valuable information and have at their disposal means of communication inaccessible to formal education, such as humor, appeals to emotions, or the participation of celebrities. Perhaps, the problem is their ineffective distribution. Creators of social campaigns should think not only of interesting and memorable forms of communication, but also about their reach It might be worthwhile, perhaps, to use social media (the popularity of which was also proven by this study), or think of more unusual forms of reaching the audience. An example is the Smartphone Zombies campaign, where inscriptions were placed on the pavement so that they were within sight of people looking at their phones.

There are various reasons why participants might have indicated sources other than school as the most important. Perhaps the knowledge provided in school is insufficient. It may, however, also be that other sources are preferred because they are in a more attractive and appealing form to young people. In addition to a more lively and attractive form of communication, social media also give you the opportunity to express your opinion, not only by commenting on the content, but also by posting photos, etc. The same applies to some modern social campaigns in which you can actively participate by, for example, posting a photo on social media (An example is the social campaign #LINIA PROSTA (Straight line), where photos were posted with a line painted on a hand as a sign of solidarity with people with Down syndrome, but also the pro-environmental campaign First day without smog, where users could record and upload their own video of holding one's breath.)

It is worth remembering that we tend to remember better what we actively participate in. We also remember better when we have an interest in the topic, or if it is related to a certain emotional involvement. The presence of social media in the first place, as in the study with students of pedagogy (Ciążela, 2021a), also shows how important social media is in the lives of young people. This should not be underestimated. Perhaps it is worth increasing and promoting the offer of environmental education on social media and even taking steps to ensure the reliability of the content present there.

In addition, it is worth emphasizing that many valuable resources may be found on the Internet, such as the "Climate Science" portal. What is worrying, however, is the fact that students indicated social media rather than news and information portals as their most important source. This is troubling because the content we deal with on social media, is highly subjective, i.e., the selection of content is created by participants, and linked to the knowledge, or lack thereof, and the views of the users themselves. Despite the publication of the IPCC Report, environmental preservation is still a subject of doubt and controversy. There are many skeptics or even critics of this issue, such as denialists and climate deniers. As a result, there are articles criticizing the activities of environmentalists. These articles usually do not refer to any scientific research.

False information, the so-called ‘fake news’, also appears on social media. Facebook's introduction of marking untrue information as fake news does not solve the problem. A recent study shows that marking some information as fake news increases the perception of other information as credible, regardless of whether it is indeed so. This phenomenon has been called the implied truth effect (Pennycook et al. 2020). Another popular form of communication, memes, are also popular on social media. They are often used to make fun of current events or people. While some memes are more or less accurate satirical comments, some are often at a very poor level and even hurt specific individuals, which can affect the recipients' emotions and contribute to the formation of negative attitudes[1].

A potentially dangerous phenomenon is also the so-called ‘sleeper effect’, which consists in dissociating the content of information and the source from which it comes over a period of time (Hovland, Weiss, 1951; Pratkanis et al., 1988). The result of this phenomenon is an increase in the persuasive impact of information, even in the case of information coming from a source considered unreliable by the recipient. This is because after some time the recipients only remember the content, but not the source of the information. The phenomenon can be particularly unfavorable when it comes to Internet use, including sources such as social networking sites, as well as discussion forums and blogs of other users. The lack of selection of the obtained information leads to an increase in the strength of unreliable information because after some time the user only remembers that he or she "read it somewhere on the Internet". This phenomenon may also gain strength in the absence of systematic knowledge on environmental preservation.

Therefore, it should be clearly emphasized that none of the above-mentioned arguments in favor of informal environmental education removes the duty to implement thorough environmental education as part of a formal education in a Polish school.

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[1] Many memes refer to someone's appearance, for example. An example is a high-profile case when the creator of the meme saw the similarity of the Turkish president to Gollum from the film series "The Lord of the Rings" (dir. Peter Jackson), for which he was accused of insulting the head of state (Barrel, 2015). There are hundreds of such memes on social media. Even if they go unnoticed in the form of, for example, accusations of defamation, they often have an impact on the negative attitudes of recipients.

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THINKING ABOUT THE FUTURE AS A SOCIOTECHNICAL CHALLENGE. SUSTAINABLE DEVELOPMENT AND THE PROSPECT OF A GLOBAL CATASTROPHE – AN ETHICAL REFLECTION

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Purpose: The aim of the publication is to present the problems related to the impossibility of unambiguous verifiability of forecasts formulated on the basis of science and concerning the future of human civilisation. This problem gives rise to completely new phenomena and triggers mechanisms that lead to the emergence of persuasive mechanisms, taking on a self-contained meaning, requiring reflection and analysis.
Methodology/approach: The analysis is based on a hermeneutic method exploring the rootedness of the texts analysed in a wider cultural context.
Limitations: The research focuses on showing the current state of these phenomena, hence the references to recent data and publications entering the publishing market.
Implications: Research on current phenomena is burdened with the danger of subjectivism. However, it allows to bring the analysis of the phenomena closer to current problems.
Value: The study is intended for researchers of environmental awareness issues and the debate over the prospect of a climate catastrophe.

Keywords: sustainable development, positive thinking, scientific forecasts, global catastrophe.

1. Introduction

We are living in times that are increasingly defined as times of unimaginable breakthroughs taking place before our eyes. The summer of 2023 in which we live is seen as a moment of radical breakthrough in the development of modern civilisation. The media are bombarding audiences with data depicting the current summer as the hottest in the history of measurements, which began with the development of industrial civilisation.

Their importance is determined by the fact that this information does not appear to show some sudden catastrophe that has been orchestrated by an unforeseeable unexpected configuration of factors that make the current situation unique and unrepeatable. It should be stated that the opposite is true. Something that was anticipated and expected has occurred.

What is surprising at best is the speed at which the expectations that were to be met over the coming decades are being realised.

News of drought in southern Europe, further temperature rise records and fires, warming seas and oceans are appearing in the media with increasing frequency. They are accompanied by analyses highlighting that the 2015 Paris Agreement's goal of limiting temperature rise to 1.5 degrees Celsius, compared to the temperature of the pre-industrial era, is proving impossible to achieve and is expected to be exceeded within a relatively short timeframe. Current expectations are linked to the development of climate catastrophe processes associated, above all, with the consequences of changing temperatures (Otto, von Brackelen, 2019). This information was succinctly summarised by UN Secretary-General António Guterres, stating that "The era of global warming is over. The era of global boiling has arrived" (Dmitruchuk, 2023).

The increasingly widespread conviction that a climate turn is taking place raises fundamental questions about the reflection to date on the issue of environmental risks, which after all is neither new nor surprising. Predictions of an impending catastrophe, both from a general ecological perspective and a specific climate perspective, have been known for years (Rich, 2020). The question addressed in this study concerns the relationship between the dominant direction of reflection on the issue of climate catastrophe and the direction of events. Specifically, it concerns the sense of the tendency to resort to a persuasive strategy referred to as "positive thinking," which, as a result of a particular coincidence, has become very deeply rooted in contemporary debate. The paper attempts a hermeneutical analysis of this phenomenon.

As one might think, this analysis will reflect on the contemporary shape of the debate around an issue that is becoming one of the most important, if not the most important problem of the present day.

2. The changing importance of forecasts in the modern world

Hegel's aphorism, from the Introduction to the "Principles of the Philosophy of Law", that "The owl of Minerva spreads its wings only with the coming of the dusk" teaches us to be cautious about making statements about the times we live in and the possible consequences of processes taking place.

Deeper reflection, however, indicates that we are living in times that in some fundamental ways transcend the horizon of this seemingly obvious reflection. Forecasts, whose message speaks of the real possibility of a catastrophe of the civilisation in which we live, have become a fundamental determinant of our present day for several decades now. This renders the wisdom

emerging at the end of the historical process completely useless and requires thinking that goes beyond the traditional Hegelian horizon.

Of course, it can be argued that catastrophic forecasts are nothing new in the history of mankind, and that predictions about the "end of the world", understood in one way or another, are a frequently recurring motif in history (Tauber, 2016). However, it is impossible not to notice that one fundamental issue is changing. Predictions and prophecies in past history, as a rule, have not appealed to objective or "intersubjectively controlled" scientific knowledge. Neither international organizations such as the IPCC nor the consensus of the overwhelming majority of experts stood behind them.

Moreover, this catastrophe turns out to be anthropogenic in nature, i.e. not the result of external forces beyond man's control, but the effect of his own choices and actions, the consequences of which turn out to be extremely destructive for his continued existence. This leads to the conclusion of the need for a radical change in the current life. The idea of a catastrophe provoked by man and the possibility of avoiding it by changing behaviour is also not new. Already the Old Testament spoke of the inhabitants of Sodom, who, by acting immorally, brought destruction upon themselves. The idea has recurred many times in history. In this case, the differentiating factor is the nature of the knowledge being referred to. The question of whether establishing anthropogenic causes for the current global catastrophe is a return to this traditional social engineering is also a recurring motif in our time, despite a complete change of context.

3. Theoretical implications of the new quality of forecasts

The fact that the realisation of catastrophic forecasts leads to a paradoxical situation in which the wisdom gained with the passage of time and their fulfilment proves barren and no longer useful for anything accompanies reflection on thinking about the threat of a catastrophe almost from its beginning. This observation becomes the starting point of the fourth report for the Club of Rome *Learning Without Borders* (Botkin, Elmandjra, Malitza, 1982), which formulates a programme of anticipatory community education geared towards thinking that anticipates crises and shapes communities able to take up the fight against them. An analogous approach is the premise of Georg Picht's philosophy of responsibility, developed in parallel (Picht, 1981), and the cornerstone of Hans Jonas' ethics of responsibility (Jonas, 1996)[1]. To some extent, this is reflected in the concept of sustainable development (Kuzior, 2008).

[1] One problem is Hans Jonas' aversion to collective action and his emphasis on the role of individual leadership. However, this is secondary to the common starting point and the belief that it is the awareness of danger that must be the premise of all action within technical civilization (Ciążela, H., 2006, pp. 193-220).

The problem of the uselessness of warnings against threats, the implementation of which turns out to be lethal for the warned, has other dimensions besides the futility of waiting for verification. The most well-known and obvious is the traditional suspicion of using a catastrophic forecast to manipulate the warned. A mechanism that involves forcing the warned to behave in ways desired by the warner under the influence of fear for the future. The problem of not being able to verify the forecast before it is realised is enriched by the fact that the forced behaviour, by changing the development of events, leads to a situation in which the warner can always claim that it was the forced change that avoided the alleged catastrophe. This mechanism has been a traditional part of the analysis of all prophecies, generally of a religious nature, concerning catastrophes, understood in one way or another, that were to bring about the proverbial "end of the world". Accusations of manipulation of this kind are now an important topic of public debate and are part of the standard repertoire of arguments of populist ideologies and conspiracy theories. The main difference related to this is that the place of priests and prophets, according to the scientific nature of the predictions, has been taken by scientists participating in the global conspiracy. The differences mainly arise in the answer to the question of whether they are manipulators of humanity wishing to impose their utopian projects on it, or whether they are the tools of a conspiracy of business and political elites seeking to reduce the masses of people superfluous to the processes of technological development of modern civilisation[2].

In addition to these two most classic and still keenly debated problems, involving the question of the attitude to the impending catastrophe, there is a third one that seems to be gaining in importance. This problem is, like the previous one, sociotechnical in nature. Its essence lies in the observation that the reality and scale of the threat, even despite its anthropogenic nature, can lead to a sense of powerlessness and resignation. Recognition that the challenge is beyond the capacity of those who could take it on.

4. Two approaches to the reality of the prospect of a global catastrophe

The way to remedy this situation is to foster optimism and self-confidence. It should be noted, however, that there are two approaches to this issue that are increasingly diverging in practice.

[2] Conspiracy theories about the so-called depopulation should be distinguished from forecasts about the inevitable death of part of the human population if a climate catastrophe develops, as discussed by Peter Frase, who draws the perspective of what he calls “exterminism” as a policy pursuing the interests of the elite at the expense of the poorer part of humanity (Frase, 2018; Ciążela, H., 2020).

The first is the attempt to reduce the gap between the scale of global challenges, often beyond imagination, and the scant capacity of individuals and groups to address them by operationalising action. The second focuses on the problem of psychologically understood motivations as such. It recognizes that action is motivated by the prospect of a positive outcome, while its absence demotivates and induces passive compliance with the inevitable course of events.

The first approach has accompanied catastrophic thinking since its very beginnings. In fact, the diagnosis of an environmental catastrophe is the premise of the demand to actively combat it. The main problem then becomes the problem of how to effectively combat the threat. The division and concretisation of the task facing the challengers becomes an essential element of this strategy. In practice, this operationalisation can take very different shapes. The boundaries of the spectrum of solutions to this problem are marked, on the one hand, by Georg Picht's postulate of achieving competence to find one's way through the maze of challenges posed by the threat of a catastrophe, and, on the other hand, by the emphatic and unambiguous directives of the first report to the Club of Rome, *Limits to Growth* (Meadows, D.L., Meadows, D.H., Randers, Behrens, 1973), which set concrete dates and rules for halting economic growth.

The issue of strategic solutions to combat the climate catastrophe is primarily technical in nature, and as such, despite raising various repercussions, is mainly debatable in a broader context. This approach often leads to the question of whether it is entangled in manipulations related to controlling people through intimidation, as was the case when interpreting the radical recommendations of the first report for the Club of Rome. However, it should be noted that it represents an area of issues far beyond the problem horizon outlined in this study.

The psychological approach to the issue, which focuses on triggering the activity of the subject (whether we are dealing with an individual or a collective), refers to completely different mechanisms and models of action. It focuses on the mechanisms of motivation, recognizing that they have a significant, positive impact on the effects of action and even the effectiveness of the efforts undertaken. "Belief in success breeds success", so in order to achieve the desired goal, the subject must be properly motivated.

5. "Positive thinking" about global issues

Although the situation we are talking about is qualitatively new, the way to approach it is by no means entirely new. It can even be said that it is the result of reflection on the fundamental processes of human development. The most reaching in depth is the inspiration of the mechanisms of mythical thinking. As analysts of this phenomenon point out, myth (irrespective

of the question of its veracity) is a formula for inducing effective action where the pattern of objective circumstances does not promise success (Armstrong, 2021). Derived from the psychology of American pragmatism, the concept of the positive influence of beliefs on the organisation of life practice has a much shorter history. Nowadays, it functions in a new, radicalised and simplified version as a formula for promoting the so-called "positive thinking", which triumphs in popular culture in the form of both numerous self-help books and educational practices.

Although the "positive thinking" idea functions mainly in the realm of problems related to the ways of achieving individual success in life and business, unfortunately its influence on the broader public consciousness is not limited to these spheres.

The environmental debate has also been very strongly influenced by this kind of thinking. A key moment in the development of this way of thinking, in the area under discussion, came with the discussion of the first catastrophic predictions that sparked lively interest in world public opinion, namely Paul R. Ehrlich's book *The population Bomb* (Ehrlich, 1968) and the first report for the Club of Rome *Limits to Growth*, already referred to in the text. In both cases, the debate revealing factual and methodological limitations[3] turned into radical and harassing and often unfair criticism, which led to a deep crisis in circles addressing the threat of environmental catastrophe. In particular, the Club of Rome, as an international body that brings together many well-known figures serving as authorities in various fields, faced an image disaster that made the Club of Rome a training ground for new narrative strategies to continue its mission by new means (Ciążela, 2006, pp. 273-209).

Although the Club of Rome itself has not recovered from the image disaster of the 1980s, the lessons from the deep crisis of the environmental debate of the late 1970s and early 1980s proved momentous. The consequences of its failure caused trauma that continues to this day. Its effect has been a marked reluctance to make catastrophic predictions and a very strong emphasis on the possibility of action to resolve the crisis. The most well-known manifestation of this new thinking was the report entitled *Factor Four. Living Twice as Well on Half as Much (Mnożnik Cztery. Podwojony dobrobyt - dwukrotnie mniejsze zużycie zasobów naturalnych)* (Weizsäcker, Lovins, A.B., Lovins, L.H., 1999) developed within the German branch of the Club. It presented strategies for widespread recycling, the economical disposal of raw materials, which were expected to bring about not only the deceleration of dangerous trends, but also

[3] The problem was that, in the case of Ehrlich's book, as a result of what D. Wallace called an unfortunate coincidence (Wallace-Welles, 2019, pp. 68-69), the publication coincided with one of the most important economic developments, the so-called "green revolution" involving the global application of new technologies that radically increased global agricultural productivity, creating the possibility of feeding a much larger population than before. And in the case of *Limits to Growth*, it very quickly became apparent that the estimate of natural resources did not take into account their very limited exploration and the fact that, as it turned out, new rich deposits were waiting to be discovered. As with Ehrlich's book, there have been accusations of irresponsibility and incompetence. Both, however, fail to take into account that - as Wallace -Welles, quoted above, points out - the "green revolution" was a one-off event, while the increase in the number of known and exploited fossil resources (primarily fuels) triggered mechanisms that exacerbated the crisis (Ciążela, H., 2018).

an improvement in the quality of life, which until now seemed incompatible (Kuzior et al., 2012).

The shift in emphasis, of which the *Factor Four* report was the most striking example, showed the logic of a process that took the form of a whole spectrum of attitudes, among which the reference to "positive thinking" strategies began to play an increasingly important role in the presentation of the issue of environmental threats (among which the threat of a climate catastrophe became increasingly dominant).

The most important manifestation of these trends is the 1987 report *Our Common Future*, prepared under the aegis of the UN by a commission headed by a Norwegian politician Gro Harlem Brundtland (Our Common Future, 1991). The report plays an extremely important role to this day as the cornerstone of the UN's adopted and hugely popular concept of sustainable development. Its formulation was significantly influenced by criticism of the *Limits to Growth* as a concept that did not take into account the interests and specificities of Third World countries (Furtado, 1982). Sustainable development has become a concept that addresses the challenge of organizing modern civilization in a just and sustainable way. On a global scale, this concept, starting from the diagnosis of the existence of global threats to the development of civilisation, focused on strategies to counter them, treating as an objective the balancing in this process of the harmonisation of problems and the diversity of ecological, social and economic interests. Thus, it was a concept intended to combine the resolution of global processes with a vision of global justice through global consensus building (Kuzior, 2014a). It has achieved unprecedented popularity as an official doctrine of the UN and the European Union (Kuzior, 2014b). It has become a way of popularising the issue of global threats on the one hand, and unfortunately marginalising them on the other.

It is clear that the question of how the sustainability formula works does not simply boil down to the internal logic of its operation. External pressure from groups uninterested or even threatened by its possible consequences played a huge role in its failure. However, it is important to realise that these groups have used and are using this internal logic to their advantage. The most important problem here is relating the concept of sustainable development to an undefined future in which development is to be balanced. The sustainability narrative, increasingly disconnected from reality, is only the most obvious example of the impact of positive thinking on the debate around the increasingly clear symptoms of an environmental catastrophe (Ciążela, 2019).

The consequences of this approach are most clearly demonstrated by the phenomenon of the so-called climate optimism. Its presentation is a post by Christiana Figueres - UN negotiator for the Paris Agreement, co-author (with Tom Rivett-Carnac) of *The Future We Choose: The Stubborn Optimist's Guide to the Climate Crisis* (Polish edition: *Przyszłość zależy od nas. Przewodnik po kryzysie klimatycznym dla niepoprawnych optymistów* (Figueres Warsaw, 2021), published in 30 languages, and the popular *Global Optimism* podcast promoting the

notion that the climate crisis represents an opportunity for humanity, opening up new perspectives and possibilities.

Even more symbolic, both in terms of title and content, is Zahra Babiani's publication *Climate Optimism: Celebrating Systemic Change Around the World* (Babiani, 2023) with an introduction by the author of the previously cited study.

These texts represent an extreme form of thinking that has settled very deeply in the reflection on the prospect of a climate catastrophe. Another formula is the phenomenon referred to as "ecosocialism", or the belief that the opportunity that "climate optimists" talk about creates the possibility of a political transformation that allows for the construction of a more equitable and, paradoxically, better-satisfying socio-economic system (Hickel, 2022). Ideas of transformation of the socio-economic system turn out to be the offspring of the idea of sustainable development in terms of the conviction that the time horizon is sufficient for such transformations and the weakness of the forces maintaining the existing order, creating the myth of a harmonious future, which, according to the authors cited, remains a realistic prospect.

Another formulation of the belief in the impact of positive thinking on reality is the proposal for a mental revolution in economics, developed in Kate Raworth's study *Doughnut economics: seven ways to think like a 21st-century economist (Ekonomia obwarzanka. Siedem sposobów myślenia o ekonomii XXI wieku)*. As with "ecosocialism", "doughnut economics" seems to operate in a world governed by its own logic, in which the desirable forms of activity to avert catastrophe seem obvious and their dissemination is only a matter of time (Raworth, 2021; Sutowski, 2023).

A moderate version of this utopian quest is the large field of reporter-journalistic publications presenting actions to combat global warming, intended to popularise forms of activism and success stories as models of grassroots action to save humanity. The logic of these publications is perfectly illustrated by the title of Simon Mundy's book *Race for Tomorrow. Survival, Innovation and Profit on the Front Lines of the Climate Crisis (Wyścig po jutro. Przetrwanie, innowacja i zysk na froncie kryzysu klimatycznego)* (Mundy, 2022).

A genetic phenomenon dating back to the tradition of the debate around Ehrlich's book are the ideas that focus on the technical possibilities of averting the climate catastrophe. With the use of new technologies and technical solutions that, like the "green revolution" in agriculture, have averted the disaster of overpopulation, it represents one of the most important trends in the debate on the prospect of a global climate catastrophe. These issues have even become an important thread in studies on the subject[4] and often radical criticism (Frase, 2018). Since it is not possible to provide a reasonably complete picture of this phenomenon in this article, I will limit myself to the statement made by George Soros at the recent Munich Security Conference delivered on 16 February 2023. Signalling the importance of the climate

[4] A significant part of the book *Retoryka i marazm antropocenu* (*Rhetoric and Marasm of the Anthropocene)* by Ewa Bińczyk (Bińczyk, 2018) is devoted to issues of fighting climate catastrophe.

catastrophe, the billionaire reduces the fight against it to the idea of spraying artificial clouds over Greenland and warning that ignoring the phenomenon leads to a dramatic increase in the cost of dealing with it (Soros, 2023).

When discussing this aspect of the issue, however, it is impossible not to take into account the fact that in the practice of economic life there is an ongoing offensive of technologies aimed at reducing greenhouse gas emissions or even achieving zero-carbon economic activities. Although the scale of this process is still limited both sectorally and geographically, it provides a context that cannot be forgotten or ignored, although the scale of action is certainly not adequate to the enormity of the challenges facing modern civilisation.

Focusing attention on the possibilities of preventing the catastrophe by harnessing the technological potential of modern civilisation leads to a clear marginalisation of the problem of the catastrophe itself. The constant presentation of, to say the least, questionable methods of preventing the catastrophe gives rise to the illusory belief that we are dealing with a problem that can be dealt with within the framework of the current shape of civilisation, and that people can cope with it without having to radically modify the way they function on the planet.

6. Question about the consequences of "positive thinking"

Studies and statements on the prospect of a climate catastrophe dominated the content determing ways to prevent it. Emphasis on ways to prevent the catastrophe breeds a manifestation of optimism about their effectiveness[5]. However, it has far-reaching and not always fully understood consequences.

It puts those who do not share the optimism invoked in an ambiguous position. Their catastrophism gives rise to the suspicion that, by presenting bleak scenarios, calling for renunciations, sacrifices or a radical change of the principles of the organisation of social life, they are not so much serving to save the planet as to realise particularist utopias like Arne Naess's ideas of “deep ecology”. In doing so, it brings back the traditional suspicions accompanying prophecies of impending doom about their sociotechnical and manipulative nature. Since the problems are not so momentous and urgent, their exaggeration turns out to be only a strategy for achieving ideological goals presenting the aspirations of certain social groups to realize their particularist visions of the world.

[5] The scale of the phenomenon is very well illustrated by a study of environmental awareness using the New Ecological Paradigm Scale (Dunlap) questionnaire on a group of more than 600 Polish students, among whom optimism about the possibility of overcoming the environmental crisis predominates (Ciążela, A., 2021). The vast majority of students agreed with the statement: “Earth has vast natural resources, we just need to learn how to use them well”. Almost half of the respondents agreed with the statement that “Human creativity will prevent the Earth from becoming an uninhabitable planet”.

The struggle against demands to end the climate catastrophe, or to refer to the broader term ecological catastrophe, has a long history, the discussion of which is beyond the scope of the paper presented here. It can be reduced to a denial of the threat of a climate catastrophe. Its effect is recognizing the campaign to fight the climate catastrophe as the result of a global conspiracy directed against freedom and property.

It is not, one would think, a matter of coincidence that, despite the intense struggle against this type of argumentation, it proves to be surprisingly vital and attractive to audiences confused and unprepared for serious debate. A very interesting development, in this context, is a study on the borderline between climate denialism and positive thinking in the technology trend by Michael Shellenberger *Apocalypse Never: Why Environmental Alarmism Hurts Us All (Apokalipsy nie będzie! Dlaczego klimatyczny alarmizm szkodzi nam wszystkim)* (Shellenberger, 2021). The author, who speaks openly about his business ties to the nuclear power industry, states, based on extensive argumentation, that the only force constructively working to solve climate problems is rationally oriented business. Whereas all sorts of climate "alarmists", like their predecessors associated with environmental movements and ideologies, only sow confusion and get in the way of saving the planet from threats.

7. The current shape of the debate

Looking at the current shape of the debate on issues of climate catastrophe prospects, it is important to note that the surge of interest in climate catastrophe, triggered by the publication of the IPCC reports starting in 2018 (Ciążela, H., 2021), has been followed by a decline in interest in this topic. The focus was first on the global Covid-19 pandemic and then on the war in Ukraine. However, it is hard not to notice that issues related to the discussion itself played an equally important role.

Discussions of the costs and strategies of the ongoing transition turned out to be the crisis-generating factors. The enormous costs of changes that could lead to a reorientation of the development mechanisms behind the desired changes have provoked a strong reaction from the societies exposed to bearing the costs.

A no less complex and controversial issue has become the question of whether the so-called “green transition”, a term which is now very often used in business circles to refer to the strategy of radically transforming the economy in order to reduce greenhouse gas emissions, promoted by big business circles, really means a change, or whether it merely shifts the factors leading to the climate catastrophe to other areas of economic activity, leading only to a new phase in the competition between large economic players to maximise their profits (Pitron, 2020).

The combination of all these factors leads, it can be concluded, to a situation in which the old balance of power is being reborn on a new basis, in a typical pre-2018 situation. Therefore, we have a strong movement denying the importance of destructive, anthropogenic climate change. We also have a political and economic establishment that specializes in playing the game of appearances and winning particularist interests, avoiding decisive steps to confront the problem. We also have a more numerous than before, but consistently marginalized group of activists with radical attitudes, stemming from taking reports and studies seriously, the symbol of which was Greta Thunberg, who patronized the revival of the debate after 2018 and is now marginalized.

Thus, "positive thinking" about the climate catastrophe, regardless of the intentions of the authors developing this approach, reinforces the *status quo*, fostering the perpetuation of a false sense of security and control over the situation.

However, all these conclusions are debatable insofar as the global situation is changing very rapidly. The rapid escalation of extreme climate events, the most prominent manifestation of which was the drought in Southern Europe in 2022 and what is happening now in 2023, carries the potential for changes that could radically alter the current trend.

Citing a whole series of publications showing the state of the debate on the prospect of a climate catastrophe almost on a daily basis, it is hard not to realize that the publishing cycle and the selection mechanisms of the publishing and reading market, although extremely dynamic at present, do not yet include reflection on the latest developments. The question of whether any changes are taking place is important. Although it must always be remembered that the mechanisms of opinion formation as a result of debate are largely based on inertia, that is, the privileged position of what has already been said over new things that have yet to fight for their place in the discussion. On the other hand, it is worth keeping in mind the tendency to develop and deepen and often radicalise positions already established, as well as the law of the independence of means in relation to ends, formulated by Georg Simmel.

Thus, the state of the debate today and the positions taken in it will affect its future. However, developments cannot be ignored. One of the most recent publications presenting "positive thinking" about the climate is a collection of interviews with authorities in Polish ecology, conducted by Tomasz Borejza under the very telling title *Odwołać katastrofę (Cancel the Catastrophe)* (Borejza, 2023). The title unambiguously suggests that the situation is not as dangerous as it might seem, since the catastrophe can be called off. However, one of the participants in this discussion, Professor Szymon Malinowski (Malinowski, 2023), in a recent interview with “Wprost” weekly entitled: *Fala upałów, gigantyczne pożary. Ekspert nie ma wątpliwości: Usmażymy się (Heatwaves, giant fires. The expert has no doubts: We will fry)* states when discussing recent climate developments that the climate is on the verge of transitioning to another state, one that is very unpleasant for us (Romanowska, 2023). Thus, the debate remains open.

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THEORY OF LEARNING ORGANIZATIONS – SOME METHODOLOGICAL REMARKS

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Purpose: The transformation of political, social, business and many other organizations into learning organizations is very needed. Such a process should be supported by the theory of learning organizations. This theory, if it is to play more effectively its role, should continue to develop. According to opinion of the author of the present text, improving the conceptual basis of this theory and of its logical structure is one of the desired directions of this development. The purpose of the paper is to contribute to such a development.
Design/methodology/approach: This text has character of logical analysis of theoretical concepts and theorems.
Findings: The theory of learning organizations is an interdisciplinary theory including elements of such disciplines as epistemology, system theory, cognitive sciences, psychology (of learning), sociology (of organizations), theory of social communication and management sciences. One, common consistent theoretical language is a necessary (though: not sufficient) condition for transforming theory of learning organizations into a more coherent theoretical system.
Research limitations/implications: The analyses presented in this text are rather of preliminary character. They should be continued; especially, some formal (mathematical) methods should be applied.
Practical implications: Precising, clarifying and systematizing theorems – are important conditions for any social theory to influence effectively politics, governance and management.
Social implications: The better function various organizations, the better (sustainable, ecologically safe, socially just, etc.) – all other factors equal – society.
Originality/value: The paper undertakes important but little-studied aspects of the theory of learning organizations.

Keywords: learning organizations, meta-knowledge, self-knowledge, possible-worlds knowledge, cognitive virtues.

Category of the paper: Conceptual paper, viewpoint.

1. Introduction

The last 250 years or so have been a period that in many ways differed from the earlier epochs. A systematic characteristic of these differences could be the subject of a large paper (if not even a book). Therefore, it cannot be presented here. Yet, at least a partial characteristic seems to be desirable (or, perhaps, even necessary). To outline it, I am going to discuss briefly the following four concepts: acceleration, complexity, "revolutionary" changes and knowledge.

Let's commence with some words on acceleration. This concept (easily defined in elementary calculus, to invoke this well-known definition would be superfluous) can be applied to characterization of various processes: from physical, through biological to psychological and social (cultural, civilizational). It is evident that a great number of processes have since the end of 18th century considerably (and visibly!) accelerated: from the number of humans living on the Earth, through the amount of natural resources being consummated, to the number of international organizations and of scientific books and journals (Many of these processes accelerate very fast: exponentially or even still faster).

Among the accelerating processes is that of complexification: the tools and techniques, the legal systems, institutions and organizations, the interconnections between various elements of the global (socio-techno-eco-) system, etc. – they have been getting more and more complex. Many of the various (technological, political, cultural and other) changes that have taken place in the last two centuries have been "revolutionary": "profound", "essential", "systemic", "qualitative" (rather than "quantitative"). Each of these words may be separately discussed but I hope that taken together they suggest intuitions sufficient to grasp the meaning of the word "revolutionary" as it is used at this place. Additionally, one could remind here the notion of scientific revolution (e.g. the Copernican) – commonly used in philosophy, sociology and history of science.

And the last word: knowledge. Its meaning will be discussed in one of the next chapters. At his moment, I would to characterize the historical processes of which knowledge is the key element. First of all, the enormous development of science: from physics (thermodynamics, electro-magnetism, atom and elementary particles physics – to mention but a few its sub-disciplines), through chemistry, biology to psychology, sociology and even – history. Our image of the world is today much richer, subtle, empirically confirmed, logically precise than it was at the beginning of the 19th century. To a degree this development has been an effect of the growth of scientific production: of the number of scientists, of scientific institutions, of journals, congresses and conferences, great (at least: relatively, in the historical perspective) amounts of money invested into this branch of (intellectual) production. This last process has had, apart from many positive effects, also some negative ones: In particular, it has resulted in in the disintegration not only of our image of the Being (in the most general, philosophical

meaning of the term) but also – of our image (and understanding) of the eco-techno-socio-system of which we, humans, are a part (Lem, 1996).

Having outlined some aspects of the changes the humanity has both generated and faced, I am going now to formulate a few notes on the consequences these changes for the organizations, and for organizational and management theory.

Our societies (including global/world society) are societies of organizations (Perrow, 1991): there exist very numerous organizations, of great many types, of differentiated forms and power of impact on society, to mention but some their characteristics. In short, the role of organizations has been for the last two centuries or so considerably increasing. It is almost sure that – in the predictable future – our societies will remain societies of organizations. It does not exclude that some organizations will disappear and some other will arise. And not only individual organizations (this or that political party, this or that corporation, etc.) – this is almost obvious, but also – types ("species") of organizations.

Since our societies are societies of organizations, thus the effectiveness of solving (well known) problems they face depends largely on the quality of organizations they contain. In short: no "good" society without "goodness" of its organizations. I put the words "good" and "goodness" in quotation marks since I want to stress that their meaning would need a comprehensive discussion; anyway, these words refer to a group of both ethical and praxiological values.

A simple conclusion to the previous note may be formulated so: The improvement of the quality of organizations is not only in the interest of the individual organizations but also in the interest of the whole societies – including global/world society (Tuomela, 2007). To this general formulation a reservation should be made: speaking about organizations I am obviously thinking only about those organizations that contribute to the development of society and not about, say, criminal organizations. The Reader is asked to remember about this reservation that will not be repeated (I am grateful to an anonymous reviewer for drawing my attention to this point).

Thus, in particular, in the interest of the whole society is that its organizations are aware of the problems it faces and are able to adapt their activities to these challenges. Such organizations can be regarded as learning organizations. So, in other words put, it is in the interest of societies that the organizations they include are learning organizations.

Since it is rather likely that many currently existing organizations are not learning organization, consequently it is in the interest of whole societies that they will (be) transform(ed) into such organizations. – This remark, however in itself obvious, suggests a question for which there is no simple, obvious answer: how societies could help organizations in getting learning organizations (Hoe, 2020).

Transforming organizations into learning organizations may be achieved by the trial-and-error method. On the other hand, as the experiences from many other fields of human activity have been teaching us, (scientific) knowledge increases the chances of greater effectiveness of such a process.

Therefore, if you accept the previous considerations, you should also agree that the development of the theory of learning organizations is one of very important tasks facing theory of organization and management or – even broader – social sciences (Senge, 2006; Senge et al., 2001).

You can have, of course, different opinions on the strategies of development of this or that scientific theory.

My opinion on developing social-sciences theories is based on philosophical (epistemological) conviction about fundamental methodological unity of all sciences – from physics to psychology. To this very general declaration, I'd like to add a few more detailed remarks.

First: as regards construction theory, it is mathematics that offers us the best instances/patterns (language, axioms, derivative theorems, proofs, etc.).

Second: even theoretical physics is only approaching the standards satisfied by mathematical theories. Therefore, one should not be surprised that social-sciences theories are much more distant from these standards. But, on the other hand

third: social-sciences theories should be as close to these standards as possible (should approach these standards).

Fourth: the process of transforming social-sciences theories into theories more close to the mathematical standards should be continuous ("evolutionary") rather than "revolutionary" (In particular, one should avoid using "too early" mathematical instruments).

Having presented my methodological stance, I can formulate now the main goal I will try to achieve in this text: analysis of the conceptual and problem structure of the theory of learning organizations – in order to make one step or two in the direction described above.

2. On systems and organizations

2.1. On systems

Organizations, as the author of "Images of organizations" (Morgan, 2006) demonstrated – in my opinion: convincingly, can be viewed (interpreted) in various ways: as machines, organisms, brains, cultures, political systems. psychic prisons, fluxes and transformations, instruments of domination (Perhaps, this list is not exhaustive but seems to comprise the most important "organizational metaphors"). There is no doubt that machines, organisms, brains and

political systems are – systems (of this or that sort). It suggests that regarding organizations as systems is not only justified but also convenient.

To what has been said above, I would like to add a methodological remark: I think that one of the simple but important methodological rules can be pronounced as follows: formulating theoretical theses try to avoid alleged specificity (needless concreteness). This rule would deserve rather elaborate discussion for which there is no place here. So let me give only a very simple example: The sentence "Two apples plus two apples makes four apples" is an application (or instantiation) of a very simple arithmetic thesis; by no means it can be regarded as belonging to botany though it says something about fruits (a similar sentence about humans does not belong to sociology, and about words – to linguistics). To put it in somewhat different way: not all true sentences about apples belong to botany; many of them belong to geometry, physics, chemistry, and even – history of art.

The following elementary theses concerning material systems (of any sort) seem to be important for the further considerations:

1. Any system is composed of elements and relations between them (internal relations).
2. Some elements of the given system can be also regarded as systems (as its sub-systems).
3. Each system is surrounded by (its own) environment.
4. The set of relations between the given system and its environment (external relations) is an important part of its characteristic.
5. Three types of elements and relations (both internal and external) can be distinguished: material, energetic and informational.

These five theses I would like to supplement with an idea developed by (Ingarden, 1970). He introduced the notion of "relatively isolated system" and outlined a theory of such systems. According to this theory, such systems have inputs and outputs that regulate the material energetic, and informative relations with environment.

So much about the broadest concept of (material) system. Now, let us pass to social systems (Tuomela, 1995). At the very beginning, a note on the word "social" (and – "society"). These words happen to be referred also to some animals (e.g. ants). Discussing the analogies and differences between societies (social systems) of non-humans and humans could be interesting and instructive but a special text devoted to this issue would be needed. Therefore, the words "social" and "society" will further refer in this text only to systems composed of humans (members of the *Homo sapiens* species).

The notion of social system needs some additional comments.

First, let us note that humans (fundamental elements of social systems) are themselves extremely complex systems (think only about the human brain). – It seems to be rather evident that – all other factors equal – the more complex elements of a system the more complex is this system. Therefore, even relatively simple (from a point of view, e.g. composed of very small number of elements – humans) social systems turn out to be, from another point of view

(e.g. dynamically) turns out to be rather complex (Think, for instance, about a social system composed from wife and husband).

Second: though anatomy and physiology of *Homo sapiens* seems to be changing very slowly (the biological differences between us – living in the 21st century, and our ancestors who lived 30 000 years ago, are rather minimal), human mind – affected by its product: culture – has been getting more and more complex.

Third, many (perhaps even: all) social systems are composed not only out of humans but also – of various objects (in particular: instruments of human actions).

2.2. On organizations

Let us make now the next step: from the notion of social systems to that of organization. I do not think that at the present state of social theory it is possible to formulate a precise definition of organization. To achieve such a goal, it would be necessary to construct a classification of social systems. – A big and complex task, not to be performed here. So, I will limit myself to a working/temporary characteristic of this notion.

I would like to start from two complementary intuitions. On one side, I assume that not all social systems are organizations: Neither family nor nation, neither circle of friends nor a village/town community, neither the educational nor health system (of a country), etc. – are organizations.

On the other hand, I assume that very different social systems can/should be regarded as organizations. Among them: various churches (including one of the oldest still existing organizations – Roman Catholic Church), political parties, public institutions (state and local government offices), business corporations and many others (more and more numerous).

The "world of organizations" is very diverse and increasingly so (Kostera, 2003). To avail of an analogy with the "world of life", one might say that various "species" ("classes", "phyla" etc.) of organizations could be distinguished, that – in other words – a taxonomy of organizations would be desirable. Unfortunately, the history of biology has taught us that constructing taxonomy is very complex task – surely not to be undertaken in one paper. Thus, remembering about "organizational diversity", let us try to indicate some common traits of organizations (Interestingly, it seems that it is easier to indicate some attributes common to – say – bacteria, birds and humans, in short: to all living organism, than – to classify them).

Humans are basic elements of organizations: they are their members. Humans are also members of other social groups/systems (e.g. members of families). It seems that we can define two basic ways of becoming member of a social group/system: voluntary and involuntary. In other words: one joins a group (organization), or one is born (in the literally sense of this word) in a group (let's call it community). This classification should be developed so that situations in which persons join a group but not voluntarily (e.g. obligatory military service) are taken into account and their specificity – underscored.

The second classification is based upon the notion of goal (this term can be also used as collective term: a set of goals can be regarded as a goal of special sort, say – macro-goal: organizations have goals, while communities do not have goals (in a possibly strict sense of the word; if we accept the thesis that to survive is the goal then probably all social systems have a goal.)

3. On knowledge and learning of organizations

3.1. On the notions of knowledge and learning

Let us start from a general note on the concepts of knowledge (Woleński, 2004) and learning and a brief remark on the relations between them.

Both these concepts presuppose the notion of subject (respectively: of knowledge and of learning). In other, more intuitive formulation: speaking about knowledge and learning we should be able to answer to two questions: "Who knows X?" and "Who is learning X?" The comments on the possible denotations of X will be made in one of the further passages. And now, two very short remarks:

First, on subject. An individual human and a group of them, an artificial object (computer?) and a group (network) of them, an animal (which? all?) and a group of animals – all these systems are regarded as (potential) subjects of knowledge.

Second, on the relation between learning and knowledge. This relation can be defined in a simple way: Learning is a process which results in growth of knowledge of a subject (During future considerations, but not now, one could discuss whether it would be convenient to speak not only about learning in standard sense but also about "negative" learning, e.g. forgetting, or – more generally – reduction of knowledge).

And now, some reflections on the notion of knowledge. It is an issue (or rather complex set of interrelated issues) discussed for some twenty five centuries: Plato, Aristotle, St. Thomas, Descartes, Hume, Kant (to mention but the greatest thinkers) – these and many others contributed to the epistemological debates (Woleński, 2004). Happily, not all philosophically important and fascinating problems have to be debated in the context of the theory of learning organizations. On the contrary, we should, I think, to start from commonsensical perspective, modified by philosophical ideas as little as necessary.

Let's try to outline a very short summary of the commonsensical perspective:

1. Humans live in the world composed of many objects like animals, plants, artifacts, mountains, rivers etc.
2. Each object has a certain number of properties – shape, color, hardness etc.

3. The world contains also some man-created objects like languages, music, religions, scientific theories etc. These objects also have some properties, e.g. meaningfulness, incomprehensibility etc.
4. Some elements of the world interact – exert influences on themselves: modify (more or less) their properties.

The further discussion I am going to continue by discussing some classifications of knowledge; the philosophically fundamental question of the "essence" of knowledge will be passed over.

I will start from the very important distinction between "knowledge how" (also called practical, performative, procedural or imperative) and "knowledge that" (also: descriptive, propositional, declarative) (Ryle, 1949; Polanyi, 1958). It can be characterized as follows:

First. "Knowledge how" precedes in a few ways "knowledge that": evolutionary/ phylogenetically (many groups of animals dispose some "knowledge how" but not "knowledge that"), ontogenetically (human infant disposes some "knowledge how" but not "knowledge that"), historically ("knowledge that" evolves from humans "knowledge how").

Second. This distinction is strongly connected with language and its use. At the first sight, one might say that knowledge "how" (e.g. to ride bicycle) is not connected with language while the knowledge "that", for instance, Warsaw is the capital of Poland – presupposes knowledge of language. But just the last phrase ("knowledge of") suggests that some special types of knowledge are "weaves" of "knowledge how" and "knowledge that" (Further discussion of this problem would demand quite a few references to philosophy of language and psycholinguistics).

Third. Though the "knowledge how" is learned mainly by training but can be supported not only by examples (to be imitated) but also – by verbal instructions ("knowledge that"). This observation can be developed into a thesis that might be (sketchily) formulated as follows: The more complex are actions (to be learned) the more important is verbalized knowledge ("knowledge that"). For instance: one can learn how to swim, even without imitating, but it is impossible to learn how to pilot a jet without worded hints (Pfeffer, Sutton, 2000).

Fourth. Let's commence this remark with some words on mathematics. The knowledge how to solve an equation (say, $x^2 + 2x - 8 = 0$) is in fact a special case of knowledge "that" – the formula for the roots is well known. But the knowledge how to prove a mathematical theorem cannot be reduced to knowledge "that" (though it can be supported by such a knowledge). A simple though important conclusion: even in such abstract and language-based domain as mathematics knowledge "how" (to transform – e.g. by constructing proof of a theorem – knowledge "that") seems to be "more important" (quotation marks to stress that this phrase is used here very intuitively and would need precising) than knowledge "that".

So much about knowledge – "how" and "that". And now, another distinction: between knowledge and meta-knowledge. Let's begin from three notes on the last concept.

First. From intuitive point of view the meaning of this concept is rather simple: meta-knowledge can be defined as knowledge about knowledge. One could suppose that introduction of this term is motivated by economy of language. But it's not like that (though the shortness of the word is a convenient side-effect). The main reason is to suggest analogies with such intellectual domains as metamathematics, metalogic, meta-philosophy etc.

Second. The idea of metamathematics and metalogic, developed by David Hilbert, Alfred Tarski and many others, has for the last century played an important role in the evolution of mathematics and logic (Rasiowa, Sikorski, 1963). The reference to these two (distinguishable though interconnected) disciplines helps to remember about logical/methodological issues connected with the "meta-" studies.

Third, these ideas have for the last decades been also adapted in other fields and such subdisciplines like meta-psychology or meta-sociology have arisen.

Fourth, let's note that, from the purely logical point of view, this distinction can be iterated: we could speak about meta-meta-knowledge and so on. From the practical point of view this possibility seems rather unimportant.

However interesting might be further discussions on various "meta-" studies (their analogies and differences), I'm going to move on to issues more closely connected with the central subject of this paper.

I will start from brief considerations on the connections between the "knowledge" – "meta-knowledge" distinction on one side, and the "knowledge 'how' " – "knowledge 'that'" on the other. I suppose that these two distinctions are logically independent; thus, they can be crossed.

Let us begin from meta-knowledge concerning knowledge "how". It comprises, roughly speaking, practical abilities/skills to learn and theoretical knowledge about learning.

(Practical) learning skills that are necessary to perform a given type of activities need also some skills. Let's give but few examples: learning to drive a car or to ski (especially if one is not very talented in the given domain) needs a lot of patience; the ability to observe attentively good performers (e.g. drivers or skiers) is very useful. But hints given by an instructor (a form of knowledge "that") play also a role. Note that the ability (knowledge "how") to listen someone (e.g. instructor) attentively and with understanding is important factor determining effectiveness of acquisition of knowledge "that".

And now some notes on learning knowledge "that". A few aspects of processes of this sort can be distinguished. At the outset of such a process operate factors mentioned at the very end of the above passage (interest/attention, understanding). Next, we should speak about two processes: memorizing and remembering. It seems that just in the case of these processes, knowledge "that" – here: scientific knowledge drawn from psychology – can be particularly useful. And, last but not least, the ability to find "access path" (possibly effective/fast) to the demanded information (a piece of knowledge "that"). It seems that developing this very ability

requires particularly close and intensive interaction between practical training and theoretical knowledge.

So far, I have in fact discussed but one part of meta-knowledge: knowledge about learning (i.e. about creating/producing knowledge). This approach has omitted a fundamental problem: Nobody (except, perhaps, some philosophers or writers) is interested in "everything". The interests of virtually all subjects are limited. Especially – cognitive interests of those whose basic interests are much more mundane (money, power, prestige etc.), or even of those whose basic interests are more sublime and noble but not cognitive (salvation, contribution to the happiness of whole mankind or of one's nation) Here arises very important question: what knowledge – both the "how" and the "that" – is necessary, what – very useful, and what – completely non-useful (to mention but three "points" on a scale of usefulness). At the beginning, the question appears difficult and even paradoxical. But considerations based on experiences of various domains of human activity prove that this impression, though not without reason, is not fully justified: Let's think about medicine. The doctor should know what medical data about his/her patient's body (and mind) are necessary/useful for him/her. It could be even said that the ability to prescribe optimal set of medical tests is one of most important measures of his/her professional excellence. A similar remark can be made about engineering professions. On the other hand, it should be noted that the situation is different in various fields of human activity. Even if one confines one's attention to medicine, one may suppose that there is a considerable difference between, say, orthopedics and psychiatry. And when think about, say, politics, the situation will turn out still more vague and complex.

This part of my considerations let's conclude with a note on the significance of this part of meta-knowledge that has been discussed above: In the time of enormous growth of the amount of information/knowledge, increases the significance of their selecting (filtering). Meta-knowledge, as characterized in this paper, is to be conceived of as an important (perhaps the most important) instrument of this process of selection.

The whole chapter on knowledge and learning I want to end with discussion of one more classification of knowledge. To introduce it, let me invoke the simplest proposition (or, to be more precise, a scheme of propositions: it contains variables) characterizing epistemic relation:

S (subject) knows O (object). It can be said, particularly, that S knows S (some philosophical and logical subtleties arise here but I don't think that their discussion is necessary at this place). Thus, we can distinguish two kinds of knowledge: external and internal. It seems convenient to use the word "self-knowledge" as an equivalent to the phrase "internal knowledge".

Self-knowledge is a very complex phenomenon (Stoneham, 2004; Kozielecki, 1986). At present, I will limit myself to a brief discussion of its structure. Self-knowledge partially overlaps meta-knowledge: it contains one's knowledge about one's knowledge (both "how" and "that"). Two remarks: First: one may both underestimate and overestimate one's knowledge. And second: one may or may not identify the lacunae in one's knowledge (Kinnon, 2007).

Self-knowledge contains also knowledge about many other aspects of the given subject (Luhman, 1984). Let's start from an area on which self-knowledge (internal knowledge) overlaps external knowledge:

Each subject exerts some influences on some elements of its environment and at the same time is influenced by (these or other) elements of its environment. The knowledge about one's relations with one's environment is undoubtedly important ingredient of one's self-knowledge.

The short discussion of still another part of self-knowledge I will commence from a note on learning. Schematically put, it can be either unconscious (a side effect of other activities) or – conscious (getting knowledge is an objective of some activities). Let's somewhat generalize the concept of conscious learning. It can be regarded as a special case of one's activities oriented at it (e.g. a person wants to be more patient or more kind to his neighbors or "better organized", etc.). Undertaking such activities is based on self-knowledge: on knowledge (and evaluation) of some one's traits, on some convictions about transformability of one's traits and about techniques of these transformations.

The last classification of knowledge I'm going to discus here is based on the distinction: "actual world" – "possible world" (A conceptual note is necessary here: For logical reasons, the actual world should be viewed as one, though particular, possible world. For convenience, I will use the adjective "possible" as an abbreviation for the longer phrase "possible but not actual"). The concept of possible worlds has been a subject of great many books and papers. Many controversial opinions have been formulated. Even their concise summary cannot be offered here. I will limit myself to present the way in which I'm going to use this concept and the reason for its introduction in this text (Takeuchi, 2004).

I think that two concepts – "future" and "innovation" – can help in both understanding the meaning of "possible world" and accounting its use.

Speaking about future, I'd like to focus on two its aspects. First: it is (practically) quite sure that the world "of tomorrow" will be very different from the world "of today". Both individuals and collectives should prepare themselves for the coming changes of the world we live in. And second: what the "tomorrow" world might look like if we do "this", and what – if we do "that". To say it in somewhat different way: both individuals and collectives should know what changes in the world are possible – both these coming to the subject from its environment and those brought to the environment by the subject.

The word "innovation" adds to that of change the idea of intention and that of positive character of change (Ober, 2022).

The ability to predict future (possible) changes and to design (possible) objects seem to be based on one very important attribute of men (and, perhaps, some other systems) – on imagination: knowledge of what does not exist but the existence of what is possible (Morgan, 1993).

And still the final comment on the phrase "possible world". As stressed in the introductory chapter, we have been living in more and more complex world (global. eco-techno-socio-

system). Thus, both the individual fate and the future of collectives depends less and less on local, individual processes, and – more and more – on global "weaves" of processes. The term "possible world" (here emphasis is on the noun) is to underline this fact (Takeuchi, Nonaka, 2004).

3.2. On learning organizations

In the previous sub-chapter, the general notions of knowledge and of learning were discussed. Let's stress the no special assumptions as to learning systems (and subjects of knowledge) were accepted: human individuals and collectives, individual animals and their collectives, some artifacts (Artificial Intelligence) – all these systems can be regarded as characterized by this notion (Cichosz, 2009; Steinbuch, 1971). On the other hand, it is obvious that various types of learning systems have their peculiar traits. Discussion of this problem goes far beyond area of analyses intended in this text. Since now it will be assumed that, by learning systems, we understand learning social systems/organizations.

As defined previously, social organizations are social systems satisfying some additional conditions. For this reason, I will commence from considerations on social systems in general, and in the second part I will take under considerations these issues that arise from the specificity of social organizations.

Social systems are composed from humans (elements), internal interpersonal (and other, e.g. between men and tools) relations and from the external social (and other, e.g. between organization and natural environment) relations.

It seems to be obvious that at least some members of a learning system are able and willing to learn. If we take into account that both parameters (ability and willingness) are evidently not dichotomic values but, at least, ordinal – we can speak about degree of ability/willingness to learn and about the statistical distribution of the values of these parameters in a given social system. This distribution can be regarded as one of the fundamental characteristics of learning systems.

Now let's move on to the internal relations. Their sheer number, not even speaking about the variety of their types, is most often great. From the perspective determined by the subject of this paper, the most important are the relations constituting the given system's communication network (Zollman, 2011). Here arises the question how to define a parameter (a complex of parameters?) characterizing the quality of this network. No precise answer can be given here but one point seems rather evident: neither radical minimalization nor radical maximalization of the amount of information flowing through this network is desirable.

Similar remarks can be made as to the external relations: the quality of the structure of the communication network connecting the given system with this system's environment. One issue deserves, perhaps, special attention: the reach of the environment. From a point view, the global world-system (eco-, techno-, socio-) could be regarded as environment of – literally – each social system. But such a way of defining system's environment would be – for majority

of social systems – not desirable and, in some cases, even disastrous (Zemanek, 1959). On the other hand, too narrow a definition of system's environment could have also some negative consequences for this system. At this point could be used the concepts of meta-knowledge, of self-knowledge and of knowledge "that" and "how": the given system should know "that" (self-knowledge "that") it is surrounded by environment and it should know "how" to delimit it.

So much about the learning social systems. And now some notes on the consequences of introducing the criteria allowing to distinguish social organizations from all social systems.

Organizations are, according to the definition proposed above, social systems whose members (individually and freely) joined these systems (and were as such accepted). If so, social organizations can be characterized as learning organizations (and not only learning systems) if they satisfy additionally the following two conditions: (1) organization knows "that" it needs members having such and such traits (meta-knowledge), (2) the organization knows "how" to choose/accept its members.

Organizations are also defined as systems having specified goals (Pettit, 2011). If so, social organizations can be also characterized as learning organization if they satisfy (to a significant degree) the following conditions: (1) organization knows "that" the given goal is its actual goal (self-knowledge), (2) organization knows "how" to "translate" its principal goal into sub-goals etc., (3) organization knows "how" to evaluate the relations between its goal and real effects of its activity, (4) organization know "how" to modify its goals (List, 2011).

4. On development of learning organizations

In the previous chapter I have sketched an outline of a "structural" (or "descriptive") part of theory of learning organizations. In other words, I have tried to present some elements of answer to the both basic and simple question: What is a learning organization? Or: What criteria an organization should satisfy to be evaluated as learning organization (Bui, 2020).

To continue these considerations, it will be convenient to introduce (for linguistic/stylistic reason and to suggest some possible connections with psychological theory of intelligence) the term "intelligent" as synonym for the adjective "learning".

Now, I would like to formulate an important factual thesis: Each organization is – at least to a degree, perhaps very small one – an intelligent organization. Therefore, the previous question (What is…?) should be reformulated or complemented with the following one: On which factors depends the degree of intelligence of an organization (organization's intelligence quotient – OIQ)? Or, alternatively: On which factors depends the evolution/development of learning (intelligent) organizations (Chia, 2020) Let me add and emphasize at once: At the present stage of these considerations, I'm only able to present a list

of such factors and make some comments about them. But now, I cannot discuss the issue (otherwise very important) of their relative importance.

And still a comment on determining factors. I assume that we might speak about two classes of factors determining a parameter (in our case: OIQ): directly determining and indirectly determining. The second class contains factors determining the directly determining factors and the factors determining factors determining the directly determining factors, and so on. The "tree" of factors is perhaps infinite. It is obvious that not only all the branches of the "tree" cannot be taken into account, but even finite but (very) long intervals of the "branches" cannot be studied. We have to confine our attention to the first, relatively short, intervals. How short (or relatively long) they should be – it cannot be decided in a general way; this question needs to be solved for each research problem individually.

There is no doubt that the OIQ of an organization depends, among others, on the ability and willingness of its members to learn. This thesis requires a few comments.

First, I'd like to stress that using these two nouns – "ability" and "willingness" – is of theoretical importance. They denote two traits of humans that are logically/theoretically (and often: statistically) independent (Incidentally, some European languages reflect this independence in sayings such as "he is brilliant but lazy"). The factors determining ability (individual intelligence) and those determining willingness (motivation) are rather different.

Second: Even small organizations (and still more the lager) are "governed" by statistical rules: It is of very little probability that all members of an organizations are (practically) identical as to their various traits, in particular – as to their ability and willingness to learn.

Third: It is highly improbable that all organizations (of the given type: say banks or political parties) have the same (or "very similar") distribution of members with various degrees of ability and willingness to learn.

Fourth: Each member of an organization is (at a fixed moment of time) located a node of the network of influence (determined by formal and informal positions) of influences (Fricker, 2011). Some nodes are more, some other – less, important. At some organizations and at some points of their histories, the central (most important) nodes are occupied by members able and willing to learn (Gilbert, Pilchman, 2014) and some other organization and/or at some other moments of their histories at these nodes are located members of very limited ability and/or very small willingness to learn. I think that at least one step further should be made: Firstly, these networks can be rather "symmetrical" (all nodes are of similar "force"), some others – "strongly asymmetric" (some nodes are much more "stronger" than others). Secondly, various factors determine the ways in which the nodes (especially in "asymmetric" networks) are being taken by one or other type of members of organization.

It is noteworthy that some traits of members of various organizations, influencing the quality of organizations, depend – to a degree – on some general social factors (Hofstede, G., Hofstede, J.G., 2005). Among them, one can include such factors as quality of education

(from elementary to academic) or research policy supporting studies on social learning/intelligence (Goldman, 2011b).

Put in other words: if society wants that its organizations are of high quality, it should exert impact on factors on which quality of organizations depends (Przybylska-Czajkowska, 2021; Freeman, 1984; Schneper, 2020).

A few words should be said on the factors determining the quality of communication – ability and willingness to communicate (Nęcki, 2000; Johnson, Lepore, 2004; Zagzebski, DePaul, 2007).

As regards ability, we should return to the educational and mass media policy. As regards willingness to communicate (pass on knowledge), we should mention the whole group factors operating on various levels of society: from organizational to national and global. This group contains two fundamental factors (here, at least one or two further steps should be made along this branch): trust (Ciulla, 2002). Fukuyama (1995) and – culture of cooperation – as contrasted with that of rivalry (Tomasello, 2022, 2009; List, Pettit, 2011). The concept of culture of cooperation should be in the future analyses connected with that of open innovations (Cherburger, 2020; Kuzior, Sira, Brożek, 2023).

5. Final remarks

I hope that arguments formulated in the introduction to this paper are at least partly convincing. Summarizing them into one sentence, we could say that theory of learning organizations is urgently needed (Kuzior, Czajkowski, 2021).

As both philosophical analyzes and intellectual history demonstrate, there is no one strategy guaranteeing research success. Particularly, both "bottom-up" and "top-down" strategies seem *a priori* equally promising (or, perhaps, should be viewed as complementary). I have chosen the second strategy trying to outline a possible "anatomy" (logical structure) of the expected theory rather than offer some detailed contributions.

The image I have presented in my text demonstrates, it seems to me – convincingly, that theory of learning organizations has to be strongly interdisciplinary: from philosophy (epistemology, philosophy of mind) (Kuzior, Czajkowski, 2022), through cognitive and computer sciences (Russell, Norvig, 2010; Szuba, 2001; Kasperska, 2009), psychology (Kelly, 2004), sociology (Goldman, 2011a) to theory of social communication (Griffin, 2001) and management science (Griseri, 2013; Begeron, 2003; Nonaka, Takeuchi, 2004).

Listening these disciplines, I haven't mentioned mathematics and formal sciences. Not incidentally: Though I believe that all sciences should be – later or earlier – mathematized, I also think that to any theory mathematical methods should not be applied "too earlier"; roughly speaking, before interesting, profound theses have been formulated and systematized.

The strong interdisciplinarity of the theory of learning organizations offers also an argument supporting my choice of theory construction-strategy: in each of the mentioned above disciplines great many texts (that might be of some importance for the theory of learning organizations) are published every year. Even flipping through the pages of these texts would be physically impossible. Therefore, one should know in advance what texts one is looking for. And to know it, one should possess an idea what is supposed to be the theory in the construction of which one intends to participate.

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THE ETHOS OF COLLECTIVE RESPONSIBILITY

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Aim: The aim of this article is to examine whether and to what extent reference to collective responsibility is present in current public discourse, in which contexts it functions, and what are the ways in which it is justified.
Project/methodology/approach: The article provides a quantitative and qualitative analysis of the presence of the issue of collective responsibility on the Internet, in the National Library catalogue, the National Corpus of Polish, and public opinion.
Findings: The research allows us to conclude that in different segments of public discourse collective responsibility is present with different intensity. It is commonly found in the statements concerning current social and political phenomena, where the existence of a certain ethos of collective responsibility can be observed. In this area it is also widely endorsed and its diverse justifications are formulated. This happens in spite of the prevailing convictions of ethicists as well as in defiance of the principles of law which allow only individual responsibility.
Research limitations/implications: The analysis revealed the ubiquitous presence and widespread approval of collective responsibility, hence a little more attention was paid to some current issues present in public discourse. Future research may focus on exploring the limits of reference to collective responsibility.
Social implications: By demonstrating the prevalence of the phenomenon of collective responsibility, the results of the study shall help to make public opinion more sensitive to the need to seek the limits of its application.
Originality/value: What is original of this study is the thesis about the widespread approval of collective responsibility, demonstration of the ways of justifying it and the method of quantitative and qualitative analysis of the content of the Internet, the National Library catalogue, the National Corpus of Polish, and public opinion concerning the presence of the explored issue. The conclusions presented in the article are important for ethicists, especially those dealing with the issue of responsibility, as well as for public opinion, as they reveal the dangers of uncritical references to collective responsibility.

Keywords: ethos, responsibility, collective responsibility.

Category of the paper: Research article.

1. Introduction

The inspiration for the interest in the issue of collective responsibility is Russian aggression against Ukraine. This aggression was met not only with (fairly common in our cultural circle) disapproval, but also approval for the imposition of sanctions on Russia. While the imposition of sanctions on specific individuals responsible for certain acts does not raise objections, the imposition of sanctions on the state and consequently on its inhabitants, regardless of their individual participation in the war, means the application of collective responsibility and should arouse opposition among those who approve only of individual responsibility. However, nothing like this has occurred. The emerging objections to the sanctions have different origins than disagreement with the application of collective responsibility.

The circumstances of the approval of the sanctions imposed on Russia, the expectation of the worsening of the economic situation of Russia and consequently of Russians, allow us to assume that, contrary to the dominant opinions of ethicists as well as the views present in the public discourse which stress the legitimacy of the application of individual responsibility, collective responsibility is widely approved.

The aim of this analysis will be an attempt to reconstruct this area of collective awareness which can be called the ethos of collective responsibility. In our definition of the ethos we follow Maria Ossowska, who writes that it is "the general orientation of a culture, its adopted hierarchy of values, either formulated explicite or that can be read from human behaviour" (Ossowska, 1973, p. 5). Therefore, the ethos of collective responsibility consists of the following elements: frequency of occurrence in different areas and the ways of justification.

2. Defining the subject of the study

The subject of our interest is the presence of the concept of collective responsibility in the selected areas of public discourse: Internet, the catalogue of the National Library of Poland, the National Corpus of Polish, the views of researchers of this issue, public opinion. We believe that an attempt to determine the frequency of occurrence of the concept of collective responsibility in the public sphere will allow us to provide an answer to the question about the prevalence of this issue in public discourse.

The article makes an attempt to justify the hypothesis that the phenomenon of collective responsibility is very common; even more: contrary to the dominant opinions, collective responsibility turns out to be approved. Two approaches are used to justify the hypothesis. Firstly, the relative frequency of these three terms: responsibility, collective responsibility and individual responsibility is sought. The frequency of their occurrence is checked on the Internet

(Google search engine), in the catalogue of the National Library and in the National Corpus of Polish. The search for the frequency of their occurrence in the above listed sources is based on the assumption that these are such significant collections that they should reveal proportions between the search terms. Additionally, any guidelines concerning the content attributed to collective responsibility are also sought in the listed collections. Secondly, the opinions of the selected researchers on collective responsibility are traced; they will allow our study to be situated in a broader context. Thirdly, our analysis focuses on the statements on the chosen issues, in which the issue of collective responsibility occurs and which are present in the public sphere (including the press, the Internet).

3. Dictionary perspective of collective responsibility

Several popular dictionaries of the Polish language provide slightly different definitions of the term collective responsibility. In the oldest Słownik języka polskiego (Dictionary of the Polish Language), edited by Witold Doroszewski, there is no separate entry on collective responsibility. There is only the entry responsibility, in which the passages concerning collective responsibility appear; these are the following: "A sense of personal responsibility of individuals for themselves and a sense of collective responsibility for the fate of the nation should be strongly cultivated (...). Collective responsibility 'the responsibility of the whole community for the acts of individuals'" (Doroszewski, 1963, p. 760).

In the later Uniwersalny słowniku języka polskiego (The Universal Dictionary of the Polish Language), edited by Professor Stanisław Dubisz, collective responsibility is characterised as follows: it is "a principle that the whole group to which a person belongs is responsible for an offense committed by this person" (Dubisz, 2003, p. 1165).

In turn, online Wielki słownik języka polskiego (The Great Dictionary of the Polish Language) describes the term collective responsibility in the following way: it is “a principle according to which the whole group to which a person belongs is responsible for an offence of a given person, and it is the whole group that should bear the consequences of this offence". Then several statements referring to collective responsibility are quoted.

Although the definition of collective responsibility presented in The Great Dictionary of the Polish Language is the most extensive, at the same time it is too narrow as it assumes that bearing collective responsibility is a consequence of someone's individual action and links collective responsibility with guilt; whereas we are faced with situations in which we assume the existence of collective responsibility although it is difficult to identify individual perpetrators (or perhaps there are none at all) and thus to speak of guilt. This is the case in the situations of collective repression of people by multiple occupiers. Besides, The Great Dictionary does not include the situation captured in the phrase attributed to Norwid:

"The homeland is a great collective duty". We think that among the above-mentioned dictionary definitions, the characterisation of collective responsibility present in the Słownik języka polskiego (Dictionary of the Polish Language), edited by Mieczysław Doroszewski is the closest to those understandings that occur in the public sphere. Therefore, this definition is the basis of our analysis. Collective responsibility is understood by us as bearing consequences by the entire group for the acts of other people (not necessarily belonging to that group) or as attribution of agency to the entire group, regardless of the participation of its members in causing unfavourable events, as well as imposition on all the members of the group some obligations to perform a certain action or refrain from it.

4. Opinions of the selected philosophers on collective responsibility

In the Polish philosophical literature the issue of collective responsibility has not received much attention. By way of example, we shall, on the one hand, refer to the way collective responsibility is defined in encyclopaedias of philosophy, and on the other, we shall present several approaches to the issue proposed by the selected individual authors.

In Powszechna Encyklopedia Filozofii (The Universal Encyclopaedia of Philosophy...; www.ptta.pl/pef) there is no entry for collective responsibility; there is not even an entry for the term responsibility. The same lack can be observed in Słownik społeczny (Social Dictionary) (Szlachta, 2004). An extensive entry on Collective Responsibility is present in Stanford Encyclopaedia of Philosophy (https://plato.stanford.edu). In the entry on collective responsibility the concept is not defined. It is argued that collective responsibility is associated with collective actions taken by groups – which is surrounded by various controversies, in particular, concerning the question whether these groups have to meet the same stringent conditions of moral responsibility that individuals do.

Stanford Encyclopaedia of Philosophy distinguishes between two types of collective responsibility: responsibility for what happened (traditional backward looking collective responsibility) and for what will happen (forward looking responsibility). It also points out several controversies concerning collective responsibility, in particular: whether a group can be the subject of collective moral responsibility; whether moral responsibility can be distributed across individuals of a group for the acts committed by others; whether in practice collective responsibility can be enforced both against individuals and groups; what conditions should be met for collective responsibility to be considered legitimate. In response, a variety of solutions are presented, which aim to question the sense of collective responsibility.

According to Karl Jaspers (Jaspers, 1979), who analyses the guilt of Germans for their actions during the Second World War, moral judgements always concern only the individual, not the collective. However, Jaspers allows for the political responsibility of the nation for its

government and recognises that judgements in terms of collective responsibility are extremely widespread. Rev. Jan Piwowarczyk (Piwowarczyk, 1985) approves of collective responsibility, although he does so conditionally. He rejects Karl Jaspers' theory concerning the issue of collective responsibility of Germans. Jaspers' proposal, he writes, is individualistic, assuming that the nation is an agglomeration of individuals; while, according to Rev. Piwowarczyk, the nation is not a random collection of people; it is a moral unity, a solidaristic group. The degree of solidarity also implies the degree of responsibility, that is participation in collective responsibility. Hannah Arendt (Arendt, 1987), on the other hand, is a strong opponent of collective responsibility. She writes that if collective responsibility were to be allowed, individual responsibility would not be possible, and this would mean that the perpetrators of Nazi crimes would be exonerated. Jacek Hołówka (Hołówka, 2001) analyses several issues traditionally categorised as collective responsibility but rejects such a qualification. He stresses that guilt and responsibility are always individual: "Collective responsibility is always a fiction. The responsible one is that who plans, chooses, decides and acts. Responsibility always falls on individuals, even if it is difficult to weigh and judge their guilt after many years" (Hołówka, 2001, p. 365). On the other hand, Jarosław Warylewski and Jacek Potulski (Warylewski, Potulski, 2007) put forward the thesis that technological progress, globalisation and the increasing importance of economic turnover lead to the growing importance of the collective entities and, consequently, of their responsibility. At the same time, while their civil, administrative liability is recognised, the problem of criminal liability of collective entities is not universally accepted. Yet, this is changing. Both among researchers of this issue and in some countries there are emerging concepts and laws which provide for the possibility of criminal liability of collective entities, treating these entities analogously to individual persons. The authors also remind that the problem of criminal liability of collective entities was present in the earlier legal systems. A change occurred at the turn of the 18th and 19th centuries. Janina Filek (Filek, 2014) writes in a similar vein, acknowledging that individual responsibility is taken for granted, but also argues that today's social transformations make us consider the possibility of responsibility of collective entities (especially companies). The different types of moral responsibility of corporations are pointed out by Tomasz Kwarciński (Kwarciński, 2016). The author distinguishes the following stances in the dispute over the possibility and validity of attributing moral responsibility to corporations: “1) denying moral agency of corporations and thus the possibility of attributing moral responsibility to corporations, 2) approving moral agency of corporations and their moral responsibility, 3) attributing moral responsibility to corporations while at the same not granting them moral agency" (Kwarciński, 2016, p. 92). He goes on to state that two types of argument are used in the dispute: argument from analogy and pragmatic arguments. Argument from analogy draws attention to the similarities or their lack between the human person and the corporation, while pragmatic argument emphasises the fact that granting moral status to the corporation is a necessary condition for achieving the desired practical goals. Kwarciński also notes the problem of bearing the consequences by

employees and other stakeholders for the actions taken by the corporation. He points out that even in the case of individuals the consequences borne by them affect not only the perpetrators of the act but also those surrounding them.

The transformation in the understanding of responsibility, including collective responsibility, is also highlighted by Andrzej Kiepas (Kiepas, 2015). The author presents the conditions of responsibility of societies (science and technology) for innovations. At the same time, while in the analyses of responsibility, including collective responsibility, some subjects (individual or collective) are mentioned, Andrzej Kiepas pays attention to the responsibility of technoscience, which certainly does not have the features of a subject.

5. Entries about responsibility on the Internet

Nowadays the frequency of the occurrence of different content on the Internet is undoubtedly one of the indicators of the interest in a given issue. We have searched through Polish Google pages for the presence of these three keywords: responsibility, collective responsibility, individual responsibility.

The number of pages on Google (Poland) about responsibility (accessed 3.04.2023):

- Responsibility: approximately 88 million pages.
- Collective responsibility: approximately 310,000 pages.
- Individual responsibility: approximately 28 million pages.

As we expected, the Internet has the highest number of pages about responsibility in general, followed by individual responsibility and the fewest pages for collective responsibility. Let us try to find out with what frequency Internet users chose the analysed keywords in 2022.

The frequency of choosing the keywords concerning responsibility according to Google Trends (https://trends.google.pl) in 2022 (accessed 3.04.2023):

- Responsibility: from 39 to 100 per day.
- Collective responsibility: from zero to 100 per day.
- Individual responsibility, according to the system: too little data.

The data which we obtained is surprising. In 2022 the keyword individual responsibility was of no interest to Internet users. The number of people interested in the keyword individual responsibility is too small for detailed data to emerge. In contrast, the other search terms attract the interest of a comparable (small) group.

Let us see what are the ways in which collective responsibility is understood in the most frequented sites on the Internet (Google, keyword collective responsibility, https://www.google.com). We believe this is a significant guideline indicating the presence of the issue of collective responsibility in public discourse and the ways in which it is understood. We took into account several dozen of top-ranked text pages, excluding video pages.

The first place is occupied by the concept of collective responsibility present in Wikipedia (Wikipedia, pl.wikipedia.org/wiki). The readers of the entry learn that collective responsibility is collective, disciplinary punishment used in closed institutions (boarding schools, military units, prisons, psychiatric facilities). The entry collective responsibility in The Great Dictionary of the Polish Language (Wielki słownik języka polskiego..., wsjp.pl) is high on the list, although lower than Wikipedia.

Many times what comes high on the list is the information about a law addressing the issue of collective responsibility. Here, the phenomenon of collective responsibility is treated as something ordinary, yet, requiring good specification of the conditions of applicability. Among the texts on the responsibility of collective entities, we can also mention an article by Janina Filek on the responsibility of a collective entity (Filek, 2014). Several pages of the article are devoted to opposing the application of collective responsibility to a group of students. In this context, there is a reference to the educational law, which states the illegality of collective punishment of students. Also, a few times one can come across some pages concerning the acts of forcing employees to agree to bear collective responsibility for company property losses which occurred during work, and a broader statement indicating the necessary conditions for accepting joint responsibility for entrusted property. Among the pages analysed there is also one dedicated to the collective responsibility for rubbish, which should be borne by tenants. Several times, in other places one can find pages devoted to the responsibility for acts committed during the communist era. These are both statements approving and opposing this form of responsibility. Further down, there are a few pages concerning the use of collective responsibility by Germans during the Second World War, which express explicit opposition (warning) to this practice.

Among those analysed there is a page devoted to English translations of a dozen examples of the use of the term collective responsibility. The examples provided include: responsibility of road users for road safety; opposition to collective responsibility as injustice; responsibility of families in Poland during the German occupation; collective responsibility for crimes committed in the name of the Reich; collective responsibility of the commune (in former centuries) for duties to the lord. Further down there appear similar translations into German.

Apart from the article by J. Filek, cited above, Internet user can come across several authorial statements: a column by Maciej Kawałko (Judge of the District Court in Szczecin) about the responsibility (duty) obliging one to get involved in the life of the collective, especially (in the case of judges) by the creation of a senior judge's house (Kawałko, Odpowiedzialność zbiorowa; https://ingremio.org) or a statement by a blogger, Jesuit Stanislaw Biel on collective responsibility. While analysing the opinions of the prophet Ezekiel, Biel questions the concept of collective responsibility. He argues that everyone takes a personal responsibility for his or her life; however, we have also a duty to admonish our neighbour when he or she sins (Biela, 2020; jesuici.pl/2020/09).

A review of the dozens of the top-ranking pages on collective responsibility on the Internet reveals that the Wikipedia entry comes first on the list of most frequented pages and at the same time collective responsibility is most often associated with the responsibility of collective entities, collective responsibility of employees and students. Less frequently there appear pages on the responsibility for the acts committed during the times of the People's Republic of Poland and the Second World War. Other understandings of the term occur even more seldom. The judgments of the phenomenon are various. The predominant view acknowledges the existence of collective responsibility and then demands the formulation of the conditions for its application. In the case of responsibility for the acts committed in the People's Republic of Poland the judgments are contradictory: both approving and denying it.

6. The entry collective responsibility in the National Library catalogue

We investigated the popularity of the issue of responsibility in the resources of the National Library catalogue, that is, marking the texts whose titles contain the relevant words (responsibility, individual responsibility, collective responsibility). In our opinion, the frequency of occurrence of these terms in the titles of books and articles proves their attractiveness for researchers. Undoubtedly, the terms mentioned may also occur in the texts with other titles, however, we consider the presence in a title as particularly significant.

Below we show the presence of the titles containing a keyword in the National Library catalogue (National Library Catalogue, catalogues.bn.org.pl, accessed 3.04.2023):

- Responsibility: in 8537 titles,
- Individual responsibility: in 15 titles,
- Collective responsibility: in 65 titles.

What surprises is the scant presence of the phrase collective responsibility, and even less of individual responsibility, in the titles of books and articles. The number of texts with the term collective responsibility in the title is even lower than the statistics on the National Library's website show. It is caused by the fact that a considerable number of texts are marked because of the presence of the term collective work. The following issues constitute the subject of interest in the texts with the phrase collective responsibility in the title: collective responsibility in general, concerning tenants, concerning the Polish population of the Biłgoraj poviat during World War II, in criminal law, in corporate crime, in a situation of accidental coincidence of names, corporate responsibility, in social reporting. The texts whose titles contain formulations on corporate social responsibility, technology, marketing, health sector or airlines can also be included in this category (the National Library catalogue).

7. The presence of the phrase collective responsibility in the National Corpus of Polish

According to the self-presentation on the website of the National Corpus of Polish (NKJP) (Narodowy Korpus..., nkjp.pl/), the Corpus is a collection of diverse texts from the earliest times to the present day. It allows one to search for typical usages of single words or phrases as well as other information about their meaning and function. It was created between 2008 and 2012 and is a joint initiative of several scientific institutions, carried out as a research-development project of the Ministry of Science and Higher Education. It has about 1500 million words in its entirety, and about 250 million words in a balanced collection (with respect to the genre and subject). The NKJP has also tools for searching the resources. We used the PELCRA search engine to search the NKJP for the already highlighted phrases concerning responsibility. Since the balanced collection is intended to be more representative of Polish language texts, we decided to use it to search for the phrases of our interest.

In the in the balanced corpus of the National Corpus of Polish, the presence of phrases concerning responsibility looks as follows:

- Odpowiedzialność (Responsibility): 12133 times.
- Odpowiedzialność indywidualna (Individual responsibility): 5 times.
- Indywidualna odpowiedzialność (Individual responsibility): 9 times.
- Odpowiedzialność zbiorowa (Collective responsibility): 57 times.
- Zbiorowa odpowiedzialność (Collective responsibility): 18 times.

In the NKJP's balanced corpus the phrase responsibility occurs 12133 times, while individual responsibility - contrary to the expectations based on the belief that the endorsement of individual responsibility dominates - is present only fourteen times, much less frequently than collective responsibility, which occurs seventy-five times.

In the balanced corpus the phrase collective responsibility occurs in the following contexts/areas (National Corpus..., nkjp.uni.lodz.pl):

- civilised countries approve of individual responsibility; the development of civilisation consisted in abandoning collective responsibility,
- it used to exist at some time in the past: in the Middle Ages, in the past, in the People's Republic of Poland, during Stalinism,
- in some countries there is a sense of collective responsibility,
- monopolists, including banks, apply collective responsibility,
- it functions under special conditions: German occupation, against soldiers subordinated to a unified command, against members of organisations considered criminal,
- it exists when there is group solidarity, identification with the national community, being in a group encourages the application of collective responsibility, the homeland is a collective duty, it is selectively applied to different groups,

- it lies at the heart of racial hatred,
- it is present in the VAT law; insurance companies use collective responsibility in the payment of driver's insurance,
- it is applied to train passengers, family members, members of a housing association, inhabitants of some town: for the bad acts of some members of this local community, residents of a building, a housing association for bad rubbish collection, emergency workers,
- government is collective responsibility,
- elites are responsible for the fate of the country,
- companies have collective responsibility for the actions of another company,
- it is present in advertising campaigns.

The above review demonstrates that the authors of the quoted texts noticed the presence of collective responsibility in many areas of social functioning. Their attitude to this phenomenon is not very diverse: distance or opposition prevail. The approval of collective responsibility is present in few texts; in these cases such statements appear: collective responsibility is acceptable in certain situations, when a military unit is under a single command, it is permissible when an organisation or an institution has been criminalised, additional punishments cannot be considered collective responsibility, elites are responsible for the fate of the country. The authors of the quoted texts also note the dual nature of collective responsibility and consequently a dual attitude to it is present in some of the texts. We are not responsible for the sins of our ancestors, but still, if we identify with a certain community, we cannot reject them. The dual attitude consists in approving the actions of the community with which we identify while rejecting the actions of an alien group.

8. The issue of collective responsibility in the current public discourse

The perception of collective responsibility is noticeable in many areas in the current public discourse. We will highlight a few of them which we believe are currently the most common and frequently justified in our cultural circle: war, international sanctions, responsibility for the past and future, the role of discriminatory stereotypes and the role of algorithms.

8.1. War and collective responsibility

Wars have been a common phenomenon both in the past and today. The consequences of wars are borne both by their initiators and, above all, by those affected by aggression. The consequences are various: death, disability, material loss, but also accusations formulated by an aggressor about victims' guilt for the outbreak of war. Evaluations of wars vary and are

formulated from different points of view. The theories of just wars define the conditions when the use of various forms of collective violence against others is justified (Wyszczelski, 2009; Walzer, 2010). The sides involved in the conflict provide numerous justifications for their actions. Referring to one of the most important issues present in the public discourse, Russia's war with Ukraine, we can see how the Russian authorities (although a similar mechanism is present in analogous situations) constructed such justifications early enough (Domanska, 2021; Labuszewska, 2023) and quickly disseminated them, thus leading to the widespread approval of the war among Russian citizens and the approval of the situation in which the Ukrainian population bear the negative consequences of the war. These consequences, to varying degrees, also affect the inhabitants of many other countries. The protracted war forces changes in justifications, therefore while initially the Russian government and Russians justified the aggression by pointing at Ukraine, over time their justifications refer to the actions of the US and the West (Gutkov, 2023). In response to Russia's actions it was decided to impose international sanctions on the aggressor.

8.2. International sanctions

Various types of sanctions are imposed on the states and societies which violate the international order, particularly those that are aggressors or are condemned for other negative phenomena, such as human rights violations (Menkes, 2011). Sanctions are imposed on both states and particular individuals. Consequences (sanctions) are imposed not only on states or their leaders directly responsible (to some extent) for aggression or other forms of violations of the international order, but, in fact, also on other residents of the state. It is expected that sanctions will worsen the situation of the people, regardless of their individual contribution to the negative actions of the state, thus leading to a change in the state's policy. The inhabitants of the sanctioned state are accused of complicity in the condemnable actions of the authorities. The most recent example of the use of sanctions are those imposed on the Russian Federation, numerous representatives of its authorities and those supporting the authorities. The assessment of these sanctions in the public discourse is varied, including critical ones, with critics primarily raising the issue of their effectiveness, the violation of the interests of the states applying them. At the same time, questioning the use of sanctions due to the rejection of the principle of collective responsibility is rare and is associated with the reluctance of the mainstream opinion. The arguments justifying the collective responsibility of the citizens of the aggressor state point out that Russian society stands in solidarity with the authorities and that ideologies justifying the actions of the authorities prevail in the country. It is stressed that Russians are guilty of or complicit in the war with Ukraine and war crimes because they voted for Putin despite the war in Georgia or the annexation of Crimea. Among the opinions collectively blaming Russians and thus justifying the use of collective responsibility, one can also notice those that refer to the idea of russkiy mir (the Russian world) (Skwieciński, 2022), russkaya Dusha (the Russian soul) (Who Fights..., tvp. info, 2022), hatred of the West (Shahaj, 2023), but also the passivity of the

Russians (Gallamov, wiadomosci.wp.pl, 2023); however a small part of these opinions oppose the war waged by Russia, and slightly more state that starting the war with Ukraine was a mistake (Survey..., www.rp.pl/konflikty-zbrojne, 2023).

8.3. Responsibility for the past

The consequences for the past deeds of ancestors fall also on successive generations. Groups (nations, states, social classes) are held collectively responsible and blamed for various acts committed in the past, which are today (though not exclusively) deemed vile. People (groups of people) who consider themselves to be descendants of the victims demand various forms of reparation, whether symbolic (apologies) or material (compensation, reparations). One of the consequences of the treaty ending the First World War was the imposition of an obligation on Germany to make reparations for the damage and losses suffered as a result of warfare (54th Treaty of Peace between…, isap.sejm.gov.pl, 2023). The last instalment concerning reparations for the First World War was paid in 2010, thus it affected several successive generations. A similar situation occurred after the Second World War. As a result of the decisions of the victorious powers (particularly at the Yalta Conference in February 1945), Germany was obliged to pay reparations. All German citizens incurred the costs of reparations, regardless of their individual contribution to the outbreak of the war and the conduct of hostilities. The problem of reparations (compensation for losses incurred as a result of warfare) is not only a historical phenomenon; it is also perceived as significant and relevant in today's discussions, for example, present in Polish-German relations. The majority (57%) of CBOS respondents (Poles about Reparations..., cbos.pl, 2022) approve of the Polish government demanding reparations from Germany. In contrast, unsurprisingly, in Germany 75% of respondents oppose paying reparations to Poland (Wasilewska, 2023, events.interia.pl/country). While supporters of reparations place responsibility on past and present generations of Germans and blame them for the losses caused by the war, opponents differentiate between responsibility and blame. They are willing to burden with responsibility and blame the people living in Germany during the war but reject such an approach for contemporary generations (Walenciak, 2022).

Burdening people with responsibility for the past not only involves demanding compensation (reparations) but it also takes more symbolic forms: apologies from state leaders, leading politicians associated with states, groups which did harm in the past. Sometimes such apologies do take place, which proves the belief that there is collective responsibility for the ancestors' acts and that it is legitimate to bear the consequences for their actions.

A part of the phenomenon of collective responsibility for the past is cancel culture. Some scholars perceive it as an example of moral absolutism or new totalitarianism, supporting their view by referring to the common practice of using contemporary arbitrary rules to judge people and phenomena from the past. People living in the past are punished in a symbolic way (toppling of monuments), some groups of people who are identified with the past evil politics

are condemned (Kuryła, 2021, klubjagiellonski.pl; Kuczyńska, 2020, krytykapolityczna.pl). However, contemporary politicians and groups of people are also stigmatised for failing to condemn the past bad deeds (exploitation of slaves) (Another Country..., Rzeczpospolita, 8 May 2023).

8.4. Responsibility for future

Alongside collective responsibility for the past, collective responsibility for the future is developing. This type of responsibility has a form of a postulate and also concerns an unspecified entity or entities (Lukaszewska, 2020; Kiepas, 2015; Kuzior, 2007; Friday, 2016; Mandle, 2009). The present generation is considered responsible for numerous future situations concerning the very shape of societies, states, economy, technology, science, artificial intelligence, environment, the quality of life of future generations. Different rules are being developed in each of these areas, the violation of which gives rise to negative individual but also collective consequences. What turns out to occur particularly often is the accusation of today's generations of destroying the natural environment (climate), disregarding the future consequences of present actions and omissions. The discussion on the responsibility for the future of the Earth takes place at different levels: scientific or philosophical, and it concerns, among others, the issue of the Anthropocene or the Capitalocene (Jasikowska, Palasz, 2022), but also international, global and European politics, where decisions are made to introduce inter-state environmental regulations. The understanding for the collective responsibility of contemporary generations for the future is also visible in public opinion surveys. These surveys report that the inhabitants of Poland are very much concerned about the state of the Earth's environment (Ecological Awareness of Poles, www.cbos.pl, 2020) and, as they declare, take various actions to contribute to some changes, recognising that everyone is responsible for this state.

8.5. Discriminatory stereotypes and collective responsibility

There are numerous stereotypes present in public discourse, some of which involve placing collective blame and responsibility on different groups. People belonging to these groups are discriminated in various ways, while their individual behaviour or abilities are not taken into account. Most often this stereotyping concerns national, class, religious groups, groups distinguished by sex, gender identity, place of origin. Regardless of their individual characteristics or behaviour, these groups suffer various negative consequences of such stereotyping: lack of access to work and good workplace, occupation of the lowest places in the social structure, negative opinions. This is often linked to their racialisation, which involves linking ancestry with specific characteristics, as well as with the place assigned in the social hierarchy (Wielgosz, 2021). In result, we learn that some peoples are 'fit' only for low-prestige jobs (Sapieżyńska, 2023) politicians steal (Kaczyński, gazetaprawna.pl, 2023), lie (Mearsheimer, 2012; Cipiur, bank. pl, 2022), doctors are corrupt (Doctors are..., Wprost,

7.09.2006)[1] , the poor are lazy[2] , immigrants threaten us[3] , political opponents deserve a negative opinion (Płociński, 2019, www.rp.pl).

8.6. Algorithms as a basis for collective responsibility

Nowadays, there is a tendency to regulate many social phenomena by referring to data sets created by using statistical methods and statistically constructed algorithms. The motives for this practice are (at least officially) noble. What is accentuated is the concern about fairness, security, objectivisation of criteria of access to various goods, their rationalisation and meritocracy. As a consequence, algorithms create differentiated sets of people who suffer the consequences of being included in a group, regardless of whether they individually possess certain characteristics. The research proves that the use of algorithms discriminates various groups which are deemed minorities. This is particularly the case for women, who are discriminated in their access to various goods (e.g. jobs), regardless of their competence (Perez, 2020). Another example relates to the calculation of car insurance premiums. Their amount depends on the average accident rate and the costs incurred by the company. The premium also depends on an individual factor, that is the behaviour of a driver; however, certain groups (young drivers) pay higher premiums, regardless of their individual behaviour (Why young drivers..., cuk.co.uk/advice, 2023). There also exists geographical crime profiling aimed to identify the areas at risk of crime (Mordwa, 2019). In some countries the police distinguishes certain areas as being at risk of potential crime, treat their residents as prone to crime, direct more forces there and, as a result, find a higher number of violations of the law.

9. Conclusions

The above analysis revealed the diverse presence of collective responsibility in different areas of public discourse. Collective responsibility is present and noticeable on the Internet, the National Library catalogue, the National Corpus of Polish, yet, disproportionate to its factual

[1] Later CBOS surveys do not confirm this opinion. In the survey from December politicians are in the first place (52% respondents) and the health service is in the fifth place (23% respondents). See: Różne barwy korupcji w Polsce. Komunikat z badań CBOS (Different Faces of Corruption in Poland. CBOS Research Report), Grudzień 2021, https://www.cbos.pl/SPISKOM.POL/2021/K_151_21.PDF, 4.05.2023.

[2] This is what 56% of CBOS respondents thought in June 2017: Społeczne postrzeganie ubóstwa. Raport z badań CBOS (Public Perception of Poverty. CBOS Research Report), June 2017, https://www.cbos.pl/SPISKOM.POL/2017/K_083_17.PDF, 9.11.2022.

[3] According to a survey conducted by CBOS in 2015, 81% of internet users had negative opinions about immigrants. The dislike results from the difference in religion and culture, the belief that they are aggressive towards white women, bring diseases, take advantage of social benefits. See: Polacy o uchodźcach – w Internecie i w ‘realu’. Komunikat z badań CBOS (Poles about Refugees on the Internet and in 'Real Life'. CBOS Research Report), November 2015, https://www.cbos.pl/SPISKOM.POL/2015/K_149_15.PDF, 4.05.2023.

significance. It is treated as something strange and alien because only individual responsibility is considered appropriate.

The occurrence of collective responsibility in public opinion proves that both its widespread presence and approval. Collective responsibility concerns a great number of phenomena. In this article we have pointed out a few of them which, as we believe, are most frequently present in today's public opinion. Hence, we can speak of the ethos of collective responsibility as a hierarchy of values approved by various groups, which consists in charging entire groups with the consequences for the acts attributed to others. The list of consequences imposed on groups which were to bear collective responsibility is extensive and includes various forms of condemnation, disapproval, ostracism, material and financial sanctions, barriers in employment, impediment (ban) in travelling. More or less perfunctory justifications for imposing collective responsibility can be traced in public opinion. These are the following:

a) it is justified by duty; one would like to say "pure duty": homeland is a collective responsibility; goals of science, technology should be good "by nature";
b) it is justified by an important purpose: opposition to aggression, human rights violations, prevention of crime, substantive, objective selection of candidates for employees, students, fair evaluation of the past, concern for the future of humanity;
c) an analogy between individual and collective responsibility is sought by attributing to groups a subjective action, that is the one which characterizes individuals. The nation of an aggressor state is united by an imperial ideology; the group to which we apply collective responsibility is made up of people guided by an evil ideology, of lazy, stupid, evil individuals;
d) practical justifications: maybe not everyone in an aggressor's group is equally responsible but we cannot leave the situation unresolved; sanctions affecting all members of a given group (on the basis of solidarity) are necessary.

Collective responsibility exists as a social phenomenon which is described and assessed to varying degrees in public awareness; nevertheless, contrary to the views of many researchers or ethicists, it occurs more frequently than individual responsibility. The concept of collective responsibility includes intertwined (though not always clearly distinguishable) issues: causation, that is, participation of the group or group members in doing evil, and bearing the consequences as a result of belonging to the group (negative moral, legal, economic sanctions, disciplinary penalties). The question of moral assessment of this form of responsibility is difficult to determine unequivocally; it depends on many factors, such as: the degree of identification with a given group, the degree of approval or disapproval of actions or omissions in social life, following stereotypes in the perception of social groups, and many others. Therefore, this question undoubtedly requires further research

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INNOVATIVENESS IN AN URBAN CONTEXT. MEASURES, APPROACHES, PLACE OF POLISH CENTRES

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Purpose: The main aim of the article is to highlight the importance of city located sources of innovativeness. The literature review was done to describe the measures, approaches and indicators which are the most often present in elaborations dealing with the issue of innovativeness in an urban context. What is more, the article made it possible to recount the place of polish centres mentioned in those rankings.
Design/methodology/approach: The paper is based on the terminological foundations constituted by the terms of: change, difference and development. Much as they are all essential to the economy, none of them could be realized without another crucial factor which is innovativeness. The term introduced hereinbefore has been described in many publications, for instance those written by Joseph Schumpeter, Peter Drucker, Oskar Lange and John K. Galbraith – just to mention the most classical ones. What may be seen as surprising, innovative potential is often measured on the regional level but rarely on the municipal level. In order to fill in this gap, shed some more light on the problem, a literature review was conducted.
Findings: Whereas innovativeness on the national and regional level is often measured, there is only a few studies tackling the title phenomenon on the city level. What is more, available rankings are relatively often published by the private sector institutions, which sometimes may be seen as a quality questioning their objectiveness.
Research limitations/implications: The review of data and sources included in the article is limited to the rankings which are relatively popular and the most often proposed by the search engines of web browsers. It is highly recommended that further research studies include and examine a wider selection of rankings – even those not widely recognized.
Practical implications: The paper highlights the need for establishing comprehensive scientific city innovation rankings. The majority of currently available rankings is established by the business sector and use a varied and incoherent list of indicators. It is therefore recommended for the scientific sector to try and develop a more universal, widely recognized and highly objective ranking.
Originality/value: The paper summarizes data which are scattered throughout different sources of information. What is more, according to this summary it tries and recounts the place of Polish centers.

Keywords: innovativeness, innovations, cities, rankings.

Category of the paper: Viewpoint.

1. Introduction

An immanent feature of the physical and social order is being subject to transformation. Although this statement may be accused of over-simplification, it is legitimized by the number of stories indicating human reflection on the inevitability of transformations of the experienced world and their irregular nature. The Ionian philosophers, based on observations of nature (including the behaviour of fire and water), saw the basic principle governing reality in changeability (Reale, 1994). The heritage of antiquity in this regard is also the Old Testament parable of seven fat and lean years, which can be interpreted as an early formulation of the law of economic business cycles.

More recent research provides additional support for these early ideas. Pitirim Sorokin (2009, pp. 7-10, 27-35) in his monumental work on social mobility quoted historical data proving the permanence of fluctuations within geographical and social space. Despite the subjectively recorded moments or times of stagnation, in the long-term perspective, reality is far from a steady state, as evidenced by the moments of "boom" and "decline", accumulation and plundering of wealth, business cycles of various lengths, or the law of diminishing profits (Sorokin, pp. 32-33). Relatively recent publications make bold statements about the extension of the thermodynamic principle of entropy (energy dissipation) to social reality (Suzman, 2020, p. 326). From an anthropological perspective, it is the striving for changeability and chaos that overwhelms it that becomes the basis for the emergence of organized forms of collective life (in other words, forms of resource accumulation) in the form of families, tribes, the state or the city - to name but the most important of them (Suzman, p. 327).

2. From change to development - significant terminological foundations

It is therefore not surprising that many analyses of reality are largely focused on the concepts of "change", "difference", "development", "progress" or "transformation". The above terms, although different in their meaning, show one of the main features of social sciences, which is not only being satisfied with a static description of the nature of phenomena, but also the formulation of dynamic observations (Turowski, 2000, p. 73). As already suggested by the previously cited terms, the description of the phenomena affecting society is undertaken using different terminological keys, which is often not accompanied by an attempt to hierarchize them or reflect on their meaning.

Although literature on the subject does not fully agree on the above matter, reconstructing the available voices, one can introduce a division into the following issues: difference, change, process and development. In turn, they mean "differences in aspects of the social system, within

specific situations and facts, observed at a given moment" (difference), "a sequence of structural transformations of the social system observed in the perspective of time" (change), "a train of sequences following each other observed in the perspective of time and causally conditioned changes in the social system" (process) and finally "the process of accumulation of individual changes of a progressive nature observed in the perspective of time that take place in the social system" (development) (Krzysztofek, Szczepański, 2005, pp. 11-13; Sztompka, 2004, pp. 437-439; Turowski, 2000, p. 73). It is worth noting that the progressive nature of development is manifested in the fact that its direction is valued and evaluated positively by bringing it closer to a state of society defined as desirable (Sztompka, 2004, pp. 441-442).

The terminological order described above justifies the greatest interest in the issue of development assumed by the author of this text. The accumulation of directional changes of a progressive, expected and highly valorised nature is important from the point of view of regional and local studies and the formation of public policies. Regardless of whether we consider these issues from positions closer to socio-economic geography (strengthening socio-economic regions) or from positions closer to the sociology of the city (mechanisms of social creation of space), one of the basic determinants of progressive changes is technical and technological potential (Tkocz, 2008, pp. 147-173; Majer, 2010, pp. 67-69).

3. Innovativeness from a scientific point of view - a cross-section of the issue

At this point we come to the key concept for the entire publication, which is innovativeness. The title term already at the level of common collocations reveals a high connection with both development and technology. Moving from the plane of collocation of everyday life to more scientific definitions, it is worth pondering for a moment on the semantic practices occurring here. Among the numerous synonyms of innovation, there are terms such as: "novelty", "technical novelty", "invention", "improvement" and "enhancement" (Dictionary of the Polish Language PWN, 2022). The associations with the previously mentioned progressive changes are therefore clear in this case. Innovativeness itself at the dictionary level is defined as "newness", "introducing something new" (Dictionary of the Polish Language PWN, 2022).

Obviously, the most valuable scientific definition of innovation and innovativeness for further discussion is more complex. In literature on the subject, references to the four most frequently quoted theoretical assumptions dominate in this regard: Joseph Schumpeter, Peter Drucker, Oskar Lange and John K. Galbraith. For Schumpeter (1960, p. 34), who is accredited with the status of the precursor of the theory of innovation, innovation is "the introduction of new products, new methods of production, finding new markets, acquiring new sources of raw materials and introducing a new organization". We also owe the

economist the famous comparison of innovation to "creative deconstruction" or "creative demolition", as a change so radical that it pushes away the old solutions (Wojtasik, 2013, p. 134).

According to Drucker (1992, p. 126), innovations are "creative changes in the social system, in the economic structure, in technology and in nature". For the cited author, the status of innovation can be granted to any idea, procedure or thing that is qualitatively different from the existing ones and thus constitutes a novelty. At the same time, it should be noted that "transforming innovations into products and market activities is (...) undertaking a complex activity with a high degree of risk and uncertainty" (Drucker, p. 126).

Lange (1973, p. 665) considered innovations in the context of their impact on the final efficiency of the input of the production factor and the final cost of the product. The researcher stated that as a result of the application of innovation, the final cost of the product or its final production cost changes (Musiał, Chrzanowski, 2018, p. 47). Thus, two ideal-typical possibilities can be distinguished here. Firstly, if the final cost increases, then the company, wanting to maintain the current level of profitability, is forced to increase production. On the other hand, the reverse situation is also possible. The use of innovation reducing the final cost allows the company to maintain the achieved level of profitability, even with reduced production volume. Between the two extreme situations described above, there are a number of intermediate configurations which, in Lange's opinion, show various possible combinations of change (Musiał, Chrzanowski, 2018, p. 47).

The fourth of the classics of shaping thoughts about innovation discussed here, Galbraith (1979, p. 245), points out that innovations in the sector of large enterprises are of an organized nature. This means that the improvements in production processes that need to be made are determined well in advance. The implementation of these improvements is supported by properly established schedules and budgets. The author noted that innovations in the field of production processes result in the replacement of labour with capital. This entails increasing the certainty of the company's income (Musiał, Chrzanowski, 2018, p. 49).

It should be noted here that in its modern form the notion of innovation is often perceived as open innovations. The mentioned term is described as purposively managed knowledge flows across organizational boundaries. In other words, it is assumed that the most beneficial for businesses is when innovations easily transfer and circle between different firms as well as between firms and creative consumers. The bottom line is that applying open innovation gain increased consumer satisfaction, increased employee productivity and development of new products and services (Kuzior, Sira, Brożek, 2023). What is important from our point of view is that the notion of open innovation can be applied not only to the commercial sector but also to organizational purposes and even politics (Bogers, Foss, Lyngsie, 2018).

On the sidelines of the considerations presented here, it is impossible to omit the Oslo Manual (GUS, 2018, p. 48), often quoted in literature on the subject. In its latest edition, innovation was defined as "more than just an invention", but also the need to "implement"

a new or significantly improved product or process, a new method of marketing or a new method in terms of business practices, workplace organization or relations with the external environment . In the Oslo Manual (GUS, 2018, p. 48) we also find the statement that innovation is "a dynamic and ubiquitous activity that occurs in all sectors of the economy". Thus, it is not an exclusive function of the enterprise sector, and may be undertaken by other organizations or individuals – i.e. all entities capable of collecting and disseminating knowledge and, on this basis, proposing changes in products or processes (GUS, 2018, p. 48).

Importantly, the Oslo Manual describes four dimensions of innovation that can provide measurement recommendations. They are knowledge (understanding information, processing it for various purposes), novelty (potentially new applications that can be measured by objective measures and subjective opinions), implementation (systematic efforts to make innovations available to potential users) and value creation (providing direct and indirect benefits – mainly in terms of profitability) (GUS, 2018, pp. 48-52).

4. Significant measures of innovation

Recalling the issue of measurement inevitably brings us to the next point, which is the quantification of innovation processes. For this purpose, standardized tools in the form of indexes are used, which are then used to prepare rankings. Probably the most frequently cited sources in this regard are the Global Innovation Index, Innovation Indicators, the European Innovation Scoreboard, along with its accompanying Regional Innovation Scoreboard. Both Innovation Indicators and EU indices are based on the previously described Oslo Manual. The first measure mentioned above, GII, which has been successively developed for 14 years, includes 132 economies in its parameterization, which account for over 94% of the world's population and 99% of global GDP. This measure is composed of two sub-indexes, inputs (Input Sub-Index) and outputs (Output Sub-Index), which are additionally divided into detailed parameters. On the input side, these are elements of the economy that are conducive to undertaking innovative activities: institutions (political environment), social capital and research (education), infrastructure (communication and innovation technologies), advanced market mechanisms (availability of loans), advanced business mechanisms (absorption of knowledge). On the side of outputs, there are results in the field of knowledge and technology (creation, impact, diffusion of knowledge) and results in the field of creativity (creative goods and services). According to the latest available list for 2021, Poland closes the table of the 40 most innovative economies in the world, among the European Union countries, ahead only of Romania and Bulgaria, remaining far behind Switzerland, Sweden and the United States, which lead the ranking (Global Innovation Index, 2021, p. 4).

The main innovation indicators are grouped into four sections: 1) science, technology and industry; 2) innovation and technology; 3) business innovation; 4) tax support for R&D and innovation. Within each section, detailed statements are regularly published, covering such parameters as access to broadband Internet per capita, employment dynamics in the IT sector, the role of foreign headquarters in the IT sector, or expenditure on higher education (OECD, 2017). Among the many detailed indicators available here, which due to limited space will not be presented here, it is worth paying attention to the basic chart available in the general report Innovation Indicators 2019 (2020, pp. 1-2). It contains information on the percentage of enterprises reporting at least one innovation in the perspective of 2014-2016 and the share of employment in innovative companies. Also this time, Poland ranks low, both in the case of the first and second parameter. Among the 39 OECD countries, companies from Canada, Switzerland and Norway were named the most innovative (OECD, 2017, p. 2).

The European Innovation Scoreboard is a ranking comparing the level of innovation in Member States and European countries that are not members of the United Community. The indicator in question takes into account such component measures as: human resources, digitization, company investments, the use of information technologies, the state of intellectual resources. By providing the results, the European Innovation Scoreboard assigns the countries included to four categories - emerging innovators, moderate innovators, strong innovators and innovation leaders. The latest edition of the ranking places Poland in the first category – somewhat euphemistically named – a category of European innovation laggards: right next to Romania, Bulgaria and Lithuania. At the other end of the scale are innovation leaders: Denmark, Finland and Sweden (European Innovation Scoreboard, 2021, pp. 2-3).

What is even more important from our point of view, as an extension of the above index, is the fact that data on regional innovation diversity in the EU is published - referred to as the Regional Innovation Scoreboard (2021, pp. 17-18). Based on an indicator framework similar to the EIS, the Regional Innovation Scoreboard also adopts the division into four categories of innovators from the former. Again, Poland does not look very favourably in the ranking under consideration. Virtually all regions of the Republic of Poland are marked with the category of emerging innovators (more on this topic see also: Kuzior, Pidorycheva, Liashenko, Shvetsova, Shvets, 2022). The only two regions officially meeting the criteria of moderate innovators are the Lesser Poland voivodeship and the Warsaw capital subregion, statistically separated from the Masovian voivodship (Kuzior, Pidorycheva, Liashenko, Shvetsova, Shvets, 2022, pp. 19, 30).

5. City innovation rankings

In addition to indicators measuring innovation at the global or local level, there are also those that rank the most innovative urban centres. Such classifications sometimes appear in the opinion-forming press. At this point, one can point to the rankings of the Polish edition of Forbes (2018) or the American Newsweek (2019) published in recent years. In the first case, the national editorial office of the magazine indicated the ten most innovative Polish urban centres. The list from 2018 opens with Częstochowa, which was appreciated by the magazine, among others, for social programs and real estate tax exemption for entrepreneurs creating jobs. The following places were occupied by: Warsaw and Kraków, Toruń, Wrocław, Gdańsk and Rzeszów, Poznań and Białystok. In the second case, the editorial office of the American Newsweek focused on identifying the most innovative cities in the world. According to the magazine, these were: Amsterdam, Copenhagen, Barcelona, Helsinki, Hong Kong, Fukuyoka, Chicago and Oslo.

Although we do not undermine the cognitive value of these rankings, the author of the article intends to focus more on the description of more comprehensive rankings, less based on the expert method, opinions and selected indicators, and more on broader sets of indicators and quantifiable data. Interestingly, a significant part of the available studies are those that are signed by the business sector and its environment institutions; the subject of innovativeness of cities is less often taken up by the science sector. This can be interpreted as the deep rooting of the issue of innovation in the repertoire of issues important for business, while possibly diminishing the importance of this term in the scientific community.

The main objective of the City Innovation ranking, developed jointly by Bloomberg Philanthropies and the OECD, was to determine how cities invest in innovation and to check to what extent innovation expenditure generates results for the well-being of city residents. The base of centres included in the study covered over 140 cities from OECD countries and beyond. On the innovation capacity side, the researchers took into account parameters such as innovation building strategies and attitudes, measures and funds targeted at the development of urban innovation capacities, or the way cities obtain and share data. As mentioned above, the ranking was characterized by the fact that, in addition to estimating the innovative potential, it also addressed the issue of translating this potential into the well-being of city residents. Indicators of urban well-being include: percentage of households spending less than 25% of their income on rent, air pollution, turnout in local elections, unemployment rate and percentage of the population satisfied with their lives. Another specific feature of the list is not indicating cities with higher or lower places, but a separate descriptive assessment of the strengths and weaknesses of each city included in the ranking. The study also points to several universally observed trends. Satisfaction of city residents reveals the connection with, among others, the size of the public innovation sector, the size of the open data set and the involvement of

stakeholders. It is worth noting that the 2020 list does not include any of the Polish cities. From Central Europe, only Bratislava and Vilnius have made the list.

The Innovation Geographies ranking, signed by the real estate agency JLL, aims to identify global leaders in innovation and talent concentration in the post-pandemic reality. In this case, the following innovation indicators were used: foreign direct investment in high-tech industry, expenditure on R&D, number of patent applications and attractiveness for venture capital. As mentioned above, in addition to addressing the issue of innovation, this list also includes a separate index of talent concentration. Among the detailed parameters constituting it, there are the level of education of the population and the level of employment in the high-tech industry. No Polish cities or urban centres from Central Europe made the ranking. The global innovation leaders are: San Jose, Tokyo, San Francisco, Boston and New York. However, if we are talking about the second dimension of the study, i.e. the world's top cities concentrating talents, these are: San Jose, Boston, San Francisco, London and Tokyo. The presented list is another one that omits both Polish cities and cities from Central Europe.

However, the representation of Polish cities appears in the report of the Australian analytical company think2know. Dated for 2021, the Innovation Cities study contains a list of 500 cities ranked in terms of the innovation potential attributed to them. It indicates the same three cities as leaders: Tokyo, Boston and New York. Among the extensive indicator layer, we will find parameters belonging to the following categories: cultural resources (festivals, shopping malls, availability of newspapers), social infrastructure (access to water, universities, government stability), market networking (city brand, embassies, direct foreign investments) (Ibid.). Among the cities of Central Europe, the highest place was awarded to Prague (59). The list includes four Polish centres: Warsaw (89), Katowice (215), Wrocław (221), Gdańsk (248) and Kraków (258).

Signed by the HSE Institute for Statistical Studies and Economics of Knowledge, the HSE Global Cities Innovation Index from 2021 is prepared on the basis of three sets of indicators: technological development (largest enterprises, R&D expenses of companies, startups, leading universities), creative industries (fashion brands, film and gaming sector, industrial design leaders), and urban environment (costs of running a business and living, transport and digital infrastructure, tourist attractiveness). Information for the list is obtained from such world-renowned sources as: Web of Science, StartupBlink, ArtReview, Passport Euromonitor or World Values Survey (Ibid., pp. 13-14). Unfortunately, although the ranking refers to itself as global, it omits cities from Central Europe, Africa and the Middle East in the parameterization. Thus, we will not find any Polish centres there. Let us mention, however, that for the HSE GCII ranking, the three most innovative cities of 2020 are New York, London and Tokyo (Ibid., p. 24).

The 2021 Global innovation Hubs Index was developed by the Centre for Industrial Development and Environmental Governance (CIDEG) at Tsinghua University and Nature Research. It consists of three detailed lists on innovation in research, economy and innovation ecosystem. The first list deals with the issue of urban human resources, the presence of research institutions and scientific infrastructure. The second list takes into account such component measures as GDP growth and the presence of innovative enterprises. The innovative ecosystem, i.e. the last of the detailed indexes presented here, covers topics such as support for start-ups, public services, and openness to cooperation. In terms of the adopted parameters, the following stand out as global innovation leaders: San Francisco, New York, London, Beijing and Boston. This is yet another ranking in which there are no cities from Poland or Central Europe.

A wide representation of the region, despite the same large base of cities (50), is present in the case of another frequently quoted study - The Most Innovative Cities in the World signed by Paymentsense. The global city index prepared in 2022 is based on five key indicators. These are: the number of patents registered by Google, the number of new business registrations in 2021, the number of universities and their ranking in the RUR World University, the average monthly number of searches for "how to start a business" and the number of business activities registered on the Kickstarter platform. According to the ranking, the global innovation leaders are Washington D.C., Berlin, Paris, Canberra and Beijing. As already mentioned in the study, it includes cities from Central Europe. These are: Bucharest (29th place), Prague (32nd) and Warsaw (34th).

Table 1.
Review of city innovation rankings

No.	Name, year of last release and authors	Methodology	Ranking leaders	Position of Polish cities
1	City innovation, 2018-2020 Bloomberg Philanthropies & OECD	Main objective: Determining how cities invest in innovation and checking to what extent innovation spending generates results for the well-being of city residents. The database consists of over 140 cities from OECD and non-OECD countries. Innovative capacity: • The importance of innovation for the city, strategies and attitudes to build innovation; • How innovations are organized and used in administration; • Measures and funds directed at the development of urban innovative capacity; • How cities acquire, store and share data for innovation work; • Whether and how cities evaluate the results of their innovation strategies Prosperity outcomes: • Households spending less than 25% on rent; • Air pollution; • Deviation of income from the national average; • Turnout in local elections; • Unemployment and employment rates; • Percentage of the population satisfied with their lives; • Life expectancy, percentage of the population without health problems; • Percentage of the population satisfied with their lives; • Walkability index; • Percentage of the population with tertiary education; • Percentage of violent crimes	The list does not indicate cities ranked higher or lower, but it contains a separate assessment of the strengths and weaknesses of each city included in the ranking, and also describes several universal trends. Residents' satisfaction with the city seems to be related to: • The size of the public innovation sector; • Dedicating part of the administrative staff to dealing with innovation; • More open data; • Stakeholder involvement	No Polish cities in the list. From Central Europe, only Bratislava and Vilnius were included

Cont. table 1.

2	Innovation Geographies, 2022 JLL	Main objective: Determining global leaders of innovation and talent concentration in the post-pandemic reality. Innovation indicators: • Foreign direct investment in high-tech industry; • R&D expenses; • Patent applications; • Attractiveness for venture capital Talent Concentration Index: • Quality of higher education; • Level of education of the population; • Level of migration of the working age population; • Level of employment in the high-tech industry	Global innovation leaders (from the list of 25): 1) San Jose; 2) Tokyo; 3) San Francisco; 4) Boston; 5) New York; 6) Seoul; 7) Paris; 8) Beijing; 9) London; 10) Seattle Global leaders in talent concentration: 1) San Jose; 2) Boston; 3) San Francisco; 4) London; 5) Tokyo; 6) Beijing; 7) Washington DC; 8) Austin; 9) Seattle Categories resulting from the intersection of the dimensions of innovation and talent: • Global leaders: Beijing, Paris; • Rich in talent: Stockholm, Denver, Hong Kong; • Focused on innovation: Chicago, Barcelona, Singapore; • Emerging innovators: Mumbai, Guangzhou; • Skilled centres: Brisbane, Hamburg, Nashville • Local hubs: Leeds, Busan, Tampa	No Polish cities in the list. No city from Central Europe was included

Cont. table 1.

3	Innovation Cities Index, 2023 THINK2NOW	Main objective: Published since 2007, the ranking of the 500 most innovative cities in the world. 162 indicators assigned to three thematic blocks: • Cultural resources (NGOs, museums, art galleries, music events, political protests, information availability); • Social infrastructure (mass transport, universities, hospitals, railways, roads, start-ups, healthcare, telecommunications infrastructure; • The strength of the city, its connection to global markets (geography, city economy and its size, geopolitical factors, diplomacy)	Global Innovation Leaders (from the list of 500): 1) Tokyo; 2) London; 3) New York; 4) Paris; 5) Singapore; 6) Los Angeles; 7) Boston; 8) Seoul; 9) San Francisco – San Jose; 10) Houston	Among the cities of Central Europe, the highest place was awarded to Prague (59). The list includes four Polish centres: Warsaw (89), Katowice (215), Wrocław (221), Gdańsk (248) and Kraków (258)
4	Global Cities Innovation Index, 2023 HSE Institute for Statistical Studies and Economics of Knowledge	Main objective: presenting a reliable measurement tool to assess the competitive advantages of cities in terms of their attractiveness for the leaders of the innovative economy. The analysis included 200 agglomerations from 53 cities. The ranking is based on 74 indicators grouped into 22 sections assigned to three thematic blocks: 1) Technological development (innovation infrastructure, technology companies, start-ups and venture capital, universities and R&D organizations); 2) Creative industries (film and animation, fashion, industrial design, computer games, advertising and PR, art, music, architecture, literature); 3) Urban environment (business costs, housing costs, mobility, availability of broadband internet, safety, tourist attractiveness, ecology, international connections)	Global Innovation Leaders (from the list of 200): 1) London; 2) New York; 3) Tokyo; 4) Beijing; 5) Paris; 6) San Francisco; 7) Los Angeles; 8) Shanghai; 9) Seoul; 10) Moscow	In the ranking, Warsaw was 43rd, the highest among Central European cities. Budapest is ranked 47th and Czech Prague is ranked 50th

Cont. table 1.

5	Global Innovation Hubs Index, 2021 the Centre for Industrial Development and Environmental Governance (CIDEG) at Tsinghua University and Nature Research	The general ranking consists of three detailed lists: • Research innovation (science and technology, human resources, research institutions, scientific infrastructure, knowledge creation); • Innovation economy (ability to create scientific innovation, economic growth, emerging industries, innovative enterprises); • Innovation ecosystem (culture of innovation, support for start-ups, public services, openness to cooperation);	Global Innovation Leaders (from the list of 50): • San Francisco – San Jose; • New York; • London; • Beijing; • Boston; • Tokyo; • Hong Kong • Paris; • Seattle; • Baltimore	No Polish or Central European cities included in the list
6	The Most Innovative Cities in the World, 2022 Paymentsense	The global city index is based on the following metrics: • Number of patent applications registered by Google; • Number of new business registrations in 2021; • Number of universities and their ranking in RUR World University; • Average monthly number of searches for “how to start a business”; • Number of businesses registered on the Kickstarter crowdfunding platform and their average value	Global Innovation Leaders (from the list of 50): • Washington D. C.; • Berlin; • Paris; • Canberra; • Beijing; • Ottawa; • Rome; • London; • Madrid; • Brasilia	Among the cities of Central Europe, only Bucharest (29th place), Prague (32nd) and Warsaw (34th) can be found in the ranking

Source: the author’s elaboration based on data from: https://cities-innovation-oecd.com/; https://www.us.jll.com/en/trends-and-insights/research/innovation-geographies; https://innovation-cities.com/worlds-most-innovative-cities-2022-2023-city-rankings/26453/; https://gcii.hse.ru/en/; https://www.nature.com/articles/d42473-021-00579-5; https://www.paymentsense.com/uk/blog/most-innovative-cities-report-2022/.

6. Instead of conclusion. Innovativeness in the urban aspect – the need for scientific rankings

The example of the Warsaw subregion given earlier clearly shows that although Poland is not ranked high in innovation rankings, and its urban centres are absent from global rankings, individual cities - if they are statistically separated - may differ positively from this pattern in a more local (continental) perspective. This perspective coincides with the definitions of urban centres as poles of growth, development and change (Bierwiaczonek, Szczepański, 2013, pp. 11-12). In other words, as places that accumulate flows of people, energy, resources and knowledge, and thus significantly contributing to the creation of new values - both in the sphere of culture and economy (Castells, 2007, p. 390). A separate and extensive selection of literature on the subject is devoted to the description of individuals living in cities, and in particular the characteristics of those individuals that inhabit the most prosperous metropolitan areas. Thus, in the statements of various authors, the urban lifestyle is associated with the need to achieve, with hubristic motivation (the need to exalt oneself), transgression, overcoming one's own shortcomings, empathy, tolerance, talent and creativity – that is, a conglomerate of characteristics sometimes difficult to define and measure, but always valorised positively (Bierwiaczonek, Szczepański, 2013, pp. 13-14; Landry, 2013; Florida, 2010; Jałowiecki, 2007). It is worth mentioning here that the importance of the title issue was reflected in the conclusions of the last Urban Policy Congress 2021. One of the adopted recommendations concerned taking action to build an integrated innovation ecosystem - e.g. by attracting and promoting human capital in the form of young talent (Frontczak, Sobala-Gwosdz, Gruszecka-Spychała, 2021).

The significance of cities can be seen both on the side of development inputs and development outputs. On one hand, urban units - especially the largest ones with a global node character - provide the necessary human, knowledge, material and energy resources for any innovation to take place. On the other hand, as centres of flows, they also become the largest default beneficiaries of innovative implementations, even if they are first implemented within their functional areas. A smart city remains the most far-reaching and most desirable outcome of city development on the path of innovation, which at the most general level is sometimes defined as a city investing in systems using the latest information and communication technologies in the sphere of production, education, transport and administration - to name only the most important of them (Kryński, 2020, pp. 157-158).

Moreover, the prominent significance of cities in considering the issue of innovation is not diminished even by the recently fashionable appreciation of the role of the state in generating development impulses (Mazzucato, 2016). As evidenced by historical examples, numerous manifestations of planned state interference in the economic structure have always been located

in a specific place, significantly contributing to the modification of the trajectory of city-forming processes (usually intensifying them) (Matyja, 2021). Moreover, bearing in mind the geographical and institutional context of the functioning of the Polish economy, it is impossible to ignore the European Union's strategy of building a globally competitive knowledge-based economy. In such a case, identification of the innovative potential appears to be a necessary step for undertaking appropriate regional policy tools (Nowakowska, 2009, pp. 207-210).

A review of the relatively recently published and more frequently cited city innovation rankings allows us to draw a few general conclusions and point out their shortcomings. The measures and indicators used in the rankings, although similar in terms of their topic, are not the same. This is one of the reasons why the presented ranking lists differ from each other. Attention is also drawn to the fact that a significant part of the reports referred to above has a strictly commercial source, less often a scientific one. In view of the above, there is a need for academic studies dealing with the title issue, as well as taking into account national urban centers.

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CAN THERE BE A CONSTRUCTIVE ETHICAL ASPECT IN THE DEVELOPMENT OF NEW TECHNOLOGIES?

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Purpose: For the future of Europe it is important how its inhabitants can use data and new technologies. Artificial intelligence can make big changes in their lives, both positive and negative. Therefore, it must be thoroughly regulated and monitored.
Design/methodology/approach: One of the possible tools to achieve this in the widest possible range is qualitative research with a case study, which is part of the contribution.
Findings: To a small extent, moral fails are taken into account simultaneously with the development of new technologies, and therefore we recommend to put big emphasis on ethical issues right from the beginning of artificial intelligence research.
Social implications: In June 2023, the EU Parliament adopted a negotiating position on the Artificial Intelligence Act – the first comprehensive rules governing the risks associated with the artificial intelligence. According to EU members, the focus of the new rules should be on people and their quality of life.

Originality/value: A return to the moral aspects of artificial intelligence research, which should become an integral part of this research.

Keywords: applied ethics, artificial intelligence, ethical aspect of research, case study, health, quality of life.

1. Introduction

The implementation ambition of applied ethics is to enter the discourse on the latest innovative activities with an ethical point of view. The wide spectrum of the application of ethics offers us the possibility to specify problems and solutions in a complex portfolio of the current problems, to look for solutions for ethical support of intentions even in the field of new technologies.

We can agree with the founder of applied ethics, P. Singer, that "a moral judgment that is unusable in practice must also have some theoretical weakness, because the purpose of moral judgments is to show us the way in practical life". In principle, every person has the ability to distinguish between the good and the bad, but he is not always able to assess questionable and problematic situations without some preparation. This affects not only humans but also the programming and behavior of artificial intelligence. It is a challenge that needs to be responded to and discussed. In the intentions of our considerations, it is also necessary to develop the opinion that a new generation of IT experts is needed, who would be participants in the discourse on the ethical nature of problems and risks of new technologies, as well as in the creation of ethical mechanisms in this area. They already fulfill this important role in many other areas (medicine, scientific projects, academic institutions, environmental studies, etc.). It turned out that many problems are not visible at first glance or do not sound like that in the initial stages.

In principle, it is necessary that, even in this environment, the development and design of these tools respect the requirement of ethical caution and consideration of risks. It is not an acceptable trend that we first develop technologies and only then think about their possible impacts or risks.

2. Ethics and new technologies – main trends and problems

The ambition to respond to the current problems was demonstrated by ethics also in relation to the information technology. Similar to other applied ethics, a new type of professional discourse was presented in connection with the progress of information technologies as well as the solution of urgent ethical problems in the given field. Although the beginnings are associated with the work of Don Parker (Communications of the ACM, 1968, pp. 198-201), its narrower application-ethical presentation is presented 20 years later by Robert Hauptman and Rafael Capurro with their article "Information Ethos and Information Ethics" (Froehlych, 1988). Later, Deborah Johnson (Johnson, 1985) clarifies the role and mission of computer ethics, linking it to the analysis of new moral problems and dilemmas and the effort to solve them in new ways. The views of T.W. Bynum (Bynum, 1997) deserve attention in connection with the development and establishment of information ethics in this context, which defines the preference of information ethics in relation to computer ethics. The overall goal is to integrate information technology and human values in such a way that technology supports and protects human values, rather than harming them. The term "information ethics" is gradually becoming a generally accepted term for the field of applied ethics. Gradually, the discourse acquires a relatively wide spectrum of specific problem areas. Such problems as, for example, specific questions of information technology in relation to the cultural-value environment (Janoš, 1993;

Capurro, 2000), macroethical and microethical approach to information technology (Capurro, 2000; Buchanan, Henderson, 2009; Steinerová, 2014), the question of the moral agent and moral act (Floridi, 2008) and so on.

In recent years, a number of initiatives have been created that focused on the issue of the ethics of artificial intelligence AI (Asilomar AI Principles – Future of Life, Montréal Declaration for Responsible Development of Artificial Intelligence, Model AI Governance Framework, Responsible Research and Innovation, Ethical Aligned Design and many others). Among the most significant is the Ethical Guidelines for Trusted Artificial Intelligence initiative from the European Commission's High Level Expert Group on AI Workshop (AI HLEG). These guidelines declare a view of AI that will be human-oriented in order to ensure the respect of human rights and the pursuit of the social interest in terms of the principle of the good life. An important part of this initiative is also a pilot program that offers a series of practical requirements on which AI developers can verify their own solutions and in which Slovak technology companies can also participate. The recommendations are based on four ethical principles (respect for human autonomy, prevention of harm, justice and explainability) and seven key requirements, or areas to which we should pay increased attention when developing AI (human factor and supervision, technical resistance and security, privacy and data management, transparency, diversity, non-discrimination and fairness, social and environmental well-being, responsibility). This proposal is also remarkable for the professional community of ethicists and their more intensive cooperation.

For example, a number of specific but important questions also arise regarding the creation of an ethical infrastructure, i.e. how this model of ethical supervision will work, the professional competence of these subjects, or their institutional status. Should it be an internal or external entity, an ethics commission? Should it be an engineer who develops the technology, a senior manager or a government institution? In other areas of the institutionalization of ethics, certain forms have already established themselves, and it is possible to draw on these experiences and inspirations. If the system is to be set ethically (ethical regime), it should serve not only as a control or monitoring system but also as a preventive (if not dominant) system. This puts questions and considerations on a different level. Ethics-application recommendations should not fulfill a formal function but rather as a process with a longer-term focus and an active tool of building and confidence-building efforts. In principle, we have available analyzes of the current situation in each EU country, and it is up to the individual member countries to take them into account in their national strategies and procedures.

It is positive that, in connection with these recommendations and considerations, Slovak experts in the field of artificial intelligence are aware of this implementation problem. The initiative of Slovak experts M. Pikus and R. Hrabovský and their publication "Artificial intelligence in Slovakia: use, impact on the labor market and ethical aspects" can also serve as inspiration.

A certain self-reflection of European countries and Slovakia in the given area is also provided by the digital economy and society index (DESI), which the European Commission evaluates the digital progress of member states and provides in its reports since 2014. According to current data[1], in 2021 Slovakia ranked in the digital economy index and companies (DESI) 22nd place among 27 EU member states. In principle, our country remains in the same position as in 2020. According to the data provided, Slovakia is just below the EU average or around it in terms of indicators in the area of human capital. 54% of Slovaks have at least basic digital skills and 27% have above-average digital skills, compared to the EU average of 56% and 31%, respectively. The number of businesses providing ICT training in 2020 was 16%, which is 4 percentage points below the EU average of 20%. The share of ICT specialists in the total employment also increased and almost reached the EU average. The overall use of fixed broadband in Slovakia steadily increased from 72% in 2019 to 78% in 2020. Slovakia has significantly improved the rollout of superfast internet and progressed with very high capacity network coverage. At the same time, the fact that 15% of companies used at least two artificial intelligence (AI) technologies in 2020, compared to 25% in the EU, as well as the fact that Slovakia ranks 19th among the 27 EU countries in terms of human capital, is also something to think about and is thus below the EU average. In this context, it can be concluded that many key measures are delayed in the digital transformation. It is necessary to adapt the educational system to new trends and focus on the skills required in employment. It is also evident that it is necessary to develop soft skills and competences for more intensive involvement in the functioning of the digital society (digital citizenship). In principle, it is clear that the focus on supporting ethics in development, as well as its implementation, is compatible with European initiatives and will be part of digitization and transformation processes in Slovakia as well.

In this context, we must realize that we are rather in the phase of searching for these effective tools. It is important that ethical expertise and experience is used. The point is that formally adopting models of ethical functioning may not be effective enough either. The question of how to make the right ethical decisions in the complex dilemma situations, how to adopt decision-making procedures, what is ethically acceptable, etc., becomes central again. It is the case method that could be an important tool for creating ethical availability and ethical counseling as an important part of external or internal assistance.

All areas will already require sensitively thought out steps, procedures, help from specialists and rationally justified procedures in the field of ethics in specific conditions.

In the portfolio of the current initiatives and institutional activities aimed at the implementation of ethics, the release of a preliminary summary report under the title *Artificial Intelligence Governance and Ethics: Global Perspectives (2019). In another one authors Angela Daly, Thilo Hagendorff, LiHui, Monique Mann, Vidushi Marda, Ben Wagner, Wei Wang a Saskia Witteborn)* which discusses the need to implement ethics, ethical standards into

[1] Index of digital economy and society 2021 Slovakia (DESI).

the global system of artificial intelligence, whether it is a state or private sector. With the advent and development of new technologies, the issue is gaining strength and experiencing not only extensive development but also a deeper penetration into specific areas of contemporary society. Therefore, we can conclude that this is an important area of ethical interest and it is necessary to enter this discourse also from the point of view of the latest experiences of applied ethics, the use of its tools.

Certainly, in the given case, the question arises not only about the creation and implementation of ethical standards (ethical norms), but mainly about the mechanisms of ethical prevention, ethical audit, ethically responsible and evaluating entity (internal or external) as an effective advisory ethical service, etc. An active ethical service could already be offered during the selection of employees, acceptance and implementation of projects, mechanisms for strengthening ethical behavior and informing about ethical failure, creation of ethical programs, etc. (such as how to set up an ethics commission and how it should work). Experts in ethics and ethical expert work can be helpful in this area and participate in risk minimization, specifications in the creation of ethical policies from the point of view of individual departments, institutions and vision. This is also why we perceive case law and its function in the field of new technologies as an important, if not central, part of minimizing ethical risks, a tool for increasing ethical profile and credibility, a tool for ethical prevention and ethical protection, or a means of ethical revitalization.

From a relatively wide range of tools for ethical expert activity and implementation procedures, the case method, which finds a universal nature in ethical implementation policy, deserves special attention. Our goal is to point out its importance in the context of the latest application-ethical requirements and at the same time to present its optimal variant on a concrete demonstration. We see it as an important part of critical reflection on some similar initiatives, which often do not take into account these current ethical-theoretical parameters and application intent.

It is important that it fulfills the normative-prescriptive side of applied ethics as well as its other requirements. We will try to present the optimal variant of the case study model in terms of fulfilling these application-ethical requirements.

Case studies and narrative approaches are an effective tool for understanding moral problems, their illustration and suggestive means of mediating ethics in the aspect of practice. In this form, ethics is better perceived by people from practice. It is an effort to get closer to practice, but also to examine how the ethical issue manifests itself, or how the moral dilemma sounds in real life. This is a certain retreat from the presentation of ethics in a purely theoretical form or the presentation of principles, which are difficult for people in practice to understand anyway or rather put off by their abstractness. "From our point of view, it is a retreat from principialism as a method of making ethical judgments and rather an approach to contextualism.... We are supporters of coherence and balance of reasoning, or reflective balance in moral reasoning I mentioned in an earlier publication where I discuss the role of applied

ethics in practice. The creation of case studies is associated with qualitative research and therefore cultivates the research potential of researchers as well as its practical usefulness. "For applied ethics, the narrative approach appears to be a promising tool for the institutionalization of ethics... the creation of stories and the use of storytelling in ethics are the most suitable form of institutionalization of ethics... writes the founder of applied ethics in Slovakia, Pavel Fobel (Fobel, 2009, pp. 7-32).

3. Case study – Health status of Roman and his diagnosis possibilities

Few patients realize that healthcare is a very strong financial sector. He can callously calculate the value of health, the cost of which increases unsustainably from year to year and therefore requires specific solutions. This is also the approach from the position of applied ethics - bioethics.

It would be possible to improve and streamline access to the patient as well as management in the healthcare sector with the help of artificial intelligence. Even the doctors themselves point to some specific functions for the use of artificial intelligence (Meško, 2017) such as efficiency in disease diagnostics, the use of auxiliary medical robots and devices as well as increasing productivity through automation.

Diagnostic errors quite often and seriously threaten the quality and safety of health care. There are statistical data that estimate that the rate of outpatient diagnostic errors is e.g. in the USA 5.08% of the total number of examinations (it is approximately 12 million people annually) (Esteva et al., 2018). Moss and colleagues used an automated rhythm classification methodology to analyze continuous electrocardiograms (ECGs) in critically ill patients and concluded that the AI technology was able to generate additional information and insights about the data that doctors might have missed (Moss, 2017).

Thirty-year-old Roman comes from a small district town, in which the regional hospital, where he has been going regularly since puberty, should be closed. He was then diagnosed with heart disease, for which he is being treated in a traditional conservative way. This year, doctors proposed to him the possibility of a new heart diagnosis using artificial intelligence in order to reveal possible deviations of the heart in even more detail. Roman has undergone regular check-ups for half of his life and trusts the doctors. However, he is too conservative and does not want to do anything extra as a patient.

Hypothesis: Roman, after thorough communication with doctors and studying the possibilities of artificial intelligence in diagnostics, decides to undergo modern heart diagnostics despite possible negative prognoses, which, although rare, are possible.

Possible alternatives of solution

a) Roman has been satisfied with the treatment so far.
b) Roman decides on a new diagnosis of his heart.
c) Roman chooses a waiting position, in such a way that when his condition worsens, he proceeds to the diagnosis with artificial intelligence.

Moral consequences of the individual alternatives

From the aspect of the first alternative according to individual normative ethical theories, Roman behaved conservatively. In the spirit of virtue ethics, he acted carefully and responsibly only for the moment now and here. The ethics of duty suggested to him that he acts for the preservation of health by default as he has done for the future, perhaps not. Even the ethical theory of responsibility is only partially fulfilled: (who?) Roman as a subject and patient (before whom?) in front of the doctors, who are also convinced of another possibility (for what?) for Roman's health, i.e. diagnosing (according to what criteria?) the latest knowledge and possibilities of science.

The second alternative in the description of normative ethical theories is more positive. According to virtue ethics, Roman acts responsibly and judiciously not only for the present but also for the future. In accordance with the ethics of utilitarianism, this approach would benefit not only Roman, but also medical science or the doctors treating him. Over the years of caring for doctors, this approach could be described as responsible towards themselves, doctors, the institution as a whole society. From the ethical aspect of duty, he would behave not indifferently to his health, but also to the care of doctors and society, which cares about the health of citizens.

The third alternative is calculated and, from a medical point of view, also undesirable. You often hear words spoken by doctors if you had come earlier. According to virtue ethics, this is an indecisive and irresponsible solution. Even the ethics of duty would not evaluate this approach to Romano's health positively. It would be difficult for us to assess from the standpoint of utilitarian ethics what benefit (contribution) such an attitude of Roman would bring for him, doctors and society if it were concluded that intervention is no longer possible.

Solving the moral dilemma

The most optimal alternative for Roman is the second option. Even considering the fact that it is not an operation or any other intervention in the body, but artificial intelligence will be used, which is supposed to evaluate Roman's state of health based on other comparisons from studies and possibly propose a new diagnosis, it is an appropriate decision. The positive aspect is related from the position of virtue ethics, which evaluates such an attitude responsibly, judiciously and carefully. The ethics of duty evaluates such a choice as positive in relation to one's health. Roman took a responsible attitude to himself (who?), but also to the institution, i.e. the hospital and healthcare (before whom?) towards his health condition (for what?) before

society, i.e. also by financing his health (according to what criteria?). It will benefit not only Roman, but also the entire society of doctors, medical science in the spirit of utilitarian ethics.

The hypothesis we outlined at the beginning was fulfilled positively, as indicated by the resolution of Roman's moral dilemma.

4. Conclusion

One of the important goals of case studies is to increase the ethical sensitivity of people in solving moral dilemmas through alternatives with moral reasoning, where as the basis of this reasoning we should take balanced (coherent) reasoning from some generally recognized ethical approaches - normative ethical theories. It is positive that applied ethics continue to develop not only on a theoretical level, but also gain practical strength and are enriched by new experiences. Workplaces are trying to expand their professional portfolio, to enrich with new experiences from the institutionalization of ethics. It depends on the individual skills and activities of the experts how they manage to manage institutionalization. How will they manage to convince companies and institutions that avoiding ethical risks and collisions saves internal economic resources, increases work comfort and thus performance, and reduces conflict in the work environment. As a result, investment in ethics becomes a competitive advantage but also a societal necessity. An expert in ethics can thus become an actor of social change and a beneficial profession.

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THE SIGNIFICANCE OF HUMANISTIC APPROACH IN CONSIDERATIONS ON THE UNIVERSITY SOCIAL RESPONSIBILITY

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Purpose: Capturing the added value for public universities resulting from adopting a humanistic approach in the implementation of the university social responsibility (USR).
Design/methodology/approach: The objectives will be achieved through desk research analysis. In this way, the previous approaches of the humanistic approach (HA) will be identified, which will then be creatively translated into benefits for the university arising from the implementation of individual elements of HA.
Findings: It seems that the humanistic approach not only aligns with the principles of the CSR concept but also closely reflects the foundations of university functioning. At the same time, there is a need for a precise model of the humanistic approach, which will aid in future practical implications, not only in the context of CSR but also USR.
Research limitations/implications: In the future, conducting research at universities would be valuable, allowing for the verification of the proposed benefits, as well as enabling an examination of the impact of the HA on university management.
Practical implications: Implementing the principles of the humanistic approach allows for the strengthening of the organizational personnel. Recognizing the human component also aligns with the formation of the university community, which should be the foundation of the institution.
Social implications: Adopting the principles of the humanistic approach will have a profound impact on the functioning of universities and their position in society, which will be strong only when the university is strong within its community.
Originality/value: This article, for the first time, systematically attempts to relate the humanistic approach to the university. This perspective will serve as a guide for university administrators as well as researchers dealing with issues of USR and HA.

Keywords: humanistic approach, humanistic reflection, university social responsibility.

Category of the paper: Conceptual paper.

1. Introduction

In considerations of the university social responsibility (USR), there is often a difficulty stemming from the lack of clear definition of the university's obligations in this regard, and consequently, the lack of clear benefits for the university resulting from the implementation of USR principles. This can be attributed to two fundamental reasons: there are various types of universities, making it difficult to establish general and specific principles for all institutions, and there are different forms of university funding, causing universities to operate under different conditions. Some differences in the implementation of social responsibility principles between public and private universities can be observed, such as the adopted quality assurance systems (Piasecka, 2015). Therefore, universities find themselves in a particularly challenging situation, having to independently seek USR principles suitable for them. In this context, a humanistic reflection seems like a reasonable direction for establishing the foundations of USR for institutions in which the community plays a significant role. Humanistic management suggests a return to the perception of organizations through the lens of the individual. In this perspective, the individual ceases to be treated as a one-dimensional existence that interprets reality solely through the prism of profits and material values necessary to satisfy their needs. An approach based on humanistic management principles is especially valuable in the context of the growing crisis of the humanities, which is gradually being marginalized in academic discourse. Humanistic management aligns with the concept of USR, and its application can become a tool for realizing the USR concept. Adopting a humanistic approach not only helps explain the approach to USR but also enables the identification of numerous benefits for universities. Therefore, the aim of this article is to capture the additional value for public universities resulting from adopting a humanistic approach in the implementation of USR.

2. Literature review

2.1. Humanistic approach

When seeking to understand the meaning of the humanistic approach (HA), it is essential to consider its origins. Specifically, it originates from psychology - from the humanistic theory, which recognizes that a person engages in activity when their needs are satisfied. In this assumption, human beings strive for self-realization and functioning in harmony with themselves (Kuhn, 2001; Maslow, 1968). The humanistic perspective in psychology poses the question: when and how do people experience a good life, well-being, and a sense of fulfillment (Acevedo, 2018; Robbins, 2008; Cooper, 2012; Davidson, 1992; Robbins, 2016; Waterman,

2013). This well-being of individuals translates into taking initiative and assuming responsibility.

The humanistic perspective has also been observed in the works of philosophers throughout various epochs. Humanism has been a subject of interest for philosophers like Aristotle, Kant, as well as Amartya Sen and Martha Nussbaum. Similarly, it is a subject of interest for researchers in the field of management (Pirson, 2013) and economics, where scholars contemplate the rationality of human behavior in light of the benefits achieved by individuals. This marks a shift in perspective, where people in organizations are not solely perceived based on their profitability and efficiency, as such an approach encroaches upon human dignity (Bartlett, Ghoshal, 1997).

The concept of humanistic management (HM) first appeared in 1967 (Lilienthal, 1967). In humanistic management, the key focus is on relying on people (WU, 2021). Some argue that the entire approach to management should be rethought, with a foundation in psychological insights rather than management theory (Ghoshal, 2005). This approach seeks to discover the human nature that translates into an individual's functioning within an organization (Pirson, 2013). Furthermore, psychological considerations strengthen the humanistic approach through research that directly contributes to our understanding of individuals within organizations (Pirson, 2017). The humanistic approach, however, requires further strengthening in the face of the dominant management paradigm based on efficiency, i.e., economic management (Kostera, Woźniak, 2021). It's worth noting the ongoing debate between the economic approach to management and the humanistic approach. Both approaches present different research perspectives and reveal distinct aspects of organizational management (Wychowaniec, 2016). Nonetheless, Barbara Kożuch emphasizes that there is no pure economic approach or pure humanistic approach; these two streams overlap, and a complete separation is impossible (Kożuch, 2010). Therefore, it seems that the choice between an economic or humanistic approach should be guided by the research goals one has in mind.

Humanistic management, much like Corporate Social Responsibility (CSR), relates to stakeholder theory, where an organization considers their expectations while also pursuing their own goals (Kessler, 2013). In a humanistic perspective on stakeholders, diversity and inclusion also play a significant role (Laszlo, 2019).

In the case of the humanistic approach, a fundamental challenge lies in grasping the essence of humanism to enable its practical implications. Nevertheless, it cannot be claimed that this concept has been precisely examined thus far (Arnaud, Wasieleski, 2014). Researchers also highlight the lack of clear guidelines on how to implement the humanistic approach in CSR (Melé, 2003; Pirson, 2020). However, attempts to do so can be seen, including the emergence of the concept of Humanistic Corporate Responsibility (CHR) in the literature. This concept adopts a humanistic approach within organizations with the aim of improving the well-being of employees in the organization (Koon, Fujimoto, 2023). Even in the field of management, discussions and dilemmas arise regarding the inclusion of humanistic elements (Maciąg, 2013;

Kuzior, Kettler, Rąb, 2022). However, it should be noted that most often, the principles derived from the humanistic approach are treated as tools for managing human resources (Lapina, 2021). Reflections can also be found in the literature concerning attempts to apply the humanistic approach to public administration (Romaniuk, 2019), which is particularly relevant in the context of public universities.

The key aspect of humanism is its focus on finding ways to fulfill human goals (Melé, 2016). Furthermore, the humanistic approach strongly emphasizes the respect for human dignity and human development, which leads to human flourishing (Melé, 2003; Melé, 2009; Dierksmeier, 2016; Pless et al., 2017). Viewing human behavior through the lens of dignity also allows for an understanding of human behavior in the workplace (Matheson, Dillon et al., 2021). As Melé points out, it's essential to perceive an "organization as a community of persons" (2011). In this sense, all employees form a community while having conditions for self-development and self-realization (Dillon, 2021; Spitzeck, 2011). Both of these elements mutually support each other (Fremeaux, Michelson, 2017), so individual development contributes to organizational development, and vice versa. In humanistic management, well-being is of paramount importance, taking precedence over the production of goods or economic outcomes (Mirski, 2005). Other studies also point to the need to pay attention to ethical, cultural, relational, and personal factors as those that build a strong organization where employee turnover is not a problem (Kuzior, Kettler, Rąb, 2022). There is also an emphasis on adopting a broader view of management through the perspective of multiple stakeholders, making it possible to achieve goals like the Sustainable Development Goals (Pałasz, 2022).

In the article, the term "humanistic approach" (HA) is used, which allows for openness to the concepts of Humanistic Management (HM) and Humanistic Corporate Responsibility (CHR). It seems that HM is too limiting when it comes to University Social Responsibility (USR), and CHR primarily pertains to business entities, lacking sufficient evidence for its application in universities. Therefore, there is currently a lack of terminological consistency in the literature, which also affects the practical implications of these concepts. In this article, I propose adopting the concept of the "humanistic approach (HA)" in the context of universities.

2.2. University social responsibility

Issues of social responsibility are closely aligned with humanistic reflections, emphasizing the creation of a humanistic environment that underscores the importance of people (Arnaud, Wasieleski, 2014). Additionally, the humanistic approach aligns with the pursuit of sustainable development goals, which more systematically define the scope of organizational responsibility (Flores, Ahmed, Wagstaff, 2023). Much attention has been given to the analysis of CSR so far. However, some researchers point out that despite the theoretical emphasis on the significance of stakeholders in the CSR concept, the social aspect is often overlooked or marginalized in practical implementations (Armstrong, Green, 2014). This may be due to an excessive focus on

quantifiable results in socially responsible actions, which is not always feasible in social initiatives.

The issue of University Social Responsibility can be considered in three areas of tasks carried out by the university: within its research, educational, and social mission (Leja, 2019). In the context of humanistic considerations, a significant amount of attention is dedicated to the workforce. However, when it comes to a university, this reflection should be broader and encompass all its missions. Therefore, the identification of stakeholders should also be based on the three missions of the university.

Within the research mission, the utmost attention should be given to employees. Caring for the internal potential of the organization forms the basis for building social responsibility (Carroll, 1991). In this area of university tasks, it seems that the principles derived from humanism can be readily applied to actions directed towards employees, as previous attempts to implement the humanistic approach have focused on human capital management.

In the case of the educational mission, special attention should be directed toward students. M. Nussbaum emphasizes the importance of humanistic education, seeing it as a means to develop critical thinking, the courage to express one's opinion, empathy, and a broad worldview (2016). Education of future managers is of particular significance, where themes related to responsibility and humanism will influence their future decisions (Deets, Rodgers, Erzurumlu, Nersessian, 2020). There is also a focus on responsible education that will help graduates adapt to a dynamic job market. It is proposed to impart competencies such as critical thinking, problem-solving skills, adaptability to change, and a willingness to learn throughout life (Sztompka, 2014).

In the context of USR, the third mission - the social mission, has played a significant role. Within this mission, a crucial aspect has been the perspective on external stakeholders of the university and the relationships built with them. In general terms, the third mission involves activities aimed at the social environment and collaboration with external entities, including businesses, local authorities, non-governmental organizations, and more (Banaś, Czech, Kołaczek, 2019). This mission extends beyond the scope of the first two missions, which are related to scientific research and education (Zomer, 2011). It is important to emphasize its impact on all of the university's missions (Pinheiro, Langa, Pausits, 2015).

When seeking opportunities to apply the HA to fulfill the principles of USR, the focus should be on all stakeholders of the university resulting from the fulfillment of its mission. In a general sense, this includes employees, students, and all external stakeholders. While in profit-oriented organizations, actions guided by a humanistic approach directed towards employees and external parties can be identified, universities have a specific internal stakeholder, which is students. Students are a crucial part of the university for several years, making the implementation of HA within the university context a unique challenge that requires careful consideration.

3. Materials and methods

In the article, the author utilized desk research to explore secondary sources addressing the analyzed issues. The starting point for the analysis is the delineation of the principles of the humanistic approach. Comparing these principles allows for further reflection on the benefits that an organization can achieve through their implementation. In the subsequent part of the article, various humanistic approaches were presented in chronological order. Nine approaches were detailed, using terminology related to Humanistic Management (HM), the humanistic paradigm, humanism, Corporate Humanism Responsibility (CHR), Human Resource Management (HRM), and others that draw attention to the humanistic approach to the principles within an organization.

In the HM concept, the following key principles were outlined (Kimakowitz, Pirson et al., 2011):

1. dignity of each person,
2. ethical decision-making,
3. seeking normative legitimacy.

The milestones of the humanistic paradigm (Pirson, 2013) have been formulated as follows:

1. central focus on human dignity,
2. well-being as end in itself not mean means to performance.

The article also mentions four principles of Humanistic Management (Kessler, 2013):

1. Recognition of the "human factor" – individuals in the organization are treated as subjects, not just tools for achieving the organization's tasks. The development and aspirations of individual employees are considered important.
2. Acknowledgment of diversity – this applies to age, gender, ethnic background, religion, and more. In the humanistic approach, respecting diversity pertains not only to employees but to all stakeholders of the organization.
3. Balancing individual goals with organizational goals – job satisfaction and empathy are valued equally alongside the organization's objectives.
4. Promoting ethical attitudes among all stakeholders – popularizing ethical codes, providing training in this area, and treating the organization as a responsible citizen.

Another approach, the humanist conception of the ontology of human being (Arnaud, Wasieleski, 2014), lists four key principles: freedom and self-determination, moral autonomy, along with dignity and equality among people, the need for social integration while recognizing the uniqueness and individuality of each person, and the final principle is a concern for the common good.

In the classification of the Three-Stepped Approach to Humanistic Management (Kimakowitz, 2016), the following factors are considered:

1. respect for human dignity,
2. ethics in managerial decisions,
3. stakeholder engagement.

A more detailed expansion of the principles of humanism is presented by Melé, highlighting seven important principles of such an approach (2016):

1. viewing a person as a whole,
2. emphasizing the diversity of individuals,
3. respecting human dignity,
4. perceiving individuals as beings striving for development,
5. fostering individual and communal development,
6. promoting harmony between humans and nature,
7. recognizing people as transcendent beings.

In another classification, attention is drawn to the foundational values of the humanistic approach (Kabadayi, Alkire et al., 2019), which include respect, trust, fairness, and inclusion.

Based on the humanistic approach from 2013 by Arnaud and Wasieleski, as well as the classifications by Melé from 2012 and 2016, a classification of elements of Corporate Humanistic Responsibility (CHR) was developed, consisting of six elements (Koon, Fujimoto, 2023):

1. participation,
2. development,
3. mutual respect with superiors,
4. self-determination,
5. mentoring and coaching,
6. fairness.

It's worth noting that this classification is relatively broad, setting it apart from others. The fact that it was developed based on previous considerations within the realm of humanism suggests a progression in conceptualization. Within each of the individual elements, the authors also make references to earlier humanistic perspectives, indicating a connection to the evolving understanding of humanism in organizational contexts. This demonstrates an ongoing development of humanistic principles and their application within organizations.

It's important to note the concept of HRM, which distinguishes two key approaches to social responsibility towards employees. The first approach is quantitative in nature, focusing on aspects like wage increases and job creation. The second approach is qualitative, prioritizing elements such as workplace friendliness, collaboration, individualized approaches to employees, and the overall comfort of the work environment (Zavyalova, Volokhina, 2023). These two approaches reflect the different ways in which organizations can demonstrate their responsibility towards their workforce.

Research conducted by Yelena Kovalenko (2020) provides insights into the humanistic approach, leading to the following conclusions:

1. A humanistic management culture emphasizes that individuals should not be treated as mere tools to achieve goals. People in an organization strive to satisfy not only their material needs but also their moral needs.
2. The humanistic approach places the individual at its core, which also affects communication. Strict rules and principles alone are insufficient for effective communication; individualized approaches to people in the organization are needed.
3. Management democratization that takes into account employees' opinions, considers the interests of various stakeholders, and acknowledges emotional factors is important.
4. It is based on humanistic behaviorism, taking into account natural human states and recognizing cause-and-effect relationships between external stimuli and human behaviors.
5. Motivators for self-realization in the workplace include the work itself, success, career advancement, development opportunities, and responsibility.

The classifications presented indicate the diversity of humanistic elements. This confirms the need for greater systematization, which will contribute to better practical outcomes.

4. Analysis and results

Comparing the existing humanistic approaches allows for the identification of key benefits that a university can achieve through a humanistic approach to organization. Different humanistic approaches have been compared to extract the core principles of this concept. The principles resulting from all the classifications were extracted and assigned weights corresponding to the number of mentions in each classification. The identified principles are presented in Table 1.

Table 1.
Principles of the humanistic approach

The humanistic approach	
Principle	**Weight**
Human dignity	9
Diversity	4
Self-Realization	4
Organizational development/common good	4
Integration	3
Ethics	3
Holistic view of human	2
Participation	2
Autonomy	2

Cont. table 1.

Equality/justice among people	2
Well-being	1
Harmony between human and nature	1
Respect for human spirituality	1
Coaching and mentoring	1
Honesty	1
Trust	1

Source: Own elaboration based on the cited literature.

The presented compilation indicates that the most significant principle among all is the respect for human dignity. This principle emerged in all classifications. This is due to the fact that human dignity serves as the cornerstone of the humanistic approach. In the second place, with a considerably smaller number of mentions (4), are: diversity, self-realization, and organizational development/common good. Notably, self-development and organizational development achieved the same result, signifying the importance of maintaining balance to avoid unidirectional thinking. Subsequent principles received fewer mentions, but this does not diminish their significance; it merely reflects a lower consistency among various concepts associated with the humanistic approach in this regard. Nonetheless, identifying them has resulted in a comprehensive set of principles, which will be useful in formulating the benefits arising from the humanistic approach.

In the subsequent part, the outlined principles of the humanistic approach were applied to the realm of University Social Responsibility (USR). Each individual principle was interpreted within the context of the university's specific missions and the responsibilities that arise from them. This is presented in Table 2.

Table 2.
The humanistic approach in the context of University Social Responsibility (USR)

Research Mission	**Educational Mission**	**Social Mission**
Human dignity - in relation to university staff.	Human dignity - towards students.	Human dignity - towards all stakeholders.
Diversity - respecting diversity among employees, as well as acknowledging diverse approaches in teaching, research, and across disciplines.	Diversity - respecting diversity among changing generations of students.	Diversity - respecting diversity of opinions, comments, and societal demands.
Self-Realization - providing conditions for the development of employees.	Self-Realization - supporting students in their personal development.	-
Organizational development/common good – caring for the development of the organization and the common good represented by the university among all stakeholders.		
Integration – multidimensional integration, both internally and externally, taking into account external stakeholders.		
Ehics – the fundamental principle governing the academic community's functioning within the organization as well as its collaboration with external stakeholders.		
Holistic view of human – the need to recognize the emotions and needs of others, accepting their states resulting from external stimuli.		

Cont. table 2.

Participation – employee participation in decision-making.	Participation – taking into account the voice of students in making decisions regarding the university.	Participation – engaging in dialogue with external stakeholders, considering the input of advisory bodies and local communities.
Autonomy – respecting the autonomy of the university and its employees.	Autonomy – respecting the autonomy of the students.	Autonomy – respecting the distinctiveness of external stakeholders.
Equality/justice among people – fair treatment of employees, equality of working conditions and compensation.	Equality/justice among people – fair assessment, equal treatment of all students.	Equality/justice among people – applied towards external stakeholders.
Well-beeing – respect for the well-being of employees, understanding their needs in the workplace and beyond.	Well-beeing – respect for the well-being of students, understanding that education is important but just one of many areas in a young person's life.	-
Harmony between human and nature – respect for the natural environment applies to all individuals and entities out of the recognition that we all benefit from it.		
Respect for human spirituality – respect for beliefs and convictions of individuals.		
Mentoring – an academic teacher should serve as a role model for students, sharing knowledge and experiences among colleagues.	Mentoring – students should feel the support of their teachers, to whom they can turn with difficulties and questions.	-
Honesty – a fundamental principle governing the functioning of the academic community, both within the organization and in cooperation with external stakeholders.		
Trust – a fundamental principle governing the functioning of the academic community, applicable within the organization as well as in collaboration with external stakeholders.		

Source: Own elaboration.

The interpretations of the humanistic approach principles in the context of University Social Responsibility (USR), as presented in the table, indicate that all of these principles find their application within the university environment. Therefore, it is justified to explore the benefits for the university resulting from adopting each of these principles. Table 3 presents the benefits derived from embracing the principles of the humanistic approach by the university.

Table 3.
Benefits for the university resulting from adopting the humanistic approach

The humanistic approach	
Principle	**Benefits**
Human dignity	Greater employee loyalty, positive student perception leading to successful recruitment outcomes for the university.
Diversity	Utilization of diversity potential within the organization, exchange of knowledge and perspectives.
Self-Realization	Allowing individual members of the community to develop enables the growth of the organization.
Organizational development/common good	Development of an entrepreneurial orientation manifested in initiating new solutions.
Integration	Building a strong community ready to defend their university and accepting challenging moments.
Ethics	Comfortable collaboration with university stakeholders, allowing for a sense of security.
Holistic view of human	Understanding decisions made by employees, recognizing the potential of each employee.

Participation	Gaining interesting ideas and solutions that align with the expectations of the community members.
Autonomy	Freedom, allowing for creativity and freedom of thought, translating into the academic development of staff and students.
Equality/justice among people	A sense of justice enabling collaboration among community members and reducing competition.
Well-being	Satisfaction with membership in the academic community.
Harmony between human and nature	Implementing environmental policies related to sustainable development and ESG (Environmental, Social, and Governance).
Respect for human spirituality	A fulfilled employee expressing their needs and openly discussing the values that accompany them without hesitation.
Coaching and mentoring	Accumulation and dissemination of knowledge, learning within the university.
Honesty	Comfortable collaboration with university stakeholders, allowing for a sense of security.
Trust	Comfortable cooperation with university stakeholders, allowing for a sense of security.

Source: Own elaboration.

The perspective of benefits sheds new light on the humanistic approach, which ceases to be merely an idealistic postulate. Recognizing how much a university can gain by adopting this new approach proves that it is not just another concept with no practical implications. It's also important to note that this list of benefits is open-ended. The identified benefits stem from existing interpretations of the humanistic approach. Importantly, none of these interpretations were directly tailored for universities. Therefore, a more in-depth approach to formulating the humanistic approach specifically for universities could potentially reveal additional benefits.

5. Discussion and conclusions

It seems that the humanistic approach not only aligns well with the principles of the CSR concept but also deeply resonates with the foundational aspects of how a university functions. At the same time, there is a need for a precise model of humanistic management that can provide practical implications in the future. Particularly important is to consider the organizational context. While a substantial amount of literature focuses on businesses, there is much less attention given to the issues related to organizational approach within the context of a university.

Indeed, despite the popularity of the USR concept, universities often lack the tools and justification to implement its principles effectively. Perhaps, to enhance efforts in the realm of USR, it's necessary to bolster the language of benefits, which would resonate more with university administrators. A similar approach was employed in the initial stages of implementing CSR and it appears to have brought about significant changes in that domain.

Perhaps in the future, it would be worth considering the addition of humanistic approach principles that have not yet appeared in any classification but are relevant to the specific nature of an institution like a university. This way, it could also be possible to enhance the benefits for the university that stem from adopting the humanistic approach.

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GENERATION Z ATTITUDES AND PRACTISES TOWARDS WATER CONSERVATION: A CASE STUDY

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Purpose: The purpose of this research study is to examine how members of Generation Z view the issue of water conservation and recycling, and to what extent the characteristics attributed to this generation influence their performance.
Design/methodology/approach: The method used was to observe a group of Generation Z students during a PBL project.
Findings: Generation Z presents certain characteristic traits that can lead to disagreements in teamwork. Leaders who strive for a deeper understanding of these characteristics and attitudes are able to work more effectively with representatives of this generation.
Research limitations/implications: The work is a subjective, qualitative evaluation of a small team of six students. Serious limitations of this work are the defining influence of observers on the subjects and the lack of control of variables that may affect the behaviour of the subjects.
Practical implications: For leaders and managers but also educators in universities and training institutions, understanding the characteristics of Generation Z is the key to effective collaboration. An authoritarian approach may not work, so it is necessary to open up to a more collaborative management style. It seems that understanding the attitudes and expectations of this generation and providing them with better, tailored support can bring the expected results in business, education.
Social implications: Understanding the differences in attitudes and expectations of Generation Z relative to older generations can lead to better integration of different age groups in society and especially in workplaces.
Originality/value: The value of the work lies in providing insights into generational dynamics, which can be useful for leaders, managers, HR professionals, educators and anyone who wants to better understand and work with the younger generation. The work also points out the advantages of design thinking methodologies for working with Generation Z.

Keywords: Water conservation, Generation Z, advertising, Project Based Learning (PBL), Design Thinking.

Category of the paper: Case study.

1. Introduction

Awareness of the protection of water resources and consumer behaviour to modern and necessary requirements for the benefit of the environment implies the inevitable discussions of many researchers of this issue. The resulting theoretical assumptions point quite clearly to the typical activity of protecting the earth's natural resources but also to conscious and qualitatively desirable activities in the daily functioning of man. Unfortunately, the concepts developed raise a lot of questions about the level of knowledge and purposeful reactivity of the younger generation for the protection of nature and water in particular. However, referring to the cultural approach to assessing water demand, it helps to understand consumption patterns as they are embedded in daily life and social conventions (Sofoulis, 2005). Looking at today from the perspective of qualitative ecological and social changes in the approach to the efficient and rational use of water resources, one sees many important and interesting solutions to implement practical concepts for the conservation of these resources. Nevertheless, modern technologies aimed at individual consumers are not achievable for most, not only because of the high cost of installation and low range of availability, but, above all, knowledge of the rightness of their application. The solution seems to be progressive advertising, which in its message will allow us to understand both the problems of the modern environment, but also the dynamics of these changes, the end result of which should be the expected revision of the environmental behaviour of all generations.

In this context, of particular interest are the attitudes and practises of Generation Z about water conservation. This paper uses a Project Based Learning (PBL) and Design Thinking approach to explore how members of Generation Z perceive the issue of water conservation and recycling and to what extent the attributes attributed to this generation impinge on the design work of advertising and information messages.

1.1. Water resources and their qualitative protection in the concepts of researchers

According to environmental protection researchers, water has been identified as one of the most important natural resources and differs somewhat from the rest, as it is perceived as a key to prosperity and wealth (Arbués, Garcia-Valias, Martinez-Espineira, 2003). However, the observed depletion and pollution of water today are among the main environmental problems facing the world in the 21st century (Aprile, Fiorillo, 2017). As a result, water may soon become a "commodity" in short supply in many sectors of the economy, as well as in everyday human functioning. However, in a more pessimistic scenario, it is necessary to assume its temporal regulation, as the amount of water used to produce many goods does not keep up with the amount of resources existing on the planet.

Taking into account the growing demand for freshwater reserves, as noted by April and Fiorillo, this is primarily due to population growth, pollution, and climate change. The authors emphasise that it is crucial to consider and implement specific approaches to combating water scarcity problems. Simha et al. (Simha et al., 2017), on the other hand, consider water conservation and wastewater reuse to be significant, but these are two different and interrelated strategies. In reality, while water protection is focused on the demand and source side of the problem, wastewater reuse aims to reduce demand by closing the water cycle and promoting a closed-loop flow of resources (waste) from the built environment to the natural environment.

As can be seen, this diverse protection of water resources is now a global action focused on water conservation processes. This issue, which environmental researchers clearly emphasise (Bagatin et al., 2014), results from growing global water shortages, as well as the amount of wastewater from industrial areas and urban agglomerations, whose urbanisation is becoming increasingly alarming for the environment, economy and society. Unfortunately, the scale of the problem seems to be increasing, resulting in drought periods in regions that have not experienced it before.

1.2. Generation Z and socio-economic views

Generation Z (also known as Gen Z or iGen), colloquially referred to as "zoomers", is a demographic cohort of people born between 1995 and 2012, following the Millennials and preceding Generation Alpha. As the first social generation to grow up with access to the Internet and portable digital technology from a young age, members of Generation Z were called "digital natives." Currently, this term should be understood as an indicator of the preferred mode of communication but not necessarily digital proficiency. Due to the unprecedented change in communication processes, cross-sectional publications dedicated to Generation Z began to appear relatively quickly, for example (Carrington et al., 2016; Weise, 2019; Seemiller, Grace, 2018). It is emphasised that compared to previous generations, Gen Z spends more time on electronic devices and less time reading books than before (Twenge, Martin, Spitzberg, 2019), which has implications for their concentration abilities, vocabulary, academic performance, and future functioning. At the same time, research on teenagers (Horowitz, Graf, 2019) shows that members of the Generation Z cohort are less hedonistic, better behaved, and more lonely than any generation previously studied. At the same time, the study reports very worrying information on mental health, with 70% of respondents believing that anxiety and depression are the main problems among their peers. A broader view of issues from a practical perspective - the Z cohort in the workplace - can be obtained by analysing the literature indicated in the literature review (Benítez-Márquez et al., 2022).

In the context of this work, it is also necessary to outline the image of Generation Z's attitude towards nature, environmental protection, climate, etc. The distinctiveness of this group is studied in many directions; for example, in (Tran et al., 2022), researchers try to determine which factors have a greater impact on consumer loyalty and purchasing intentions towards

eco-fashion. Comparative studies of age cohorts indicate that more and more young people are taking personal responsibility, using environmentally friendly alternatives to cars, and considering the carbon footprint before purchasing a product, unlike older generations (Skeirytė, Krikštolaitis, Liobikienė, 2022; Poortinga, Demski, Steentjes, 2023; Dragolea et al., 2023). The literature review did not indicate positions that referred to the views and practises of Gen Z on socio-economic processes of direct water conservation. It should also be noted that scientific publications mostly present a declarative image, which translates to a small extent into the sphere of behaviour. On the one hand, we can observe the commitment and willingness to protect the environment, but, on the other hand, not necessarily the willingness to bear the costs for high-quality water. Therefore, ecology specialists recommend directions of action focused on strengthening social-human values, developing skills leading to individual and social practises, and implementing appropriate educational and environmental policies (Lazăr et al., 2022). Only in this way can natural resources, including water, be fully protected in the context of Generation Z's attitudes.

2. Methodology

The issue of environmental protection and, in particular, the opinion-forming role of the young generation on this topic raises a number of questions not so much about their knowledge, but about practical activities in this area. This unique research space, which over the course of several years has changed its forms and contemporary perception of the problem of protecting our planet's resources, does not clearly indicate that the knowledge of young people will coincide not only with practical activities for the protection of water resources and their recycling, but also with the implementation of possible technological solutions for their benefit. Therefore, in order to diagnose and verify the position and knowledge of the young generation, it was decided to verify this information as part of the Project Based Learning (PBL) project, implemented in the academic year 2022/2023.

When designing the topic of the PBL project and embarking on its implementation with a group of students, the authors of this study posed the following questions:

(1) How do members of Generation Z perceive the issue of water conservation and recycling?
(2) Can a self-organising team of Generation Z students develop a model or product that is a progressive informational-advertising message regarding an extremely important problem facing humanity?
(3) To what extent do the attributes attributed to this generation precisely fit the attitudes and skills that this cohort pretends to have for working on this type of social project?

Recognition of opinions on water conservation and recycling was designed as a process based on independent knowledge acquisition (regarding water issues) by students.

The answer to the second question was established as a clear final effect of the work, supported by a report that concludes the project.

To answer the third question, based on the reading of the literature mentioned above, several attributes (AT) of Generation Z were abstracted, which differentiate them and were subjected to revision in this study based on observations of the group of students implementing the PBL project.

List of attributes subjected to verification:

AT1: Dependence on social media - Gen Z relies heavily on social media for communication, information, and networking.

AT2: Pragmatism and realism - Gen Z is usually practical, seeking job stability and financial security while continuing to learn.

AT3: Environmental concern - members of Generation Z are environmentally aware and advocate for sustainable practises.

AT4: Global perspective - representatives of Generation Z have a sense of global connection and are interested in international affairs.

AT5: Progressive values - Generation Z students are more inclined to support progressive social and political issues.

AT6: Entrepreneurial thinking - many representatives of Generation Z have an entrepreneurial spirit and seek opportunities to create their own ventures.

These characteristics were decided to be verified during a PBL class on a small group of students (from Generation Z), who were given an open research topic on water conservation and recycling. The opportunity to observe a self-organised (partially autonomous) team at work allows one to check not only the declarative level but also the depth of understanding of the concept, readiness to integrate knowledge and practise, attitudes towards the studied aspects.

Design Thinking methodology was chosen as a system to organise and support the work, in order to ensure that participants not only gain substantive knowledge but also a broader view of a practical nature. The team designed for the student group three meetings with experts (employees of our university) who were to present professional perspectives on information about water and water conservation, media and their impact on people, and a specialist who was to present one of the objective research techniques of the effect of images on people, eye-tracking.

This paper is a qualitative account of two members of a three-person team (academics) leading a project carried out by six students over one semester.

A diagnostic survey method was selected for the initial verification of the assumptions and the tool was an intentionally designed anonymous survey questionnaire, conducted in an electronic format. The survey was divided into two main areas. The first concerned socio-demographic information and the second comprised intentionally designed questions on the

issues under analysis. The respondents were 261 students from various faculties of the Silesian University of Technology, where 51.8% of the respondents were female. Details are presented in section 3.1.

Participants in the project group and the observation procedure

As part of the PBL projects conducted at the Silesian University of Technology (SUT), a team of academic teachers proposed the topic: "Saving and recycling water - a challenge for the civilisation of the 21st century - a scientific-research and educational approach to progressive advertising". The PBL projects in the SUT education model are voluntary and last one semester, and students apply independently to carry out tasks after the list of projects is announced at the university. Students working in a PBL group are exempted from some course classes, obtaining the necessary points (ECTS) during project work. A group of six people who studied two different fields - "Preschool and Early School Pedagogy" (4 women, sixth semester of 10-semester master's studies) and "Project Management" (a man and a woman, fourth semester of 7-semester bachelor's studies) - participated in the implementation. All students were born after 2000 and therefore are qualified as representatives of Generation Z.

The academic teachers leading the project are experienced educators with many years of experience in the development of multidisciplinary PBL projects. The leading team assumed the role of facilitators of the Design Thinking process and to a lesser extent served with their expert capabilities.

Observations took place during systematic, several-hour meetings in a training room at the university and during student activities on the project board (a web application available on all platforms). Students were not observed during breaks, on personal internet communication channels, or in other forms outside of conversations with the group or 1:1 conversations initiated by individual persons (especially during the preparation of the final report and presentation). The participants were informed that they were the subject of observation to develop a scientific article summarising the project.

3. The course of the PBL project

Participants, according to the rules of PBL classes, obligatorily participated in weekly (contact) meetings with the three-person project management team (academics from both study units) and could benefit from the knowledge of experts, also being university employees. The Trello system, a web-based and mobile application for managing kanban boards in conjunction with the university's Microsoft 365-based accounts (documents and graphic design files), was imposed for online group collaboration. Enforcing the use of the Trello tool stemmed

from the need to easily control the work of the student team, they were required to share all elements of their work through a structured board system.

The project aimed to build an effective advertising that would convince young people to save water and consider recycling it. To achieve this goal, the project team used the Design Thinking process, which helped to tailor the developed solutions to the target audience, and therefore the initial meetings were devoted to identifying problems related to water conservation and the Design Thinking methodology. At this stage, the students unanimously chose their peers as the target audience for their project, recognising in the discussion that it would be easiest to communicate and reach this cohort and that interacting with this group could yield significant results in changing beliefs and behaviours.

3.1. Identification and survey study

The first task of the team was to identify the problem of water saving and recycling. The independent work of the students highlighted how practically they perceive this issue and the fact that they formed their knowledge exclusively from online sources. In the next step, the project team developed a survey questionnaire and conducted it online using Google Forms.

One of the main goals of the survey was to find out what factors convince and, at the same time, determine a young person to make the decision to save water and consider recycling. Moreover, the students constructed the tool in such a way that the posted graphics prompted some reflexion on their actions in the face of the world's water shortage problem. The respondents were guided to reflect on ways to save water when completing the survey. Two members of the project group lived in the students' homes during the academic year and conducted a pilot study that yielded a final version of the questionnaire, which was approved for use by the project's teaching team.

Analysis of the results of the questionnaire revealed several key aspects regarding the attitude of the surveyed group towards the problems of water conservation and recycling.

Awareness of water conservation. The respondents clearly showed awareness of the need to conserve water. The majority spoke in the affirmative, pointing to specific practises, such as turning off the tap more often, choosing to shower instead of taking a bath, and reusing water, such as when cleaning.

Willingness to conserve water. When asked to justify their reluctance to save water, almost all respondents indicated that they save water and do not need to justify themselves.

Environmental awareness. Some respondents also emphasised awareness of the limitations of water resources and reluctance to be responsible for the deterioration of this state, also indicated the possibility of a vision of a dire future - "there will be no water, there will be no humanity".

Education. An important aspect of the survey was the issue of education on water conservation, which showed that most respondents consider education necessary and think that

people's awareness is very limited when it comes to water resources, the degree of demand, and the need to take care of the natural goods the Earth gives us.

Giving up material goods. Respondents were also asked about the potential abandonment of certain material goods for the environment. The respondents mainly indicated restrictions on various consumption practises (buying clothes with each new collection, washing the car more often, buying bottled water).

Economic motivation. The main motivation for saving water was economic savings; lower bills were indicated as the most important reason.

Emotional feelings. The analysis also took into account the emotional feelings of the respondents, most of whom indicated a lack of specific emotions related to lack of water or limited access to it.

Respondents' data. Those who completed the questionnaire declared that they were between 19 and 24 years of age and mainly came from large towns and cities (from 50,000 to 500,000), the least numerous group (30.6%) consisted of respondents living in rural areas and towns up to 50,000. Of the 110 questionnaires qualified for analysis, a slightly larger group of respondents were women. More than 53% of the participants declared that they are single, almost 42% live with a partner, and less than 5% have a family (wife/husband/children).

Students joining the project, according to the leadership team, were convinced of their (personal) fairly extensive knowledge of water conservation issues, and based on the analysis of the questionnaires, they felt that their generation was equally aware. The leadership team drew the students' attention to serious limitations of the diagnostic survey method, including the peculiarities of online surveys, pointed out some shortcomings of the constructed survey tool, and ambiguities of the obtained results. The team in the discussion also showed scepticism, but in the report, the students included this kind of wording summarising the survey: "Young society is aware of the water shortage problem. Knows ways to save and recycle water. Can classify the main problems of the 21st century. The young generation is aware of what products use the most water".

3.2. Meeting with an expert in media communication

The leadership team designed a meeting with a media specialist in the PBL project. The meeting aroused great interest among students, as it turned out that they had not previously encountered the knowledge underlying the construction of advertising and information messages and their impact on people. Very important here turned out to be the excellent preparation of the expert, who in a few hours discussed the most relevant areas useful to the group, from the meaning and use of colours, principles of composition, design of a coherent message, typographic principles, to issues of how people perceive and test visual messages. The meeting also analysed a practical example of advertising, presenting plans for brand-related activities, and communication strategy with the audience. The importance of heat maps obtained from eye-tracking studies, which show what elements attract the viewer's attention

first and how long they permeate, was discussed. The expert also stressed the importance of subtlety in visual communication, pointing out that effective advertising should be guided by aesthetics and contain a small number of elements to carry a deeper meaning, as well as the need to motivate the viewer to reflect and analyse.

It is worth noting that in the later stages of the project, the expert's guidance proved very valuable to the group, and any graphics and videos created were analysed by the team with the active use of this knowledge.

3.3. Meeting with the expert on water resources

The team, as part of gaining substantive knowledge, met with an expert who deals with water issues, water treatment from several perspectives, from local to European and global. The expert pointed out a number of contexts that are not usually covered in popular media coverage. Thus, by far the students were most impressed by fairly basic information about the quality of so-called tap water, the lack of need to filter it, explanations related to the concepts of water hardness, white sediment in the kettle (limescale), and the influence of meteorological conditions on water microbiology.

It should be noted that most of the information presented by the expert was completely new to the group and often came as a complete surprise. For example, the independent work of the students when they conducted a reconnaissance of the topic created in them a deep conviction after the need to filter water for drinking, with various techniques that are associated with incurring significant costs for families or end users (osmotic filtration, jugs/bottles with carbon filters). The expert knowledge imparted had a decisive influence on the subsequent choice of form and the target advertising campaign itself, which was created as part of the project.

3.4. Selection of advertising form and implementation

At the stage of choosing the form of advertising, the students focused on their abilities, personal preferences in making their decision, they did not enquire which forms of messages are most effective according to, for example, specialised portals. Their choice fell on the social network Instagram, where they created a profile, initially made available only to team members, and then made public. The group developed an information campaign based on graphics with informative text promoting a responsible attitude toward the many aspects of life in which water (and water conservation) are essential. The students also shot several short film forms (footage of less than 30 seconds), which they believe should make a big difference in the perception of the issue by the target group, their peers.

Using the knowledge gained during the project activities, the group created, in their opinion, a visually coherent message divided into nine educational cycles. It also conducted survey research (on small groups of peers) on the name of the entire project, preferred colour sets, and the appearance of the graphic design of the posts (A|B tests). These activities are called prototyping and testing in the design thinking methodology.

At this stage of the project, we no longer observed any specific changes in students' knowledge or modification of attitudes towards the issue of water and water conservation. Only specific dynamics of involvement in the work of group members were noticed. Students who were accustomed in the course of their studies to group project work experienced the hardships of individual tasks more easily and their motivation fluctuated little.

3.5. Meeting with an expert perception testing

The last invited expert presented eye-tracking technologies that more objectively observe people's perception of media materials; in particular, he focused on eye-tracking systems. This research in the project was to be used by students to unbiasedly examine designed image variants, modify graphic designs, and ultimately reliably select the most optimal versions of messages. The team, using a hardware eye-tracker (Eye Tribe) connected to a laptop, was able to determine on which element of the graphics on the screen the test person focused his or her gaze, in which places, and for how long. Thanks to the expert-prepared software, the students conducted the test on 27 people to confirm the testing of A|B test opinions for 4 different graphics variants. This stage actually involved two members of the group who had the opportunity to observe and talk to the test students.

The above description is only an abbreviation of the project activities intended to illustrate the versatility of the activities that the students carried out and the dynamics of their attitudes. It should be emphasised that the examples presented are only a selection of the many activities in which the students participated.

3.6. Verification of the characteristics of Generation Z

The project team had the opportunity to observe not only the attitudes, behaviours of students and their beliefs related to the use of water, but also the dynamics of these processes. Following the work and reactions of the students, the leadership team had the opportunity to distinguish certain regularities that support the typical characteristics attributed to Generation Z to varying degrees.

AT1: Dependence on social media - Gen Z relies heavily on social media for communication, information, and networking.

This feature can indeed be confirmed as common. However, the facilitators team noticed a poor willingness to learn how to use a new, slightly more complex application (compared to the most popular apps) like Trello. Despite the ease of getting support to understand the concept of communication and collaboration through the tool, the four students were unwilling to devote time and energy to learning the new tool for many weeks of the project. These limitations are related to people's personal stories rather than problems with the availability of information on how to use the specialized tool. Also noted was a reluctance to use software that ran on computers in favour of being able to work with smartphones. However, people who became

more deeply involved in the project naturally started using their laptops, due to the limitations of the software and mobile hardware.

AT2: Pragmatism and realism - Gen Z is usually practical, seeking job stability and financial security while continuing to learn.

This characteristic was indeed confirmed in our observations. However, it is important to keep in mind that assessing what action is pragmatic or realistic may be different for people of different generations, which can lead to many misunderstandings. What, from the point of view of the project management team, was a matter-of-fact action, in the eyes of the students often appeared as redundant, too confusing and time-consuming.

AT3: Environmental concern - members of Generation Z are environmentally aware and advocate for sustainable practises.

A characteristic definitely evident in the observed group. The team was able to observe how the level of knowledge regarding water and water conservation varied poorly, despite the time the students had to recognise the topic. It was observed that there was a lack of inclination to search deeper for information in favour of collecting information, in short, easily digestible, visually, and content-attractive forms. The team got the impression that the collected set of facts (and, in fact, Internet artefacts) did not combine into a coherent whole, which is the result of the global nature of the problem under study, both from a natural and social perspective.

AT4: Global perspective - representatives of Generation Z have a sense of global connection and are interested in international affairs.

A quality also definitely evident in the observed group, but in the dimension of connections between people with whom we form, for example, relationships at the level of news broadcasts (I feel a connection with people whose posts I see, read about, etc. regardless of, for example, geographical location). A more general, generalised, or interest in specific nations in the style characteristic of earlier generations has not been observed.

AT5: Progressive values - Generation Z students are more inclined to support progressive social and political issues.

This trait can be fully confirmed by the project team, however, in the declarative layer, as over the course of the project no changes could be observed that could be interpreted as actively supporting social or political change. The mere fact of working on an outreach campaign conducted through Instagram, in the team's opinion, is not enough to recognise activity, as other forms of activism that are typical of those interested in supporting progressive social and political causes were not observed. However, it should be noted that a significant number of students filmed short video forms, of which they were the protagonists, despite the fact that they had not previously made such attempts to publicise their image.

AT6: Entrepreneurial thinking - many representatives of Generation Z have an entrepreneurial spirit and seek opportunities to create their own ventures.

One of the students in the project was heavily involved in the work of preparing the graphic layer and creating a campaign on Instagram, viewing these activities as a great training and gaining competencies necessary for her future career. Another person saw the project as an opportunity to start her academic work, hence she was heavily involved in the research process with an eye-tracker. During the project, no tendency to transform or use the activity in a business direction was noticed, neither during the interviews with the participants nor even during the idea generation blocks. Had this trait been prevalent in the generation surveyed, the leadership team could have observed at least the seeds of business-like ideas that could have emerged with such a broadly framed project topic.

4. Summary

The main objective of this document was to verify the beliefs about water conservation and recycling of Generation Z, which was designed to answer three research questions.

The first task of the project group (acquiring factual knowledge, developing and conducting a survey, presenting and discussing the results) led the project team to the conclusion that students have a high belief in their knowledge of water issues, environmental behaviour, and are of the opinion that many people of their generation are capable of incurring certain costs of discomfort in order to conserve or rationally use water resources. The meeting with the expert showed them new insights that came as a serious surprise to them, although they were, in fact, a set of commonly available information (including on the Internet) that had not penetrated their consciousness during the exploration stage.

Based on the final result (the artefacts presented, including the final report and the campaign launched on Instagram), we can unequivocally confirm that the team of Generation Z students is capable of developing a model and product that are a progressive information and advertising message. The project team was not concerned with assessing the quality or effectiveness of the message produced.

Summarising the overview of the characteristics studied from Generation Z (the last research question), the team notes that, in fact, most of the attributes attributed to this age cohort are indeed confirmed, but it should be kept in mind that the definitions of attitudes and activities can be significantly different between generations. Therefore, it is very important to carefully determine whether people belonging to different age cohorts have clarified their intentions and activities. Moreover, representatives of Generation Z, very often report in good faith, for example, that they are well prepared in terms of content and readiness to take action. Often, they are convinced that since they found some information on the Web and decided that a particular task is not complicated, they will manage it on their own. Unfortunately, the results of their actions are often inadequate or inconsistent with the requirements set by older

generations. Ignorance of these facts can lead to misunderstandings in teams and collaborative professional work. In online communities, we can find quite widespread opinions about very difficult cooperation with generation Z. But in parallel, where management teams (usually representatives of older generations) orientated in their functioning to communication, have taken the trouble to recognise the strengths and weaknesses of this cohort, cooperation and mutual satisfaction have become an everyday reality. Interestingly, we can now see that the older generations are clearly indicating what they can (and should) learn from Generation Z. Of course, this requires a specific mindset of management teams that have abandoned a merely directive management style.

It is still worth highlighting the role of the Design Thinking process in working with Generation Z. The Design Thinking methodology reflects the values attributed to this cohort by deeply empathising with the user, prototyping, and continuously testing solutions that are in line with the real needs and aspirations of their generation. This approach promotes increased communication and collaboration, including between generations, which is essential in modern business environments.

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ECOCENTRISM. HOPES AND CONCERNS

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Purpose: Ecocentrism analysis, based on selected themes of Aldo Leopold's and J. Baird Callicott's ideas, in the context of the debate with anthropocentrism; An attempt to indicate a new axiological foundation for ecocentrism.
Design/methodology/approach: The achievement of the article's objective results from the utilization of a set of tools, including hermeneutics, analysis of relevant literature, and comparative theory. Through these methods, a set of ecocentric values has been reconstructed, carrying the potential to develop a more rigorous protection of the natural environment.
Findings: The ecocentric approach to environmental conservation can be more effective than the concept of „sustainable development", as it considers the well-being of the ecosystem, refrains from treating nature as a resource, takes into account abiotic factors, opposes long-term environmental degradation, and places biodiversity at the core. Simultaneously, it is a flexible approach, basing its axiology on both biological and social community values. It's not about negation, but rather a modification of traditional ethics.
Research limitations/implications: The transformation of the cultural approach to the relationship between humans and nature requires social acceptance and a coherent value system. Ecocentrism is challenging to embrace in societies where anthropocentrism (a focus on human interests) prevails. Practical application of ecocentrism is difficult when it is not widely known and understood. Some of its propositions may encounter resistance, such as ethical consideration directed towards abiotic factors.
Practical implications: Ecocentrism can be applied in everyday life, in businesses, and many other areas. It is a theory with immense practical potential, worthy of consideration in the realm of business practices, resource management, urban planning, agriculture and food production, education, politics, and legislation.
Social implications: Adopting the principles of an ecocentric approach would have a profound impact on society by altering values, priorities, and actions to focus on the well-being of ecosystems.
Originality/value: The value of the article lies in the original systematization of ecocentric ideas in the context of the concept of „ecosystem" and „anthropocentrism". For the first time, the article identifies concepts, and simultaneously metaphors, that can serve as a vehicle for the popularization and further continuation of the ecocentric tradition. The highlighted terms are „home" – directly referring to the etymology of the word „ecosystem" – and „family" (a triad of values also appears: life, safety, well-being).

Keywords: ecocentism, anthropocentrism, biocentrism, deep ecology.
Category of the paper: Conceptual paper.

1. Introduction

The theoretical scope of the article encompasses the analysis of the concept of an ecosystem and the issues presented by the classical proponents of ecocentrism, Aldo Leopold and J. Baird Callicott, as well as the influence of this concept on practical aspects of environmental conservation. The first part of the article presents the methodology applied (2). In terms of content, the text begins with an analysis of the ecosystem – a concept that plays a fundamental role in the context of the theory presented (3). Next, the central themes of Leopold's and Callicott's thoughts are analyzed, and the demarcation lines distinguishing ecocentrism from deep ecology and biocentrism are indicated (4). In the following section, attention is drawn to examples of conflicts and difficulties in the implementation of ecocentrism, which stands in opposition to anthropocentrism (5). Part (6) reflects on the hopes and concerns associated with ecocentrism. The issues concerning inspiration and criticism related to the further development of ecocentrism are covered in section (7). The conceptual nature of this article is also explained here. In the summary, the practical consequences stemming from ecocentrism are pointed out (8).

The recipients of the article are not only specialists in the fields of philosophy, ethics, ecology, and environmental conservation, but also individuals interested in sustainable development, sociology, and public policy. The text provides a fresh perspective on how evolving ethical views and societal attitudes can impact the future of the planet. Ecocentrism can significantly influence the expansion of ecological awareness, offering valuable insights to various organizations and decision-makers, in pursuit of more resolute and innovative actions to maintain ecosystem stability.

2. Methodology

In the context of the growing ecological crisis – from climate change to the loss of biodiversity – the search for ethical and philosophical foundations for rigorous environmental protection is becoming increasingly important. The identification of values that could provide 'strong' protection of the natural environment is carried out (in this article) based on a set of selected methodological tools. These methods include hermeneutics, which involves the interpretation of selected philosophical texts – along with the relevant literature on the subject

– as well as comparative analysis, whose aim is to contrast different ethical approaches to the environment, i.e., ecocentrism, biocentrism, anthropocentrism, and deep ecology. The text subjects the source term „ecosystem" and a number of other issues (including „speciesism", „plant ethics", „abiotic ethics", „value conflict") to analysis. This is an example of a methodological approach that focuses on the evolution of a key concept as well as selected contexts that provide insight into the lineage, development, and central theses of a given field. From a methodological standpoint, the content of the article seeks to answer ontological questions: What is ecocentrism? What characterizes its specificity? What set of values expresses what is most important and characteristic for ecocentrism? What underpins the attractiveness and unattractiveness of ecocentrism („ecological terrorism")? Does the set of values affirmed in ecocentrism have a chance to become the basis for active pro-environmental attitudes? Apart from historical and contextual analysis, the article is associated with normative research. On one hand, the goal is to identify classic ecocentric values. On the other hand, it's about their critique and pointing out the path for further development of ecocentrism. Proposed (new) values could then be tested in real social contexts (interviews, surveys, case studies). If ecocentrism were to be increasingly integrated with recognizable ethical norms, social activities, and political demands, the values it represents would have to be well understood, widely discussed, and (at least in part) socially accepted. To make this possible, it is necessary to build a clear transition from the field of ethics and value theory to politics, based on the „strength" of the language that shapes opinions regarding ecological problems (this task is served by metaphors of „family" and „home"). Let us add that creating a new set of concepts and values, based on critical analysis, requires the use of linguistic methodology. Creating a new conceptual language of ecocentrism must be based on the semantic and pragmatic analysis of terms, along with the study of their potential impact on changing thinking and attitudes towards nature. In developing ecocentrism, focus should be placed on the role of language, cognitive structures, and symbols, as these phenomena are key in understanding reality (Goodman, 1968). What we think about nature is shaped by conceptual systems and metaphors that are dependent on a given language and culture. The potential of this type of cognitive relativism is utilized in environmental thought (Lakoff, 2010) – but it seems – to an insufficient extent.

3. Ecosystem and moral status

How should nature be treated? Various concepts of ecological ethics provide answers to this question. In the face of an ecological crisis, one of its streams gains increasing significance: „ecocentrism" (from Greek 'oikos' – house, environment, 'kentro' – center). To deeply understand this theory, it's necessary to grasp the key concept underlying ecocentrism, which

is the „ecosystem". The fundamental premise of ecocentrism is to grant moral status to ecosystems that constitute the Earth's biosphere. The biosphere is the global sphere of life on Earth, encompassing all ecosystems and therefore organisms in their correlation with the Earth's crust (lithosphere), water (hydrosphere), and air (atmosphere) (Vernadsky, 1997). On the other hand, an ecosystem is (put simply) an ecological arrangement in which living organisms and their environment interact with each other. An ecosystem is the „basic unit of nature", a collection of living organisms in a specific area, along with their inanimate environment, where a continuous flow of matter and energy occurs between organisms and their environment (Tansley, 1935, p. 237). If we consider etymology, an ecosystem is a „whole composed of parts"[1]. An ecosystem does not possess a hierarchy but rather a (food) structure, comprised of the physical environment, autotrophic and heterotrophic organisms, as well as organisms responsible for decomposing dead organic matter. In the work of Aldo Leopold, a classical representative of ecocentrism, there emerges a description of an ecosystem in the form of a specific structure and the flow of energy between its different layers[2]. In the „pyramid" scheme outlined by Leopold, one should not perceive a hierarchy of values. Emphasis is placed on the mutual relationships among plants, land, insects, birds, rodents, and carnivores. The essence lies in the dependencies within the ecosystem, not in the „superiority" or „inferiority" of individual layers:

The species of a layer are alike not in where they came from, or in what they look like, but rather in what they eat. Each successive layer depends on those below it for food and often for other services to those above. Proceeding upward, each successive layer decreases in numerical abundance. Thus, for every carnivore there are hundreds of his prey, thousands their prey, millions of insects, uncountable plants. The pyramidal form of the system reflects this numerical progression from apex to base. Man shares an intermediate layer with the bears, raccoons, and squirrels which eat both meat and vegetables (Leopold, 1949, p. 252).

A similar description of an ecosystem can be found in the works of the American biologist and founder of modern ecology, Eugene Odum, who speaks of an ecosystem as the flows of energy and nutrients between biotic and abiotic components[3]. It's worth emphasizing how to understand the term „energy", which serves as the source of changes within an ecosystem:

[1] The concept of „ecosystem" is composed of two words, the Greek word οἶκος (*oikos*), meaning „house" or „home", and the word σύστημα (sýstēma), meaning „system". The second word consists of the prefix σύν (*sýn*), which signifies „together" or „jointly", and the verb ἵστημι (*ístēmi*), which means „to place", „to put", or „to establish". When the verb is used in the context of the word σύστημα (*sýstēma*), it signifies the arrangement of different elements into a whole, the creation of something complete, an organized collection, a coordinated arrangement. Therefore, a system is a „whole composed of parts", and an ecosystem can be understood as a „house composed of parts".

[2] Leopold employs the term „biotic community" as well as „land", which correspond to the concept of an „ecosystem". He refers to his concept as „the land ethic".

[3] Abiotic factors, such as temperature, humidity, light, soil, and water, influence organisms and interactions between them in ecosystems. Today, this is self-evident – its foundations were established by (Odum, 1971).

An ecosystem consists of all the organisms and the abiotic pools with which they interact. Ecosystem processes are the transfers of energy and materials from one pool to another. Energy enters an ecosystem when light energy drives the reduction of carbon dioxide (CO2) to form sugars during photosynthesis (Chapin III, Matson, Vitousek, 2011, p. 5).

From the preliminary remarks, it is evident that ecocentrism advocates surrounding the vast organic and physical space with respect. As the stability of an ecosystem relies on the mutual interactions between organisms and their environment (equivalents in biology being „biocenosis" and „biotope"), ethics significantly broadens the scope of interest by encompassing valuation not only of living organisms. When discussing the ecosystem as a phenomenon with moral value, we must consider biotic factors (living) but also abiotic factors, meaning physicochemical ones. This fact might be surprising for individuals accustomed to ethical intuitions that primarily concern humans, possibly animals, but rarely plants, microorganisms, or rocks. Should ethical reflection be limited solely to living organisms with the capacity to experience? It appears not (Brennan, 1984). Traditionally, ethics has been focused on sentient organisms that possess specific preferences – primarily avoiding suffering and striving to fulfill their needs (this fact was reflected upon by J. Bentham). However, since an ecosystem consists of all organisms and the physical environment in which they live, objects of ethical consideration extend beyond various exotic organisms (due to the ecosystem's span), such as extremophiles, to also include (as mentioned earlier) plants. „Plant ethics" is still a relatively new area of ethical research, as traditionally, ethics focused on examining relationships between humans and/or humans and animals. However, the development of ecology has led to a better understanding of the complexity of interactions in ecosystems, hence the need to also consider the role of plants and ethical issues related to them in these ecosystems[4].

One of the fundamental terms in contemporary ethics is the concept of „moral status", which can be attributed to a certain entity or not. If it is attributed, humans acquire moral obligations towards this phenomenon. The concept of moral status can take various forms and is developed within different philosophical traditions (Tannenbaum, Jaworska, 2021). In the case of ecocentrism, moral status is attributed to all ecosystems, encompassing life forms and abiotic components that constitute them. This status is assigned based on relationships and affinity within a given community (Callicott, 1989). Traits such as being a living organism, experiencing pain, possessing rational thinking abilities (etc.) are not necessary conditions to possess moral status. Ecocentrism is a holistic position where moral status depends on the role and function a particular entity plays within the community – its biological equivalent being the „ecosystem".

[4] In the context of pioneering views presented toward plants, it is worth mentioning the perspectives of Paul W. Taylor (Taylor, 1986). This biocentrist rejects the so-called „speciesism" which implies human „superiority" or „being better" than all living beings. He believes that ethics should be guided by „species impartiality", avoiding harm to both plants and animals (Taylor, 1986). See also (Attfield, 2018).

4. Ecocentrism, origins, differences

Aldo Leopold is an ecologist and naturalist, author of the essay collection *A Sand County Almanac*, which was published posthumously in 1949. Leopold places the relationship between humans and the natural environment at the center of his focus, emphasizing the need to protect wild areas and biodiversity. Let's recall with Aristotle that humans are social creatures with the power of speech and moral reasoning. In the context of Leopold's reflection, we must add that he is also a biological being. Humans are members of the biotic community – together with plants and animals, we form a bond: a shared process of evolution.

J. Baird Callicott undertook the task of interpreting Leopold's legacy, focusing on the development of ecological philosophy, particularly pertaining to ethics extended to encompass the entire natural world. His works continue Leopold's ideas within the context of contemporary environmental philosophy. These authors share an ecocentric holistic stance (Callicott, 1989, p. 25). Leopold's attention is primarily drawn to wild animals; he doesn't emphasize the „defense" of domesticated animals that contribute to the decline of ecosystems. Both thinkers agree that all forms of life on Earth are the result of a long process of adaptation and changes occurring through evolution. Each organism has its place in the ecosystem and serves a specific role within it. Because different organisms fulfill distinct functions in the ecosystem, it's not the case that ants, elephants, plants, or rivers have the same moral value as family members or domesticated animals. The latter are members of a social community, therefore deserving special treatment:

Pets, for example, are […] surrogate family members and merit treatment not owed either to less intimately related animals, for example to barnyard animals, or, for that matter, to less intimately related human beings (Callicott, 1989, p. 56).

While wild animals do not possess an equal moral value to humans, we have moral obligations toward them. The fundamental matter is the role a given animal plays in nature (Callicott, 1989, p. 57). Understanding this fact solidifies a holistic perception of reality and negates the mistaken desire to correct natural processes:

Among the most disturbing implications drawn from conventional indiscriminate animal liberation/rights theory is that, were it possible to us to do so, we ought to protect innocent vegetarian animals from their carnivorous predators. Nothing could be more contrary to the ethics of the biotic community than this suggestion. Not only would the (humane) eradication of predators destroy the community, it would destroy the species which are the intended beneficiaries of this misplaced morality (Callicott, 1989, p. 57).

Because bees play a very important role in the ecosystem, these insects should be subject to greater moral attention than, for example, rabbits or voles (Callicott, 1989, p. 25). On the other hand, invasive animals can be removed from the ecosystem (for its benefit). In Callicott's view, domesticated animals are part of a social community. They are dependent on humans,

and there is a kind of social contract that binds us to them. Human moral duties toward the ecosystem stem from both belonging to the biotic and social communities. Ethics must take into account the fact that these communities are not identical, yet they are interconnected. Ecocentrism aims not to supplant but to complement and expand traditional ethics. It is not about denying human morality, but about its modification (Callicott, 1989, p. 94). Ecocentrism does not advocate vegetarianism; it is flexible and non-dogmatic concerning animals. The well-being of the entire ecosystem takes precedence over the life of an individual mammal or insect.

A certain challenge in understanding ecocentrism is its resemblance to biocentrism and the concept of „deep ecology", which can lead to confusion between these streams. In the development of contemporary ecological thought, the views of Arne Næss have played a significant role[5]. Similar to proponents of ecocentrism, Næss emphasized the importance of biodiversity, highlighted the idea of balance, interdependence, and integrity among all aspects of nature. While deep ecology and ecocentrism challenge a strictly anthropocentric approach, individual human experience remains a significant reference point in deep ecology and doesn't lose its importance. Meanwhile, ecocentrism places the ecosystem above the individual. This matter is clearly explained by J.B. Callicott:

[…] the good of the community as a whole, serves as a standard for the assessment of the relative value and relative ordering of its constitutive parts and therefore provides a means of adjudicating the often mutually contradictory demands of the parts cosidered separately for equal consideration (Callicott, 1989, p. 25).

Deep ecology appears to be a form of spiritual experience linked to profound sensations in nature. Its proponents seek an emotional connection with nature, which can lead to feelings of awe or excitement. Ecocentrism focuses more on ecosystem balance, energy flow, and the processes taking place within them. It doesn't emphasize personal experience or spiritual aspects. In comparison to ecocentrism, deep ecology seems to offer a more inspired proposition (thus, perhaps, more appealing). Descriptions of ecosystems don't contain an undefined sense of metaphysical „depth". Nature isn't idealized. Life within the biotic community is challenging and full of threats. To put it bluntly, it comes down to the fact of eating and being eaten (Callicott, 1989, p. 57).

The demarcation difference also separates ecocentrism from biocentrism (Taylor, 1983). The latter focus on living organisms. The concept of „ecosystem", however, forces attention to the relationship between organisms and their surroundings in the natural environment. Ecocentrism doesn't omit the abiotic environment, which involves non-living matter. An ecosystem comprises all organisms and the physical environment with which these organisms interact. Another distinction is that biocentrism concentrates on appreciating the value of each living organism. This view underscores the importance of individual beings in

[5] Næss introduced the concept of „deep ecology" in the 1970s (Næss, 1973).

the universe and emphasizes respecting their existence regardless of the role they play in it. On the other hand, ecocentrism centers on a holistic perspective. Each organism plays a significant role in maintaining balance and the functioning of the entire ecosystem.

5. The dispute over anthropocentrism

Anthropocentrism is a viewpoint asserting that humans are the central point of reference and priority in determining what is morally good and bad. It is a philosophical concept assuming that humans are at the axiological center, thereby possessing superior rights and interests in relation to other species. Anthropocentrism can take various forms, depending on whether it focuses on the interests of the individual, community, or the entire species. Anthropocentrism can be understood individually[6], communally, or species-wise.

In the 20th century, the most influential figure of communitarian anthropocentrism was presented by John Rawls in his vision of a just community brought to life through a social contract (Rawls, 1971). Due to the special respect shown for human dignity, autonomy, the ability to make decisions, and taking responsibility for them, including only human beings within the moral community seemed self-evident (Fox, 1986)[7]. Especially in Cartesian dualism, there existed a clear hierarchy between humans and animals. However, ecological ethics did not follow this path. Contemporary thinkers rather point to the necessity of a compassionate and more egalitarian approach to animals, based on research concerning their evolution, behavior, consciousness, and altruistic behaviors[8]. An important moment was the emergence of the concept of „speciesism"[9]. The terms „anthropocentrism" and „speciesism" are not synonyms, but they are related in the context of ethical debates. Anthropocentrism is a form of speciesism where human interests are favored over other forms of life. Ecocentrism should be considered a position in opposition to anthropocentrism and speciesism. Humans are part of the ecosystem, but their interests are not prioritized.

[6] One can defend individual well-being and happiness as a moral priority. The American philosopher Tara Smith, drawing from Ayn Rand's philosophy, advocates rational egoism as a moral value (Smith, 2006). However, this viewpoint has rather given way in contemporary times to anthropocentrism understood as the defense of society's and the human species' interests. Aligning with one's own needs (as a moral priority) is often associated today with the defense of individualism, self-realization, and criticism of altruism (Shaver, 2021; Baier, 1973).

[7] M.A. Fox is a figure who underwent an evolution concerning the issue of human responsibilities toward animals. Fox disagreed with Peter Singer's position on animals and maintained a moral preference for the human species (pointing to the justification of animal testing). He subjected the arguments he put forth to criticism in subsequent publications (Fox, 1987; 2000).

[8] One can argue that only recognizing animals as „others than humans" as equals to humans enables the recognition of all human beings as part of an authentically egalitarian community (Ebert, 2020).

[9] The popularization of the term was contributed by P. Singer, who argued that the unequal treatment of other species is analogous to discrimination based on race or gender (Singer, 1975).

Will ecocentrism differ in practical action from ecological anthropocentrism? It seems so. Ecocentrism safeguards nature protection in a rather uncompromising manner as it remains impervious to rhetoric concerning human needs (Taylor et al., 2020; Washington et al., 2017). Unfortunately, despite the increasing degradation of the natural environment, incorporating ecocentric values into the recommendations of various institutions engaged in nature conservation encounters resistance. This happens due to the shaping of human morality and political actions based on anthropocentric premises. Ecocentric solutions can conflict with anthropocentrism, especially in the context of resource access. For instance, restricting access to water or forest areas in the name of ecosystem protection can clash with human rights to access food, water, and shelter. Another example could involve conflicts related to cultural traditions. Specific social practices may have a detrimental impact on the environment. These could include hunting endangered species or agricultural practices that harm ecosystems. Stringent environmental protection measures can lead to conflicts with the right to preserve traditional culture. Another significant conflict arises in connection with economic development. Modern understandings of „human rights" encompass the right to development and an improved quality of life. Ecocentrism, prioritizing environmental protection and all organisms, may curtail economic growth and impose restrictions on industrial activities. The concern for the well-being of the ecosystem may conflict with the rights to decent living conditions, work, and access to education. Mary Anne Warren criticizes J. Baird Callicott's position in the context of conflict resolution as follows:

The biosocial theory provides no satisfactory principle for the resolution of conflicts between different prima facie moral obligations – either those arising from within a single community, or those arising from the different communities to which one person may belong. Moreover, it requires us to deny moral status to person and other sentient begins that are not co-members of our social or biological communities. In this respect, it conflicts with moral judgments that most of us would make (Warren, 1997, p. 132).

Is the destruction of an ecosystem by humans, for example, draining a wetland habitat, morally wrong? From the perspective of anthropocentrism, we can consider such actions as wrong, but we cannot say that they are inherently wrong. We need to take into account the reason behind the human action, and this is done from the perspective of their well-being. For example, river regulation might aim to prevent flooding, protect buildings along rivers, enhance inland navigation, or raise local groundwater levels (these actions might have economic and social justifications). Anthropocentrism does not establish the protection of ecosystems like marshes, peatlands, or ponds as a fundamental principle. Ultimately, any action is wrong if it harms humans. Sometimes people do not know what is good or bad. Certain facts might not be immediately evident, and the benefits or drawbacks of specific actions might only become apparent over time. However, certain trends have been reversed. It is assumed that the less we interfere with a river, the more we gain. Regardless of whether someone is a supporter or opponent of river regulation, they primarily see the role it plays for humans (source of

drinking water, hydropower, fish farming, navigation, recreation). Forests, meadows, or wetlands are not perceived as independent ecosystems and parts of nature of which we are a part. Humans see themselves as the rulers of nature. Both the draining of wetlands and the absence of such regulation – both actions are taken for the benefit of humans. The same way of thinking is replicated in relation to climate, tropical forests, soil, fungi, or seas.

One of the most significant ethical topics is the issue of granting rights to animals (Regan, 1983). The concept of „animal rights" has weakened the traditional anthropocentric paradigm, introducing a new dimension to the perception of the relationship between humans and other forms of life. Ecocentrism is not yet a well-known idea and does not frequently appear in mass communication. Humans, as conscious and rational beings, possess higher moral status and greater entitlements than animals, plants, or ecosystems. The very formulation of „human rights" implies superiority over animals or abiotic factors, thereby paving the way for various forms of exploiting nature and animals (scientific experiments, food production, entertainment). It is worth noting that animal rights movements strongly challenge the legitimacy of anthropocentrism, arguing that human practices infringe upon animals' rights to life, avoidance of suffering, maintenance of integrity, and behaviors driven by evolution. Ecocentrism, which attributes value to ecosystems – including animals, plants, and abiotic components – strongly challenges anthropocentrism.

6. Hopes and Conserns

Ecocentrism is a set of specific values. Which of them have been particularly highlighted? Aldo Leopold, a proponent of the wild nature, precisely indicates what is good and what is bad:

A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise (Leopold,1949, p. 262).

J. Baird Callicott, striving to develop precise ethical principles that should guide human interactions with nature, emphasizes the importance of integrity, stability, and beauty as well:

The integrity, stability, and beauty of the biotic community depend upon all members, in their appropiate numbers, functioning in their coevolved life ways (Callicott, 1989, p. 57).

Callicott's argument also includes the affirmation of unity, coherence, and self-consistency (Callicott, 1989, p. 50). Does such a defined axiological system resonate with any radicalism[10]? Does this specified system of axiology seem associated with any radicalism? Is it understandable for the average person?

[10] Ecocentrism is also an ecological movement. It has become an influential viewpoint among radical environmental activists. The well-known organization Earth First! emerged from within the mainstream environmental organizations in the 20th century USA, such as Sierra Club, The Wilderness Society, Friends of the Earth (Woodhouse, 2018).

It seems that the values mentioned above can be considered abstract rather than clear directives that ignite ecological enthusiasm. These values are not transparent to individuals who haven't delved deeper into the theory of ecocentrism. Unity, coherence, and stability appeal to reason rather than to the heart. These terms aren't capable of constituting a distinct and appealing message. „Beauty", which undoubtedly resonates, doesn't appear to be a value that supports a radical and „strong" concept capable of changing the fate of the planet. The lack of a compelling message is a certain challenge. Additionally, ecocentrism doesn't offer direct benefits to humans, only indirectly. What benefits does humanity gain by acting based on ecocentric values? Even posing this question assumes an anthropocentric perspective that we (potentially) need to depart from. Callicott points out the beneficiaries of ecocentrism – and humans are not among them.

Animals, plants, mountains, rivers, seas, the atmosphere are the immediate practical beneficiaries of the land ethic (Callicott, 1989, p. 25).

Human beings, like bears, are omnivorous mammals – not the „crown of creation". There shouldn't be too many bears – the same applies to humans (ecocentrism advocates for a decrease in the human population). Let's ask simple questions: Would human life be easier, more comfortable, or safer in the perspective of ecosystem stability? Are people willing and able to, for instance, independently and pro-ecologically cultivate vegetables? Or perhaps they expect abundant agricultural produce, conveniently available at the nearest supermarket, at an attractive price? The ecocentric paradigm is not a model of consumerist living. In the ecocentric perspective, many things would have to be prohibited – such as monoculture agriculture, which enables mass production of cheap agricultural products.

As for diversity, what remains of our native fauna and flora remains only because agriculture has not got around to destroying it. The present ideal of agriculture is clean farming; clean farming means a food chain aimed solely at economic profit and purged of all non-conforming links, a sort of Pax Germanica of the agricultural world (Leonard, 1949, p. 199).

When thinking about nature and proper treatment of the environment, we usually focus on living organisms, especially mammals. Ecocentrism brings awareness that living organisms cannot be separated from their specific environment. This idea is introduced to ethics by the term „ecosystem", encompassing non-living matter as well. The abiotic environment becomes the subject of intensified attention for ethicists. Human actions disrupt physical space, disturb geological structures, damage fossils, harm plants, and ecosystems. Rocks significantly contribute to maintaining ecosystem stability. Axiologically important are the Earth's surface, lower layers of the atmosphere, and even deeper layers of the Earth's crust.

Ecocentrism seems to overshadow sustainable development[11]. „Sustainable development" often serves as a cover for further planetary exploitation. Through the concept of „sustainable development", humans ensure the continuity of nature's service function and can exploit it without being accused of doing nothing. However, humans are leading the natural environment into a widening circle of degradation („sustainable development" slows down and masks this process). The era of „sustainable development" turns out to be a period of intensifying ecological crises (Bendell, 2022; Lippert, 2004)[12]. For this reason, ecocentrism can and should inspire the creation of public policies aimed at environmental protection. An ecocentric approach could more significantly modify regulations regarding waste management, natural resource utilization, and spatial planning. Implementing ecocentrism could lead to a revision of practices and standards in various industries. If we remain within the realm of anthropocentric thinking, it can be added that greater care for ecosystems would undoubtedly impact human health, access to clean air, water, and food.

The further development of ecocentric ideas should be factual and specific to effectively illustrate the underlying practice. At the same time, it should stimulate imagination. If we aim to popularize ecocentrism, we face the necessity of creating a new terminology that offers a vision and hope tailored to the ecological challenges of the 21st century. Outside of specialist circles, ecocentrism remains a relatively unfamiliar concept. This theory is challenging to implement because it shifts priorities from considering one's own good to thinking about the well-being of the ecosystem. This is precisely why ecocentrism provides „strong" protection for nature. It adopts a stance that assigns value to all living organisms and their natural environment, regardless of their utility to humans, thereby blocking ethical arguments that treat nature as a resource. It seems that the concept of „home" could be a distinguishing term for ecocentrism (see further). Every ecosystem is a home that is built upon abiotic foundations. In this home, we don't live alone but with a family: plants, animals, extremophiles. While residing in this home, we shouldn't think solely of ourselves and strive solely for our own aspirations. In the realm of academic rhetoric, the concept of an „ecosystem" is a formal designation: it's a „system" as well as a „whole composed of parts". The hallmark of ecocentrism should be the notion of a „home" and the kinship of its inhabitants.

[11] „Human societies are utterly dependent on the natural world not only for material but also intellectual and spiritual sustenance" (Smythe, 2014, p. 927).

[12] The topic of sustainable development extends far beyond the thematic scope of this article. This issue requires separate consideration due to the vastness of the literature, the popularity of the idea, and especially its significance. „Sustainable development" is an idea that is even perceived as an alternative to the traditional model of philosophizing, specifically as: „a mechanism that should be embedded in the development of Western civilization" (Piątek, 2007, p. 5). The subject of sustainable development is widely analyzed and developed by Polish researchers. See (Ciążela, 2004; Kuzior, 2008; Tyburski, 2007; Hull, 2008; Gawor, 2006). When developing ecocentrism, it is worth considering the reflections and conclusions reached by Bryan Norton – see further, the section „Inspiration".

In the subject literature related to ecological issues, there is a sense of pessimism regarding progress in solving environmental problems – such as in relation to global warming (Luke, 2008). Ecocentrism is necessary to find new energy for action and to establish principles upon which „something" can be changed. Through popularization, reflection, and understanding of the values advocated by ecocentrism, we gain a chance for a better tomorrow.

7. Discussion

a. Inspiration

When it comes to the debate concerning the appropriate foundations for nature and human relations, contemporary theories that emphasize the socio-political context of ecological ethics and the deconstruction of traditional social institutions – including the family – seem important. Special mention deserves to be made of Robyn Eckersley's reflections, which hold that hierarchical structures based on class, race, gender, and nationality impact access to natural resources and the quality of life. The problem of anthropocentrism, therefore, extends not merely to the issue of the exploitation of natural resources and the loss of biodiversity but reflects broader social structures of domination. The exploitation and degradation of the natural environment are part of a wider system of hierarchical relations that are tied to anthropocentric politics and practices. For instance, marginalized and impoverished communities often suffer greatly from environmental degradation – even though they did not contribute to it to the greatest extent. Ecocentrism, therefore, is not limited to recognizing the value and rights of all forms of life but is simultaneously a call for social justice. Social structures of domination often support, and are supported by, forms of ecological hierarchy and exploitation. Striving for a just world requires understanding and abolishing both of these forms of hegemony and privileged positioning (Eckersley, 1992).

Val Plumwood emphasizes the convergence of social and ecological forms of domination. Her analysis of moral responsibility toward ecosystems is based on a new conceptualization of the relationship between humans and other forms of life. Both Eckersley and Plumwood aim to critique established hierarchies: gender hierarchies and species hierarchies. However, they differ in terms of specific ideas and employed methodology – Plumwood primarily relies on feminism as her main reference point. The thinker focuses on critiquing the opposition: „non-human beings-humans", but also the dichotomy: „nature-culture", which reinforces exploitation in both the social and ecological spheres (Plumwood, 2002). Instead of hierarchical relationships based on superiority and primacy, Plumwood advocates for reciprocity and a care-based ethics. Ecofeminism, which deconstructs the patriarchal structure of the family, serves as an important complement to the ecocentric perspective. The household, which (in my

conception) represents the ecosystem, is not based on violence and domination. See also: (Warren, 2000; Gaard, 1993).

For those wishing to develop ecocentrism, an important point of reference could be Bryan Norton's concept focused on conflicts and synergy between different environmental ethics. Norton is interested in the philosophical and ethical foundations of ecosystem management – himself proposing an adaptive approach to natural resource management (Norton, 2005). Interestingly, the researcher discards the dichotomy between anthropocentrism and ecocentrism, arguing that focusing on sustainable ecosystem management can satisfy the needs of both humans and other forms of life. This is a pragmatic approach geared towards sustainable development – less so „purely" ecocentric. Norton points to an interesting convergence of certain values. He argues that ethics based on different values (for example, anthropocentric vs. ecocentric) can lead to similar, sustainable environmental management practices. This kind of reflection is important as it attempts to reconcile different approaches to environmental protection, providing a significant contribution to the discussion about the tension between the idea of sustainable development and ecocentrism. This approach aims to integrate various perspectives – ecocentric, biocentric, and anthropocentric – in order to create a more holistic and adaptive management model.

b. Critique

In aiming to develop a more universally acceptable version of ecocentric ethics, it is important to consider the main arguments levied against it. A fairly obvious criticism against ecocentrism (as a form of extremism) is the unjustifiable rejection of anthropocentrism – that is, the idea that human needs should be the priority of ethics. This criticism is based on a variety of arguments, and even paradoxes: ecocentrism is considered to be, de facto, an „amplified" form of anthropocentrism (Schmidtz, 2011; Drenthen, 2011). It has been pointed out that the ecocentric approach fails to specify what concrete moral duties towards nature arise from adopting this perspective. Furthermore, there are various environmental policies that lack common moral principles – ecocentrism is not necessarily the best or universal model among them (Norton, 1991). Moreover, we lack a precise determination of the moral value of different ecosystem elements, making it difficult to make decisions regarding conflicts of interest within the ecosystem, as well as the occurrence of similar priority conflicts between what is good for humans and what is good for the environment (Light, Rolston III, 2002). Despite the development of ecocentrism, there are still no clear answers to many questions, such as whether humans should intervene in an ecosystem to save a species from extinction, or allow natural events to take their course (i.e., the extinction of the species). The literature offers arguments against ecocentrism that are both specific and indicate precisely oriented flaws – for example, in relation to agriculture (Comstock, 1995) – as well as those that point out its broader shortcomings. It is not just ecocentrism but ecology itself that is failing to address contemporary challenges, especially global warming. Therefore, ecology should disappear, allowing room for

a new political paradigm to emerge (Shellenberger, Nordhaus, 2004; Shellenberger, Nordhaus, 2009).

Is the „driving force" for nature protection really currently beyond the domain of ecologists? Answering „yes" would be an exaggeration. Nevertheless, ecology is increasingly intermingling with politics (one could therefore say that ecology is „weakening", while politics is strengthening). In this arrangement, important are the voters who do not make political decisions (including those regarding the natural environment) based solely on cold and rational argument analysis. On the contrary, emotions matter in politics. And it should be remembered that one of the strong and negative emotions felt towards ecocentrism is the fear of the radical form of this theory and extremist ecological activism. Since ecocentrism negates the anthropocentric paradigm, the fundamental concern arises from the belief that ecocentric values may develop into radical anti-humanism. Therefore, one must confront (perhaps) the most serious concern directed towards ecocentrism, namely the possibility of using violence in the name of ecocentric principles, or some form of ecological terrorism (Manes, 1990). Although violence within ecological movements is rare and does not represent a general trend, there are researchers who use the term „eco-terrorism" (Laqueur, 1999; Mullins, 1997; Eagan, 1996). The radical ecological movement Deep Green Resistance goes so far in its concern for the planet that it recognizes violence as a means to achieve its goals (Jensen, McBay, Keith, 2011; Spadaro, 2020)[13]. Of course, violence can be understood differently – it can be an attack on people, but also on private property. Dangerous are sabotage, arson, and acts of vandalism attributed to groups like the Earth Liberation Front.

Many researchers argue against labeling radical environmentalism as acts of terrorism (Martin, 2003; Harmon, 2000). Personally, I believe that the radicalism (or extremism) of ecocentrism should not be understood as synonymous with terrorism and violence, but rather as a nonconformist stance. This radicalism should not be violent, but should take the form of constructing a positive program – for those who want to think differently and live in harmony with the ideals they espouse. Positive values (like „the ecosystem as home") constitute a specific form of creation and departure – in relation to nature, beyond what is currently widely accepted (both ethically and socially). Anthropocentric axiology is widely accepted. The nonconformity of ecocentrism would consist in transcending and (communally) supplementing the anthropocentric perspective – not in resorting to violence.

c. Conclusions. The Ecosystem as Home; Animals (and Plants) as Family

Despite its positive potential, ecocentrism is not without flaws. One of the criticisms that can be leveled against this concept is its limited capacity for mobilizing social action in favor of ecological endeavors. The model focuses on abstract and passive values, where the concern

[13] Determining whether ecocentrism promotes ecological terrorism depends on the approach of a given researcher and the interpretation of specific theory and practice. For example, how should one evaluate the actions of Paul Watson, the founder of the Sea Shepherd Conservation Society?

for the preservation and protection of nature is evident but less so for active intervention on its behalf. Aldo Leopold speaks reverently about ecosystems, but his body of work seems to lean more towards a contemplative (rather than activating) approach to ecology. Currently, we find ourselves in a situation where the tone of environmental ethics cannot be conservative. Wild nature is shrinking, the state of the natural environment is deteriorating (peatlands are disappearing, biologically rich tropical forests, etc.)[14]. Many positions offer rich reflection related to environmental ethics. However, there is a lack of clear, practical slogans and directives that would indicate specific forms of behavior, teaching from the ground up that every individual (not just „big" corporations and capitalism) bears co-responsibility for the world and the place in which they live.

Pro-environmental actions, derived from the biological term „ecosystem", are difficult to quantify and implement in educational and public policies. Ecocentrism (for example, as conceptualized by J. Baird Callicott) appears as an elitist ethic, targeted at academic and intellectual circles. Such a sociological observation leads to the conclusion that the influence of ecocentric postulates on social and political discussions concerning the natural environment is limited. On a daily basis, people have other problems than the „intrinsic value of ecosystems". If „care for the ecosystem" is to become a real demand and an important area of action, ecocentric values need to be concretized and skillfully illustrated. A wide-ranging education is needed, which will „narrate" about the Earth's ecosystems and present ecocentrism in schools, media, and politics. Especially in schools, a greater scope of activities related to observing different ecosystems is needed, as well as stimulating interest in various aspects – even those considered „threatening"[15]. Ecocentric education can significantly increase social acceptability for the presence of wild animals and plants in their natural habitats and nature reserves, but also in areas developed by humans (cities, urban parks, agricultural areas, industrial zones). Achieving this goal will not be helped by theoretical complexity. Values such as integrity, stability, unity, and coherence are abstract, which makes it difficult to reevaluate anthropocentric attitudes. It is important to remember that synonyms for the word „abstraction" include not only „idea", „theory", and „mental shortcut", but also „absurdity", „pipe dream", „utopia" and even „waste of time".

One could venture to say that anti-anthropocentric values appear as distant ideas that do not relate to people's direct, everyday experiences. As a result, they may not be capable of eliciting the positive and emotional response needed to mobilize mass activity. A compelling narrative

[14] Here is one of the symbolic facts: the mass of humans and livestock significantly outweighs the mass of wild animals (Bar-On, Phillips, Milo, 2018). Of course, „is it better?", „is it worse?" – the assessment depends on the adopted perspective and the selection of statistical data. At the beginning of the 21st century, Bjørn Lomborg pointed out that the expected lifespan of humans is increasing, air quality is improving in developed countries, and in developing countries the percentage of people at risk of hunger is decreasing from 35% to 18%, etc. (Lomborg, 2001).

[15] The aim is to establish the value of safety, which should be characteristic of ecocentrism. If a species seems harmful (or unnecessary), it means that we know too little about it – this idea is attributed to Konrad Lorenz (an Austrian zoologist and pioneer of ethology).

would involve promoting a different set of values than those highlighted by the „source" ecocentrism represented by Aldo Leopold and J. Baird Callicott. In my opinion, a discourse related to the concept of home (as a metaphor for the „ecosystem") could play a significant role.

One could argue that anti-anthropocentric values appear as distant ideas that do not relate to people's immediate, everyday experiences. As a result, they may not be able to evoke the positive and emotional response that is essential for mobilizing mass activity. A compelling narrative means promoting a different set of values than those underscored by „original" ecocentrism, as represented by Aldo Leopold and J. Baird Callicott. In my view, a discourse related to the concept of home (as a metaphor for „ecosystem")[16] and family (as a metaphor for evolutionary bonds with non-human entities) could play a significant role. George Lakoff points out the fact that metaphors shape our understanding and attitudes towards various political issues, including environmental protection[17]. It's important to note the correlation between emotions and a sense of identity (to a lesser extent, facts and arguments) and the making of specific ethical decisions in a political context (Westen, 2007). A value system centered on the family emphasizes survival, safety, and mutual well-being among its members (promoting a set of values: life, safety, good). How should we treat animals and plants if we are a family and share the same home? Should we conserve or waste water while at home? Should we pollute our home or keep it clean? Should we harm members of our own family? The answers to these types of questions are obvious and natural. And that's an advantage! If values appear indisputable and certain, they will be accepted and practiced daily. Meanwhile, conceptualizing and translating the protection of „ecosystem integrity and coherence" into routine actions appears to be a much more difficult task – perhaps even doomed to failure. To develop ecocentric attitudes, we can apply many ideas borrowed from the „domestic ethos": mutual care, responsibility, limited consumerism, etc. The triad of values upon which ecocentrism should be developed and popularized is: life, safety, good. These values could be at the forefront, thereby negating the impression of the abstraction of classical ecocentrism based on previously mentioned values: integrity, stability, beauty (Aldo and Callicott), and unity, coherency, self-consistency (Callicott).

Individuals wishing to develop and promote ecocentrism should implement peaceful forms of ecosystem affirmation. The use of violence in the name of environmental protection contradicts holistic ethics. Ecocentrism is based on interdependence and respect for all forms of life – this fact excludes violence. Nonviolent action is inherent in ecocentric activism, as empirical evidence confirms. Many movements, such as Extinction Rebellion, focus on

[16] A home is made up of specific materials and substances. For a home to endure and provide shelter, it must have a material basis, foundations. The metaphor of „home" indicates why ethical reflection should also be directed towards abiotic factors.

[17] People's relationship to the world is primarily conditioned emotionally. Conservatives and liberals operate within different metaphorical frameworks, which is why they understand ecological issues differently. Conservatives emphasize the importance of private property, the hierarchy of beings, and the strict father figure, while liberals focus on helping the vulnerable, empathy, equality, and parental responsibility (Lakoff, 2017, pp. 322-323).

peaceful protests and civil disobedience. In works on ecological ethics, violence is generally rejected as a means of achieving ecological goals. The metaphors of „family" and „home" emphasize a theoretical distance from violence. A home is not a space of violence. A family is based on positive emotions and mutual understanding of needs. Home and family are spaces of „good" living and a sense of security. Modern ecology should be aligned with these values. „Security" is not an abstract value but a specific directive focusing attention on particulars, for example: remedial measures against attacks from environmental terrorists, intelligence data collection techniques, and security planning (Likar, 2011).

Active and effective nature conservation should nowadays be a „team game" at the ethical, political, and social levels. Activists cannot operate solely on the fringes of society, arousing associations with terrorism. Loneliness implies weakness, and weakness invites the temptation of using violence. The aim of ethical reflection is to socially ground ecocentrism by highlighting its positive potential: anti-violent and activating. It's not just about analyzing the ethical foundations of ecocentrism, but about reformulating them into the form of recognizable ethics and social practice. It's important to move beyond old schemas with a new ecological rhetoric that resonates with clear and recognizable values. The metaphor of family (and home) should be the basis for further development of ecocentrism. The values of family and home are fundamental in shaping and perceiving reality – also in Poland. We need a new understanding of ecological ethics, in the spirit of recognizable values that are antithetical to terror. The vision of the family comprises a set of specific moral priorities – not supremacy and recourse to forceful arguments.

Engaging in discussions about seeking more rigorous ways to protect wild nature, it is worthwhile to study as wide a range of approaches as possible, not overlooking the classics, starting from Aldo Leopold's land ethic, J. Baird Callicott's holistic approach, Arne Næss's deep ecology, or Paul W. Taylor's biocentrism[18]. These approaches include not only humans but also other living beings and ecosystems in the ethical sphere, thus expanding the scope of ethical responsibility. These concepts aim for the long-term utilization of natural resources, which is more aligned with the ecological principle of ecosystem balance and stability. A holistic approach allows for a comprehensive analysis of ethical value – contrary to anthropocentric reductionism, which relies on a narrow perspective: utility for humans. However, does Western civilization need strict ecocentrism? Is an ethic needed in which the value of things derives from their contribution to the integrity, stability, and beauty of ecosystems? In the era of global warming, we need enduring, complete, and rich ecosystems. Each of us should develop ideas that (in our opinion) are capable of confronting the most pressing challenges of contemporary times. At the same time, we need to cultivate skepticism, vigilance, criticism, and readiness to learn and change our views within ourselves. It may turn out that the values most urgently needed in the contemporary world lie beyond the reach of ecocentrism.

[18] See also (Varner, 1998; Attfield, 2003).

8. Summary

Due to the ecological crisis, there is an increasingly strong clash between the anthropocentric and ecocentric paradigms. This is not just a theoretical dispute. Ecocentrism opposes the resolution of environmental issues within the existing social and economic framework, in which nature is (more or less implicitly) exploited. Ecocentrism emphasizes the need to reevaluate the relationship between humans and nature. The problem is not only inadequate management models, farming practices, construction methods, etc. Ecocentrism demands profound changes in the way of thinking and recognizing the interdependence of humans with other organisms and abiotic factors in the ecosystem.

Further development of ecocentrism requires moving it from the academic realm into the widely discussed sphere of ideas. Ecocentrism, as an approach that assigns value to entire ecosystems, has the potential to become a groundbreaking paradigm in which the relationships between humans and nature are fundamentally altered. An ethical transformation towards ecocentrism is both possible and desirable. For this kind of shift in thought and attitudes to occur, the popularization of the values associated with ecocentrism is necessary. It is important to understand why this theory matters and why it raises concerns. Ecocentrism is significant due to its broad scope and consideration of the long-term effects of human actions on the natural environment. Recognizing the Earth's ecosystems as our shared home, a unique and deserving-of-protection community, implies embracing a wide range of moral obligations towards non-human forms of life, natural habitats, and abiotic components.

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JUST TRANSITION AS A TOOL FOR ENERGY POVERTY ALLEVIATION IN POST MINING AREAS

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Purpose: The EU is currently facing an energy transition that is a process affecting entire regions and changing many aspects of reality. The European Green Deal assumes that the transition, which in its consequences may cause so-called "territorial stress," should be fair, and that citizens and regions affected by the swap will not be left behind". Energy poverty understood as a situation in which households are unable to access essential energy services and products, is most likely to affect less developed regions – especially coal mining areas in the near future post-mining areas. The goal of this paper is the analysis of adequate energy poverty indicators tailored for post-mining areas- based on the SITRANS project results.
Design/methodology/approach: To begin, the review was performed using both the standard method of critical literature review, web-based literature research and a study of academic multidisciplinary databases such as Scopus and Google Scholar. The next step of the research was the mapping of the literature flow around energy transformation. For this mapping, the methodology of VOS-viewer has been used. The last part of the research was focused on indication analysis of adequate energy poverty indicators tailored for post-mining areas.
Findings: It was shown that one of the most common approaches to defining energy poverty is to precise it as a situation in which households are unable to access essential energy services and products Additionally it was pointed out, that the ambitious goal of the EU is to be climate-neutral by 2050, an economy with net-zero greenhouse gas emissions requires multilevel and multidimensional changes, what it can cause so-called "territorial stress". The transition to a decarbonized economy in the EU-27 is expected to result in the loss of approximately 76,000 jobs in coal mines and plants by 2025; the number is expected to double with more than 154,000 job losses projected by 2030. As such the negative effects of energy transformation can contribute to an increase in the level of energy poverty. The performed review indicated that to make sure that no one in this process would be left behind a Just Transition has been set up. At that point correlation between energy transformation, Just Transition and energy poverty has been indicated. It was indicated that energy transformation will affect less developed regions – especially coal mining areas in the near future post-mining areas. The finding of the paper is the proposal of energy poverty for the post-mining areas.

Practical implications: The outcomes of the project are going to be used in the SITRANS project. The empirical research is to be conducted in coal regions of Western Macedonia in Greece, Silesia, Poland and Stara Zagora, Bulgaria. The results will allow us to estimate the level of energy poverty and as such will be a base for creating Roadmap for Energy Poverty Alleviation.
Originality/value: The paper brings new to the science, as it introduces the energy poverty indicators for post-mining areas.

Keywords: Energy Transformation, Energy Poverty, Energy Poverty Indicators.

Category of the paper: Research paper.

1. Introduction

The EU is currently facing an energy transition that is a process affecting entire regions and changing many aspects of reality. The European Green Deal assumes that the transition, which in its consequences may cause so-called "territorial stress," should be fair, and that citizens and regions affected by the swap will not be left behind. This is one of the main tenets of Just Transition. What needs to be strongly underlined, energy transformation can be highly risky for energy-poor households, who enter the transition at a disadvantage, as from its nature energy poverty affects less developed regions – especially coal mining areas – as well as the most vulnerable in society: unemployed people, low-skilled workers and those aged above 60. Understanding this starting point is critical in ensuring the energy poor are able to participate in a Just Transition and are not subject to further disadvantage. Energy poverty is understood as the lack of an adequate level of domestic energy services, such as space heating and cooling, water heating, lighting, cooking, and use of household appliances. Even access to information and communication technologies is considered essential to guarantee a decent standard of living for the population, and even necessary to realize their full potential. Energy poverty can be observed in many regions of the world. Due to its multidimensional nature, it is not exclusively the domain of poor or developing countries. However, it should be emphasized that if energy poverty is defined as a limitation of choices, this means that those suffering from this type of poverty are *a priori* excluded not only from the ability to meet basic needs such as heating or cooling their homes and cooking at home. Even more disturbingly, they are excluded from other important elements that are essential for individual development. These primarily include health, education, access to information and political participation. Energy poverty can affect home heating or cooling, as well as health, education, access to information and political participation. Energy poverty is a contributing factor to other types of poverty and can be seen as one of the major challenges of the 2st century.

With the transformation towards renewable energy in EU coal, most member states developed energy plans, with a plan for coal-ban. It could create additional energy poverty in the post-mining area. Therefore, it is important to choose the proper indicators or composite indicators which can inform in advance about possible energy poverty problems. Nowadays, there have already been proposed many indicators but not focusing on this area. In the SITRANS project (Life-2021-CET-Coal Regions, available at https://sitrans-project.eu/project/), which takes a meso-level approach to explore various factors influencing the emergence and effectiveness of governance, the positive socio-economic impact, we identify and analyse the changes of poverty connected with decarbonization of the energy system. The SITRANS project addresses two main objectives:

a) the necessity to assess the economic and social consequences of the energy transition at both regional and intra-regional levels,
b) the requirement to develop an efficient governance model for a fair transition that incorporates a location-based approach.

The project encompasses various aspects, including the formulation of new governance policies and structures, and policy development, with a primary focus on aligning local and regional strategies with the clean energy transition and bolstering the fair transition by leveraging support from the Just Transition Mechanism. The main goal of the paper is a baseline review of the energy poverty indicators and a proposal of those indications which will have the best application for the SITRANS project purposes, i.e. post-mining areas.

2. Materials and Methods

To begin, the review was performed using both the standard method of critical literature review, web-based literature research and a study of academic multidisciplinary databases such as Scopus and Google Scholar. The keywords such as “Energy transformation”, “Just Transition”, “Energy Poverty” and “Energy Poverty Indicators”. It was shown that one of the most common approaches to defining energy poverty is to precise it as a situation in which households are unable to access essential energy services and products Additionally it was pointed out, that the ambitious goal of the EU is to be climate-neutral by 2050, an economy with net-zero greenhouse gas emissions requires multilevel and multidimensional changes, what it can cause so-called “territorial stress”. The transition to a decarbonized economy in the EU-27 is expected to result in the loss of approximately 76,000 jobs in coal mines and plants by 2025; the number is expected to double with more than 154,000 job losses projected by 2030. As such the negative effects of energy transformation can contribute to an increase in the level of energy poverty. The performed review indicated, that to make sure, that no one in this process would be left behind a Just Transition has been set up. At that point correlation between energy transformation, Just Transition and energy poverty has been indicated.

The next step of the research was the mapping of the literature flow around energy transformation. For this mapping, the methodology of VOS-viewer has been used. VOS-viewer is a special tool that uses the software for visualizing and constructing bibliometric networks, which include for example journals, researchers, or individual publications, and they can be constructed based on citation, bibliographic coupling, co-citation, or co-authorship relations. To perform the mapping "Energy Poverty Indicator" and "Energy Poverty Indicators" terms were used.

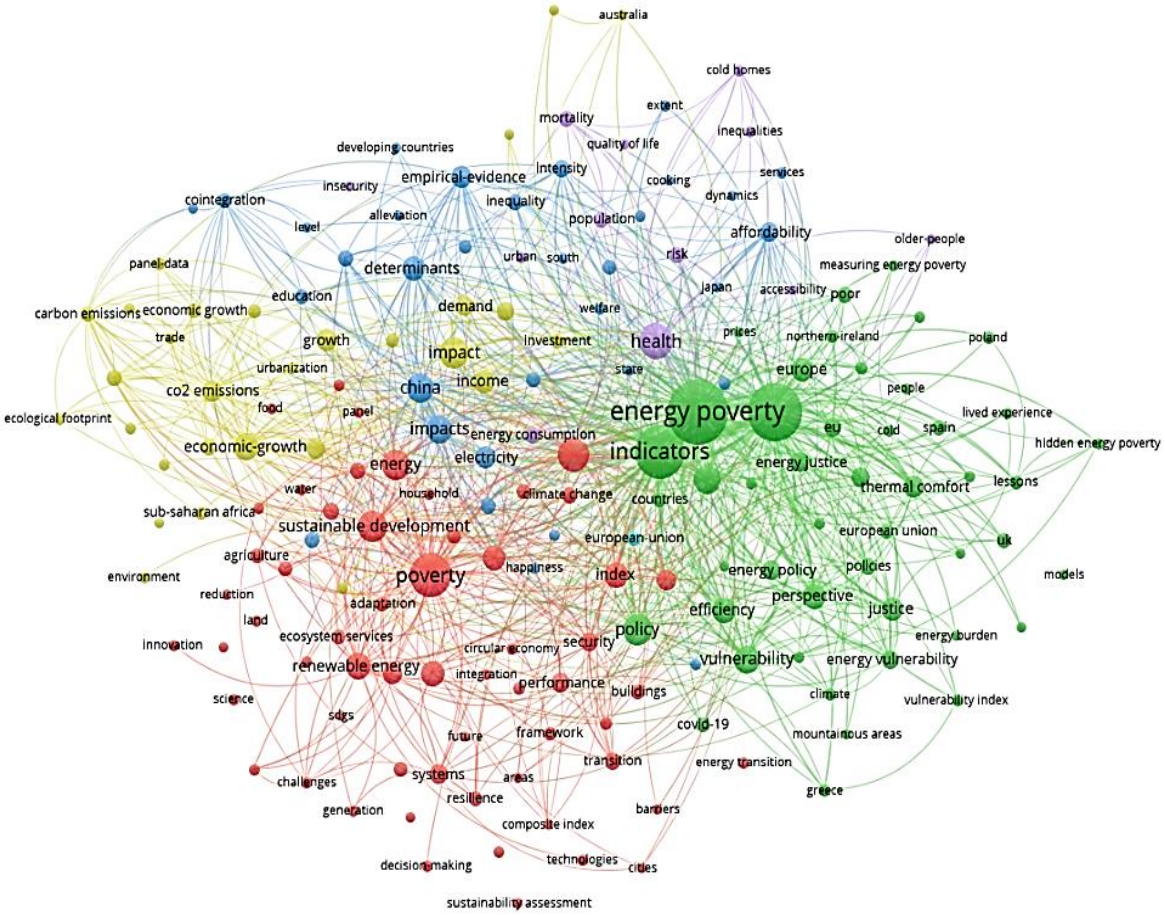

Figure 1. Literature review of the energy poverty indicators.

Source: VOS viewer.

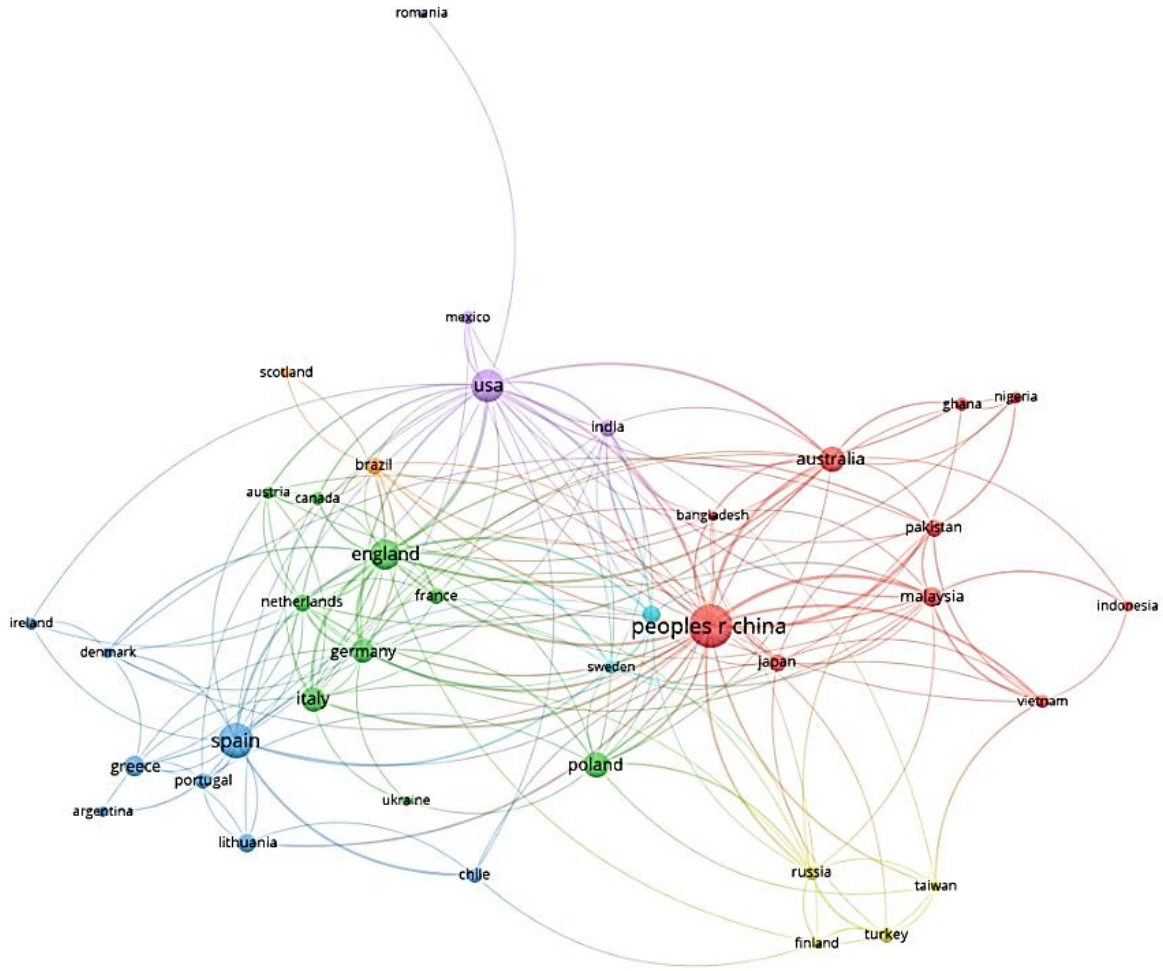

Figure 2. Literature review of the energy poverty indicators by the authors origin.
Source: VOS viewer.

The results of mapping indicated that literature can be structured into three groups adequate to the frequency of term occurrence in the literature. The major flow of literature related to the indicated terms was for articles related to energy justice, energy policy, vulnerability, policy, and efficiency. The next group was related to terms such as poverty, sustainable development, renewable energy, buildings, and households. The last group showed links to such terms as affordability, intensity, electricity, and education. Additionally, a literature review of the energy poverty indicators by the authors of origin has been performed. The VOS-viewer has been used. The last part of the research was focused on indication analysis of adequate energy poverty indicators tailored for post-mining areas.

3. Energy Poverty Literature Review

Schislyaeva and Saychenko indicate that globalization, bilateral trade, and the level of bureaucracy may contribute to energy poverty. The study's potential remedy was that bilateral commerce be evaluated to determine whether conditions of energy demand and supply are met in order to maintain energy pricing in an affordable range, particularly for low-income households in European countries (Schislyaeva, Saychenko, 2022). Stefan Stefan Bouzarovski perceives the main causes of energy poverty in the EU include high energy costs, low household incomes, inefficient structures and equipment, and specific household energy demands (Bouzarovski, 2014). La Paz, Tarrega, ZhenyuSu and Paloma Monllor reveal the unobserved relationships between energy poverty indicators and home characteristics, which are influenced by other factors as household type, poverty, and tenancy of housing (Taltavull et al., 2022). Eisfeld and Seebauer suggested taking self-restriction in energy use into account in addition to the energy poverty combination of high energy costs, low income, and poor housing conditions (Eisfeld, Seebauer, 2022). Middlemiss and Gillard mentioned six challenges to energy vulnerability for the fuel poor: quality of dwelling fabric, energy costs and supply issues, stability of household income, tenancy relations, social relations within the household and outside, and ill health (Middlemiss, Gillard, 2015). According to Karpinska and Smiech energy transition, can create energy poverty by increasing heating cost (Karpinska, Smiech, 2019). Nagaj and Korpysa claims that pandemic COVID-19 had a negative impact on the average disposable income of Polish households, which, with the increase in prices and expenditure on energy carriers, led to an increase in the proportion of disposable income spent on energy carriers (Nagaj, Korpysa, 2019). Aristondo and Onaindia focused on three indicators: *the ability to keep the home adequately warm*, *the arrears on utility bills (electricity, water, gas)* and *the presence of a leaking roof, damp walls or rotten windows* (Aristondo, Onaindia, 2018). Guzmán-Rosas claims energy poverty, and this could be accentuated in subgroups of the indigenous population (Guzmán-Rosas, 2022).Taylor introduced the "10%" indicator (at least 10% of a household's income spent on energy), and various other single indicators sought to combine the key variables of income and energy expenditures (Taylor, 2007). According to Butkiene energy poverty depends on households' individual characteristics e.g., household income, habits, specific energy needs, available technologies, and external conditions e.g., energy prices, climatic conditions, indicators of energy performance of the building (Butkiene, et al., 2021). According to Marz Fuel poverty was broken down into three vulnerability dimensions heating burden, socio-economic and building vulnerability (Marz, 2018). Fabbri claims that fuel poverty depends on family income and energy prices. Building energy performance also influences required energy consumption and is a contributing cause of fuel poverty (Fabbri, 2015). Brunner indicates that there are relevant factors in causing fuel poverty among those, bad housing conditions, outdated appliances, financial problems are prominent

(Brunner et al., 2012). Thomson and Snell points out, fuel poverty in Europe as a result of the influx of many former social states and growing fuel costs (Thomson, Snell, 2013). O'Sullivan shows that deregulated electricity market continues to lead to increases in the real price of residential electricity and in the number of people in fuel poverty (O'Sullivan et al., 2011). Simoesa, concluded that in Southern European countries, due to future climate change the occurrence of heat waves with significant impact on public health will increase and with it most probably the share of potential fuel poor (Simoesa et al., 2016). Heindl and Schuessler includes measures used in practice, such as the low income/high-cost measure and the double median of expenditure share indicator (Heindl, Schuessler, 2015). Berangere and Ricci focused on probability of being fuel vulnerable is higher for those who are retired, living alone, rent their home, use an individual boiler for heating, cook with butane or propane and have poor roof insulation (Berangere, Ricci, 2015). According to Thomson insufficient energy services in households that vary over time and space causes energy poverty, which requires statistical indicators for effective research and policymaking (Thomson et al., 2017). Igawa and Managi indicates that country's economic development level and income inequality, as well as household-level socioeconomic factors, affect households' energy poverty (Igawa, Managi, 2022). According to Njiru and Letema energy poverty has negative impact on indicators of standards of living, caloric intake, life expectancy and literacy levels (Njiru, Letema, 2018). Ogwumike and Ozughalu claims that determinants of energy poverty include household size, educational level, gender and age of household head, general poverty, region of residence and proportion of working members in the household (Ogwumike, Ozughalu, 2015). Riva deals with energy poverty and factors related to household composition, dwelling characteristics, urban/rural location, and province of residence (Riva et al., 2021). Meyer draw on a set of complementary indicators with the aim of grasping the multifaceted nature of energy poverty: excessive energy bills compared to available income (*measured* energy poverty), restriction in energy consumption below basic needs (*hidden* energy poverty) and self-reported difficulties to heat the housing correctly (*perceived* energy poverty) (Meyer et al., 2018). Streimikiene shows that the main social indicators of just low carbon transition were selected to address state of energy poverty, vulnerability and justice in just low carbon transition and include such state indicators as inability to keep home adequately warm; arrears on energy bills, dwellings with leakages and damp walls or rot (Streimikiene et al., 2021). According to Alexandri and Androutsopoulos energy upgrade of existing dwellings, placing emphasis on whether they can constitute an efficient means of dealing with energy poverty (Alexandri, Androutsopoulos, 2019). Charlier and Kahouli claims that under the impulse of economic crises and environmental and energy policies, many households have experienced reductions in real income and higher energy prices (Charlier, Kahouli, 2019).

4. Energy Poverty

In the forthcoming decades, the energy sector will confront three significant transformations related to energy security, climate change, and energy poverty. Various interpretations of energy poverty not only identify different numbers of households at risk but also pinpoint households with distinct characteristics, creating an unclear foundation for both scholarly research and policy development (Brunner, Spitzer, Christanell, 2012). Energy poverty is generally defined in energy studies in two primary ways: the absence of access to electricity and the household's reliance on inefficient and polluting methods to fulfil their energy requirements by burning solid biomass (Bouzarovski, 2014). A household experiences energy poverty when it cannot meet its energy needs. This is manifested through a high percentage of income spent on energy bills, an increased likelihood of electricity cut-offs, and the inability of a household to maintain comfortable indoor temperatures or access desired services such as air conditioning, heating, or computer usage (Boardman,1991). Adequate domestic energy services encompass space heating, cooling, water heating, lighting, cooking, home appliance usage, and even the use of information and communication technology (Aristondo, Onaindia, 2018). These services are deemed essential to ensure a decent standard of living for citizens and are prerequisites for realizing their full potential in their lives. According to the Commission Recommendation (EU) 2020/1563 from October 2020, energy poverty is a situation where households cannot access essential energy services (EU 2020/156, 2020). Energy poverty can be observed in multiple regions worldwide; it is not confined solely to poor or developing countries (Igawa, Managi, 2022). Even in developed, industrialized, and highly electrified European nations, energy poverty challenges may exist. It is crucial to emphasize that if energy poverty is defined as a limitation of choice opportunities, it signifies that those experiencing this type of poverty are inherently excluded not only from meeting basic needs like home heating, cooling, and cooking but also from other vital aspects required for personal development (Charlier, Kahouli, 2019). These encompass health, education, access to information, and engagement in politics. Energy poverty can impact not only a household's ability to heat or cool their home but also their overall well-being, educational prospects, access to information, and participation in political processes (Guzmán-Rosas, 2022). Energy poverty is a contributing factor to other forms of poverty and is considered one of the major challenges of the 21st century. According to the European Economic and Social Committee, in 2022 up to 42 million people in the EU cannot afford to heat their homes adequately (The European Economic and Social Committee, Press Realis, 2023).

As per the United Nations Sustainable Development Goals (SDGs), ensuring access to clean, sustainable, and affordable energy for all is a top priority for governments worldwide (UN, SGD, 2015). This emphasis arises from the intrinsic connection between human development and energy usage: energy is a vital requirement for meeting essential human needs

such as clean air, health, food and water, education, and basic human rights (Njiru, Letema, 2018). Additionally, energy plays a fundamental role in the advancement of every sector of the economy. Energy poverty typically exists in countries where there is insufficient or inconsistent data regarding key economic indicators.

When energy poverty is understood as the inability to access adequate energy services, then the social group who would be especially and most likely experience energy poverty would be all those who are on a low income. On the other hand, people could be energy poor without being income poor. As such social groups that are more likely to experience energy poverty can not only be narrowed to poverty, as in the category of energy poor elderly people living on, they own, family living in single homes, residents of high poverty urban areas, families, living in the countryside, single parents, migrants (Middlemiss, 2022; Carrere, Peralta, 2021).

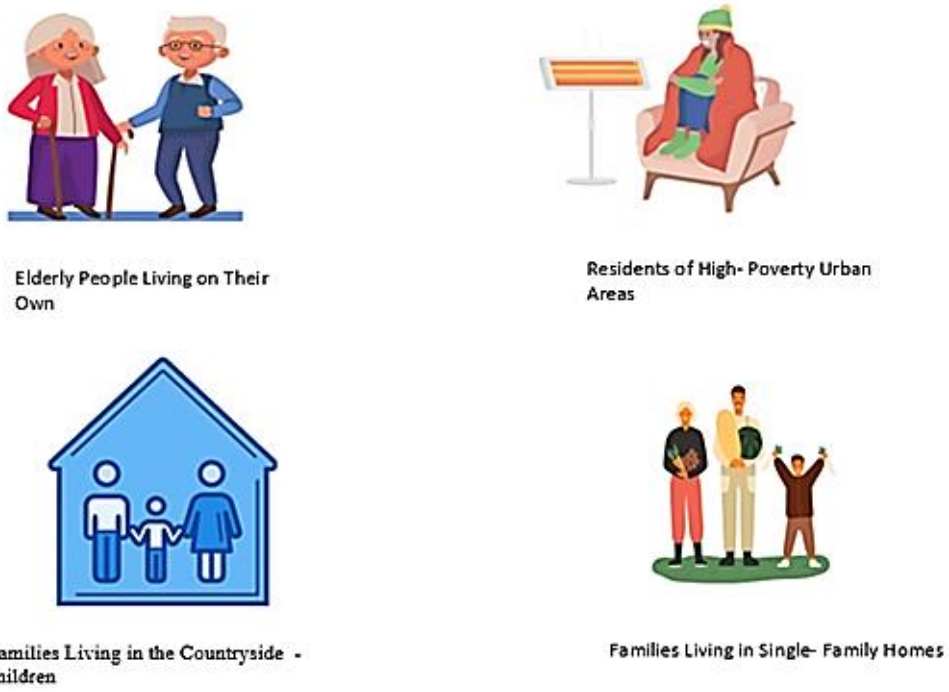

Figure 3. Social groups who suffer energy poverty the most.

Source: Own study.

Energy poverty results in unmet basic needs and depressed economic and educational opportunities that are particularly pervasive among women, children, and minorities (Christian, Casillas, Kammen, 2010). Energy poverty is caused by the interplay of three main factors:

- Low incomes.
- High energy need.
- High energy prices.

Table 1.
Review of energy poverty definitions by international institutions

Institution	Definition of Energy Poverty
The International Energy Agency (IEA, 2007)	a lack of access to modern energy services, including electricity, clean cooking facilities, and forms of mechanical power for productive uses such as agriculture, industry, and transportation
The World Bank	the lack of access to modern energy services, such as electricity, clean cooking facilities, and access to modern fuels, which affects health, education, livelihoods, and overall well-being
European Union (EU, 2020)	energy poverty is a situation in which households are unable to access essential energy services
The United Nations Development Programme (UNDP, 2022)	the inability to access or afford the energy services necessary for a decent standard of living, including access to electricity, clean cooking facilities, and modern fuels for heating and transportation

Source: Own study.

Hence, it can be affirmed that energy poverty constitutes the condition where individuals struggle to fulfil their basic energy requirements within their place of residence at an affordable cost. This encompasses maintaining an adequate level of warmth and supplying various forms of energy to adequately support the fundamental biological and social needs of household members (Laurence, Bart, Middlemiss, Maréchal, 2018). Energy poverty manifests through aspects such as insufficient heating of living spaces, which can lead to the proliferation of harmful microorganisms. Consequently, it increases the risk of respiratory illnesses, allergies (Ballesteros-Arjona, Oliveras et al., 2020) especially in overly damp and mold-infested dwellings), hormonal imbalances, cardiovascular complications, a decline in mental well-being (including stress, anxiety, and mood disorders), and a general weakening of the body's immune system (Polimeni, Simionescu et al., 2022). Notably, energy poverty is intricately intertwined with economic poverty, which is characterized by a lack of access to material goods and resources. In Europe, economic poverty is meticulously examined through various methodologies, encompassing a wide range of quantitative and qualitative approaches. These methods aim to comprehend economic poverty in its multifaceted nature and, importantly, to devise social safety nets and policies to combat it effectively (Hayati, Karami, et al., 2006). Likewise, the issue of energy poverty warrants comparable attention from researchers and policymakers, necessitating thorough investigation and the development of strategies to alleviate its impact.

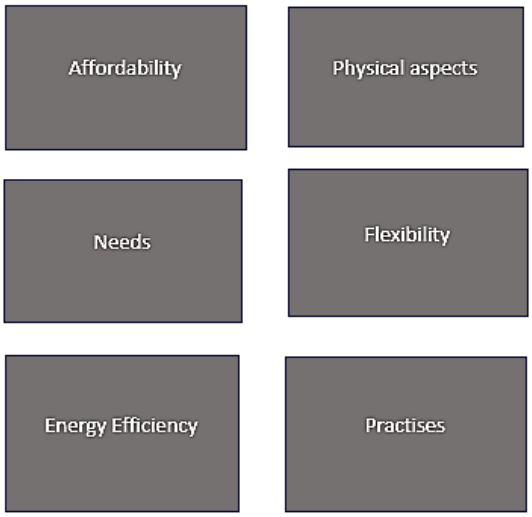

Figure 4. Key challenges to get access to energy.

Source: Own study.

Among the causes of energy poverty (González-Eguino, 2015), there are three types mostly indicated:

- Technical reasons - occur when a residence has a low level of energy efficiency, making it take more effort to maintain an optimal standard of heat. Another reason is the malfunctioning of heating systems, inadequate to heat a given apartment. Greater energy consumption for heating entails greater expenditures and thus depletes a household's disposable resources, which can be used for other purposes (often including basic expenses). Low energy efficiency of buildings and installations can also result in insufficient reheating of the dwelling, so that the optimal standard of heat cannot be maintained. Also, energy inefficient household appliances, e.g.: light bulbs, consumer electronics and household appliances can lead to a marked increase in expenditures from the household budget and thus a reduction in disposable income after paying energy fees (Pachauri, Spreng, 2011).
- Economic causes - occur when there is deprivation of economic resources, which can consequently lead to energy arrears and cutting off energy sources or saving on heating to reduce the cost of energy bills. This group of causes also includes mismanagement of the household budget, which affects the difficulty of covering housing expenses. One can imagine a situation in which a household operates in a building with optimal energy efficiency and with efficient heating and electrical appliances, but due to material deprivation is unable to maintain an optimal standard of heat and cover other necessary energy expenses. This group of causes most closely approximates energy poverty to economic poverty in its characteristics (Sovacool, 2012).

- Causes related to attitudes toward efficient energy use - occur when improper use of appliances leads to significant energy losses and consequently increased energy expenditures beyond what the household can afford. The group of these causes has cognitive, behavioral and emotional dimensions (Nguyen, Ali Nasir, 2021). Examples of such actions include ventilating the apartment while the radiators are turned off, leaving appliances consuming electricity unnecessarily. In this area, the main moderator of behavior is knowledge of the efficient use of heating and electrical appliances or knowledge of investments in higher energy efficiency equipment (energy-saving light bulbs, thermal insulation of buildings, etc.)

Economic poverty and household energy poverty often overlap but are not identical. Therefore, addressing deprivation in one area does not fully resolve the issue in the other. Consequently, efforts to combat household energy poverty cannot rely solely on measures designed to alleviate economic poverty. The challenge of energy poverty is multifaceted, and its resolution cannot be confined to a single sector-specific policy. A comprehensive solution should address the various underlying causes of this problem (Aristondo, Onaindia, 2018). This necessitates an integrated package of measures, including enhancing the energy efficiency of buildings, providing financial support to low-income households to meet their ongoing energy expenses, and equipping them with the knowledge and skills to effectively manage energy usage and consumption within their homes. As a result, the development of a complementary set of public policies targeted at this demographic should be a collaborative effort involving representatives from the relevant ministries responsible for these areas (Middlemiss, Gillard, 2015). This integrated approach is essential to comprehensively tackle the complex issue of energy poverty and ensure that vulnerable households receive the support they need to improve their energy security and overall well-being.

5. Energy Poverty Indicators

The battle against energy poverty must adopt a comprehensive approach that includes ensuring fair access to clean and affordable energy services, leveraging advanced financial tools, and promoting sustainable energy alternatives. Our aim should be to create a future where every individual and household has access to these essential services for their well-being, development, and empowerment by embracing a holistic approach and implementing targeted strategies (Siksnelyte-Butkiene et al., 2021). In Europe, millions of people, particularly low-income individuals and vulnerable groups, grapple with the complex issue of energy poverty (Halkos et al., 2021). The European Union (EU) acknowledges the significance of energy poverty as a policy concern and is actively taking steps to address it through various measures. The lack of accessible energy services not only affects public health but also raises social justice

concerns, as it can lead to higher rates of illness and mortality. One of the primary approaches employed by the EU to tackle this problem is the establishment of energy poverty indicators. The impact of energy poverty on an individual's health, well-being, and overall quality of life can be profound. The challenging task at hand is to explore the numerous indices of energy poverty in Europe and conduct a critical analysis of their interrelationships. Existing literature identifies three primary measurement methods, as highlighted by (Thomson et al., 2017).

Table 2.
Three main methods of energy poverty measurement

Expenditure	where examinations of the energy costs faced by households against absolute or relative thresholds provide a proxy for estimating the extent of domestic energy deprivation
Consensual approach	based on self-reported assessments of indoor housing conditions, and the ability to attain certain necessities relative to the society in which a household resides
Direct measurement	where the level of energy services (such as heating) achieved in the home is compared to a set standard

Source: Thomson et al., 2017.

Several metrics can be utilized to gauge the extent of energy poverty in Europe. An illustrative example is the proportion of household income allocated to energy expenses. Another vital indicator of energy poverty is the energy efficiency of buildings. Buildings consume 40% of the energy consumed in the EU and are responsible for 36% of the region's total greenhouse gas emissions, according to a European Environment Agency report from 2013. Enhancing the energy efficiency of buildings can thus contribute to sustainability and a reduction in energy poverty (Romero et al., 2021). Importantly, these indicators are interconnected, so improvements in one area can have positive ripple effects elsewhere. For instance, boosting a building's energy efficiency can reduce household energy costs, subsequently decreasing the proportion of households experiencing energy poverty. Efforts to combat energy poverty can also align with environmental sustainability. For instance, the promotion of renewable energy sources can lower household energy expenditures while simultaneously aiding the EU in achieving its climate objectives. However, it's crucial to recognize that certain indicators of energy poverty may involve trade-offs. For example, higher energy consumption could potentially undermine energy efficiency if policies aimed at reducing household energy expenses are implemented without due consideration.

Bouzarovski and Simcock argue that it's viable to perceive energy poverty as a matter of social justice intertwined with broader socioeconomic disparities and exclusion (Bouzarovski, Simcock, 2017). They propose that addressing energy poverty necessitates a social approach that takes into consideration the needs and perspectives of the affected communities and stakeholders. A pivotal tactic for mitigating energy poverty and its adverse repercussions is to enhance the energy efficiency of buildings. Contend that increasing building energy efficiency can have multiple benefits, including stimulating local economies, generating employment opportunities, improving building quality, enhancing urban environments, and reducing household energy expenses and consumption (Lee et al., 2019).

Furthermore, apart from the direct reduction in household energy costs, the promotion of renewable energy sources aligns with the EU's efforts to attain its climate objectives (European Commission, 2019; Sovacool, 2018). However, it's essential to acknowledge that there can be trade-offs among different approaches to address energy poverty, and initiatives aimed at lowering household energy expenses may inadvertently lead to increased energy consumption, potentially undermining energy efficiency (Burchell et al., 2016). Hence, it's imperative to implement a comprehensive and well-balanced strategy that considers the various facets of energy poverty and their interdependencies. Combatting energy poverty requires a systematic approach that involves the collaboration and engagement of all stakeholders while considering the socioeconomic and environmental implications of the issue (Sovacool, 2018).

Given the intricate nature of Europe's energy poverty challenge, a multifaceted strategy is essential. By comprehending the diverse indicators of energy poverty and their interconnections, policymakers can craft effective policies that simultaneously address energy poverty and advance sustainability (Baker, 2019). The EU's Energy Poverty Observatory plays a pivotal role in achieving this objective by providing valuable data on energy poverty in Europe and facilitating evidence-based policy development. To tackle the multifaceted issue of energy poverty, cooperation among energy providers, governments, and other stakeholders is imperative (Carley, 2020). By addressing the various dimensions, it becomes possible to enhance the well-being of countless households, reduce greenhouse gas emissions, and promote inclusive and sustainable development both within Europe and beyond.

According to EPOV guidebook they organized and identified secondary indicators:

Primary indicator:

- Energy expenditure ratio.
- Energy affordability.
- Energy intensity.
- Overheating.

Secondary indicator:

- Housing quality.
- Income.
- Vulnerability (age, health status, disability).
- Housing tenure.
- Energy efficiency of Appliances.
- Energy performance of Buildings.
- Fuel type.
- Quality of Fuel.
- Energy debt.
- Energy insecurity.
- Access to energy tariffs.

- Access to energy advice.
- Energy use behaviours.
- Comfort level.
- Outdoor air pollution.
- Indoor air quality.
- Thermal discomfort.
- Social isolation.
- Satisfaction with energy supply.

EPOV provides four different primary indicators for energy poverty, of which two are based on self-reported experiences of limited access to energy services (based on EU-SILC data) and the other two are calculated using household income and/or energy expenditure data (based on HBS data).

Table 3.
Primary energy poverty indicators

Consensual-based indicators – EU-SILC Target variables	Ability to keep home adequately warm (HH050)1 Format of the question: Can your household afford to keep its home adequately warm? Arrears on utility bills (HS021)2 Format of the question: In the past twelve months, has the household been in arrears, i.e., has been unable to pay the utility bills (heating, electricity, gas, water, etc.) of the main dwelling on time due to financial difficulties?
Expenditure-based indicators (long list) – HBS	Absolute (equivalized) energy expenditure below half the national median Share of (equivalized) energy expenditure (compared to equivalized disposable income) above twice the national median

Source: Energy Poverty Observatory, EPOV Indicator Dashboard Methodology Guidebook.

6. Conclusion – energy poverty alleviation in post-mining areas

Energy transition which is based on reducing reliance on coal is crucial, at the same time it's not as simple as substituting a renewable energy source for fossil fuel. Beyond the financial aspects, there are complex challenges facing coal mining areas and power stations. These challenges include potential job losses, economic hardships in mining communities and regions, and the necessity to address employment shifts through retraining and welfare support, as well as identifying new regional economic drivers. The results of transition apart from the financial aspects, there are complex challenges facing coal mining areas and power stations. These challenges include potential job losses, economic hardships in mining communities and regions, and the necessity to address employment shifts through retraining and welfare support, as well as identifying new regional economic drivers – in its consequences may cause so-called "territorial stress". The European Union's efforts to reduce carbon emissions are anticipated to lead to the displacement of around 76,000 jobs in coal mining and power plants by the year 2025. This figure is predicted to double, resulting in more than 154,000 job cuts by 2030.

As coal is phased out, its impact will vary across different regions, emphasizing the importance of ensuring a fair transition, commonly referred to as a 'just transition,' for both workers and communities. Within the EU, coal-related infrastructure spans 108 regions, and it currently supports approximately 237,000 jobs, with the majority (185,000 jobs) being in coal mining. At that point energy poverty is most likely to affect less developed regions – especially coal mining areas in near future post mining areas. The concept of a "Just Transition" has gained global recognition as it encompasses not only the imperative of shifting towards new energy sources but also emphasizes the importance of engaging with and providing support to affected workers and communities during this transition. In this context, there is an argument that sustainability transitions, up to the present day, have not sufficiently considered the wider consequences of these disruptions on local coal-dependent communities and their future employment opportunities.

SITRANS is an EU-funded project which will promote a place-based governance approach and tailor-made transformative policies in areas that are intensely experiencing the phase-out of coal. By assessing the socio-economic impact of the energy transition, SITRANS will develop an effective governance model based on the principle of “leaving no one behind”. The results of these actions will lead to the creation of a Just Energy Transition Observatory (JETO), the aim of which will be to design, host and monitor evaluation models based on predefined indicators and criteria. The main objective of SITRANS is to promote the place-based governance approach and tailor-made transformative policies in areas that are intensely experiencing the phase-out of coal. The project addresses the complex nature of decarbonization in coal regions. To do this, it will consider the socio-economic and environmental factors at play in this process and develop a robust framework to involve residents in decision-making. The aim is a just transition. Such an endeavour requires improved governance at all levels by empowering public and private stakeholders, especially through participative governance models.

SITRANS aims to achieve the following objectives:

- Shift to a low-carbon economy: SITRANS aims to enable people and regions involved in the project to address the shift to a low-carbon economy.
- Economic and social impacts of such a transition: SITRANS aims to align local/regional strategies with the clean energy transition to mitigate social, employment, economic and environmental impacts of the transition.
- Bottom-up and just transition governance approach with local stakeholders and citizens: SITRANS encourages a place-based approach and strong citizen engagement in the governance structure and decision-making processes.
- Building capacity and understanding amongst key stakeholders & citizens: SITRANS invests in building capacity and understanding amongst key stakeholders with a view to fostering a participative decision-making culture at the local/regional level.

- Transition towards an energy-efficient, renewable energy-based economy: SITRANS addresses key pillars of the energy transition: energy efficiency and renewable energy. In regions and localities, they can foster fairer energy, solidarity, and community solutions. They can also help to protect vulnerable consumer groups from energy poverty.
- An inclusive, consumer and community-centered approach: SITRANS works on detailing and tailoring on national energy poverty measures through the National Energy and Climate Plans of each member state.
- Implementing the sustainable energy-related elements of their local and/or regional transition plans: SITRANS brings together evidence-based and place-based policies supported by the regional authorities to accelerate impact investment.
- Combining the support provided by the Just Transition Mechanism and/or other sources of available funding: SITRANS promotes local coordination to support transformative projects which seek to attract private and community-based funding.

The project seeks to support the shift away from coal by helping to ensure a fair distribution of the costs, benefits, and risks among key stakeholders. Ultimately the aim is for society to benefit and to minimize any negative effects of change. The result will be a sustainable development apparatus for improved inclusive and place-based governance at all levels, by empowering the public and private stakeholders and by involving civil society. SITRANS will promote a Just Energy Transition through an inclusive and place-based approach to governance in areas that are intensely experiencing the phase-out of coal. In this respect, the project's outcome is Public and Citizen engagement for Deliberative Democracy & Impact Investing (https://sitrans-project.eu/)**.**

To full fill the ambitious requirements of the project energy poverty indicators for post-mining regions have been designated. Selection of the indicators has been based on data availability on a European level and results in the selection of two energy poverty indicators:

- 1.M/2: Absolute (equivalized) energy expenditure below half the national median.
- 2.2M: Share of (equivalized) energy expenditure (compared to equivalized disposable income) above twice national median.

Additionally, to corelated energy poverty indicators with social indicators, which can influence and are corelated with energy poverty. qualified for these:

- 1.SDG 01-10 People at risk of poverty or social exclusion.
- 2.SDG 08-40 Long-term unemployment rate by sex.

The empirical research is to be conducted in coal regions of Western Macedonia in Greece, Silesia, Poland and Stara Zagora, Bulgaria. The results will allow us to estimate the level of energy poverty and as such will be a base for creating Roadmap for Energy Poverty Alleviation.

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SOCIAL DIALOGUE IN THE TRANSITION PROCESS OF A MINING REGION

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Purpose: The aim of this article is to discuss the results of qualitative research concerning the inclusion of stakeholders in social dialogue conducted as part of the transition process of a mining region. The subject of social dialogue is the joint shaping of professional relations, working conditions, wages, social benefits as well as other matters of socio-economic policy that are in the area of interest of various stakeholders. Dialogue plays a particularly important role in the transition process of a coal region and in the departure from traditional branches of industry.
Design/methodology/approach: The qualitative study in the was carried out in 2022 and 2023 as part of the Regional Observatory of the Transformation Process project (ROPT). It composed of 8 focus group interviews and 5 individual in-depth interviews in eight subregions of the Silesian Voivodeship.
Findings: Social dialogue is a mechanism for reconciling opposing interests in socio-economic relations. This papers findings share information about the quality and course of this process as a crucial for the effective involvement of stakeholders.
Originality/value: The new and the value of the paper is regarding social dialogue efficiency to prepare people for the changes that arise from the transition process.

Keywords: transition, transformation, coal regions, social relations.

Category of the paper: Research paper.

1. Introduction

Social dialogue is the basic mechanism for reconciling opposing interests in socio-economic relations. The subject of social dialogue (SD) is the joint shaping of professional relations, working conditions, wages, social benefits as well as other matters of socio-economic policy that are in the area of interest of various stakeholders. At the European Union level, social dialogue is defined as discussions, consultations, negotiations and cooperation with the participation of organisations representing social partners, including employers and employees

(EC, 2021). European social dialogue constitutes a part of the European social model, serves as a form of influence exerted by European social partners on the European social standards, and plays an important role in managing the affairs of the European Union. Three basic facts attest to its significance in shaping the common future of the European Union:

1. It is included in the Treaty on the Functioning of the European Union (EC,2012).
2. It is supported by the laws of the European Union.
3. It is acknowledged as key action within the European Pillar of Social Rights, the main goals of which also include better and more numerous jobs (EC, 2017).

In Polish legislation, SD is firmly grounded in the Constitution of the Republic of Poland (Constitution of the Republic of Poland, 1997), and it is also expressed in the law on the Council for Social Dialogue and other institutions of social dialogue of 24 July 2015 (Sejm of the Republic of Poland, 2015). Practice saw the formation of a definition that binds social dialogue with common professional relations, particularly collective agreements in a workplace. Social dialogue is referred to as the overall common relations between trade unions and employers' organisations. It encompasses the bilateral or trilateral relations between the aforementioned parties and state authorities such as the government and its agenda, local government or state institutions. Social dialogue is the process of constant interaction between participants in order to reach an agreement in matters of control over variable socio-economic factors at macro and micro scale (Polish Ministry of Family and Social Policy, 2023).

The Silesian Voivodeship constitutes the largest mining area of the European Union, and it is subject to the energy transition process that entails a transition from an economy based on traditional fossil fuels towards a sustainable, low-emission circular economy. In this scope, political decisions taken at the level of the European Union play a key role, as expressed in the provisions of the European Green Deal and related policies: the EU Green Deal Investment Plan and the Just Transition Fund (Drobniak, 2022). Strategic documents of the local government of the Silesian Voivodeship that refer to the transition process are drafted to address these challenges, including: the Development Strategy of the Silesian Voivodeship Śląskie 2030 (Marshal's Office of the Silesian Voivodeship 2020), the Regional Innovation Strategy of the Silesian Voivodeship 2030 (Marshal's Office of the Silesian Voivodeship, 2021), the Territorial Just Transition Plan of the Silesian Voivodeship 2030 (Marshal's Office of the Silesian Voivodeship, 2022), the Technological Development Program of the Silesian Voivodeship for the years 2019-2030 (Marshal's Office of the Silesian Voivodeship, 2011).

The carbon neutrality goals adopted by the European Union pose an extraordinary challenge to the Silesian Voivodeship in terms of carrying out a just transition[1] (Kiewra et al., 2019; McCauley, Heffron, 2018), which will require changes at the social, economic and

[1] Just transition is a process of systematic and gradual changes that in the extended perspective make it possible to base a region's economy on modern branches of industry that are neutral to the environment. It will have a direct influence on about a million people who work in the mining industry and in branches related to it. More: Kiewra, Szpor, Witajewski-Baltvilks, 2019; McCauley, Heffron, 2018.

technological level. The process concerns not only the mining industry, located primarily in the area of the Silesian Voivodeship, but also other sectors whose future is strictly related to mining (Frankowski, Mazurkiewicz, 2020). From the perspective of mine personnel and mining-related companies, the transition of the mining industry will lead to a considerable transformation of the job market, which will give rise to new risks, such as the temporary difficulties and limitations of scale in the business activities conducted by the mining-related companies, as well as limited employment and in some cases the closure of these companies (Ślimko, 2018). The scale of the problem can be attested by the results of conducted research, according to which the number of mining-related business enterprises ranges from about 370 to over 900 companies that provide 110 to 130 thousand stable jobs. The consequences of the mining industry shutdown for the mining-related companies over the next 30 years may include the termination of an estimated number of jobs ranging from 26,667 (optimistic variant) through 50,580 (likely variant) to 75,876 (pessimistic variant) (Ingram et al., 2020). Terminating employment in the mining sector will lead to breakdowns or shifts of entire value chains (Magretta, 2014), therefore the key stakeholders in the transition process need to be prepared for the upcoming changes. Using the instruments of social dialogue is incredibly important in this process. Considering the importance of the energy transition for the future of the Silesian Voivodeship in terms of the socio-economic factor, it becomes necessary to develop adequate mechanisms supporting this process in order to limit its negative impact (Frankowski et al., 2021).

2. Methodology

This article presents the most important results of the qualitative research conducted by the Central Mining Institute, concerning the involvement of stakeholders in social dialogue in the transition process of a mining region. The research was carried out in 2022 and 2023 as part of the Regional Observatory of the Transformation Process (ROPT) project. The primary goal of the ROPT project is to support and enhance the management of the socio-economic transition process in the region.

Social dialogue can be understood from the angle of two perspectives:

1. From the institutional perspective, as a statutory task resulting from the provisions of the 24 July 2015 law on the Council for Social Dialogue and other institutions of social dialogue.
2. From the perspective of a broader social process, as a method for conducting communication, reaching compromise and sharing information among the interested parties.

As part of this research, the analysis encompassed the broader definition of social dialogue as the basic factor for the functioning of social life, involving the possibility of engaging various stakeholders in the socio-economic and energy transition processes. Such an approach is also significant given the fact that effective dialogue serves primarily to support all the involved parties, including the social party as well as the particularly strong and representative employers' and employees' organisations that participate in the dialogue process. Dialogue plays a particularly important role in the process of coal region transition and departure from traditional branches of industry, making it possible to pursue practical compromises and to balance decisions, especially in a topic as important as transition, thereby facilitating its social acceptance.

In recent years, qualitative research has become increasingly more popular in social sciences (Konecki, 2000; Kostera, 2003), allowing the researchers to gain better knowledge and understanding of the perspectives presented by the experts (Konecki, Chomczyński, 2012). The basis for accomplishing the research goal was the triangulation of research tools (Hammersley, Atkinson, 2000; Konecki, 2010), which encompassed: desk research, focus group interviews (FGI) and individual in-depth interviews (IDI).

From September 2022 to February 2023, 8 focus group interviews (FGI) and 5 individual in-depth interviews (IDI) were conducted in eight subregions of the Silesian Voivodeship, per the NUTS3 classification and the specifics of the ROPT project: Bielski, Bytomski, Częstochowski, Gliwicki, Katowicki, Rybnicki, Sosnowiecki and Tyski.

The FGI participants were 142 experts representing local government administration, industry companies, industry organisations, labour market institutions, local self-regulatory organisations and local development agencies, the social party, including business-related institutions, NGOs and many more. The focus group interviews were complemented with 5 individual in-depth interviews with experts representing diverse social environments, professions and professional experience, who participate directly or indirectly in the transition process and serve significant professional or environmental roles in the transitioning areas.

The research group selection was based on methods of non-probability sampling, involving groups of respondents from various circles of stakeholders engaged in the transition process. The term "stakeholders" was introduced in 1984 by R.E. Freeman, who stated that a stakeholder is any person who influences or is influenced by a company, institution/ or organisation's activity (Freeman, 1984). Based on the report "Supporting the Preparation of Territorial Just Transition Plans in Poland" (PWC, 2021), it was assumed that a just transition stakeholder is any entity or category of entities/persons, who have an influence, are influenced by or claim to be influenced by the just transition process, and therefore play a specific part in it.

3. Research results

Social awareness of the transition process

During the qualitative research, the participants of the FGI and IDI interviews were asked an opening question whether there is a sufficient level of social awareness regarding the transition process in the region among the population of the Silesian Voivodeship. All the participants gave a clear answer that the level of social awareness regarding the energy and socio-economic transition in the region is insufficient and that a constant dissemination of knowledge on the topic is required. They noted that there are differences depending on the size of a district and its type, that is whether it is urban, rural or urban-rural. According to the experts, rural districts are characterised by the lowest level of awareness regarding the transition process, and its perception is primarily based on mine closure and economic criteria such as the rising costs of power and heating. Therefore it can be concluded that the notion of transition pertains primarily to renewable energy sources and the loss of jobs in the mining and mining-related sectors.

The state of social dialogue with the stakeholders

When asked the question whether social dialogue is being conducted with various transition stakeholders, the FGI participants above all expressed the opinion that there is no dialogue on the national level. The research participants claim that there are procedures and instruments available for conducting social dialogue, but they are not employed in a manner that would guarantee the appropriate participation of all the stakeholders, especially ones such as e.g. non-governmental organisations or trade unions.

A part of the experts believe that there is no social dialogue on the national level because there is no will to conduct joint communication on the long-term process involving the planning and introduction of changes. Especially the representatives of the social party, that is trade unions and non-governmental organisations, see problems in conducting dialogue respectful of the equal rights of all the parties. The reasons for these problems are depicted in Fig. 1. On the other hand, the experts representing the local government stressed the problem that the dialogue is irregular and limited, in many cases, to information exchange and consultation on already drafted documents.

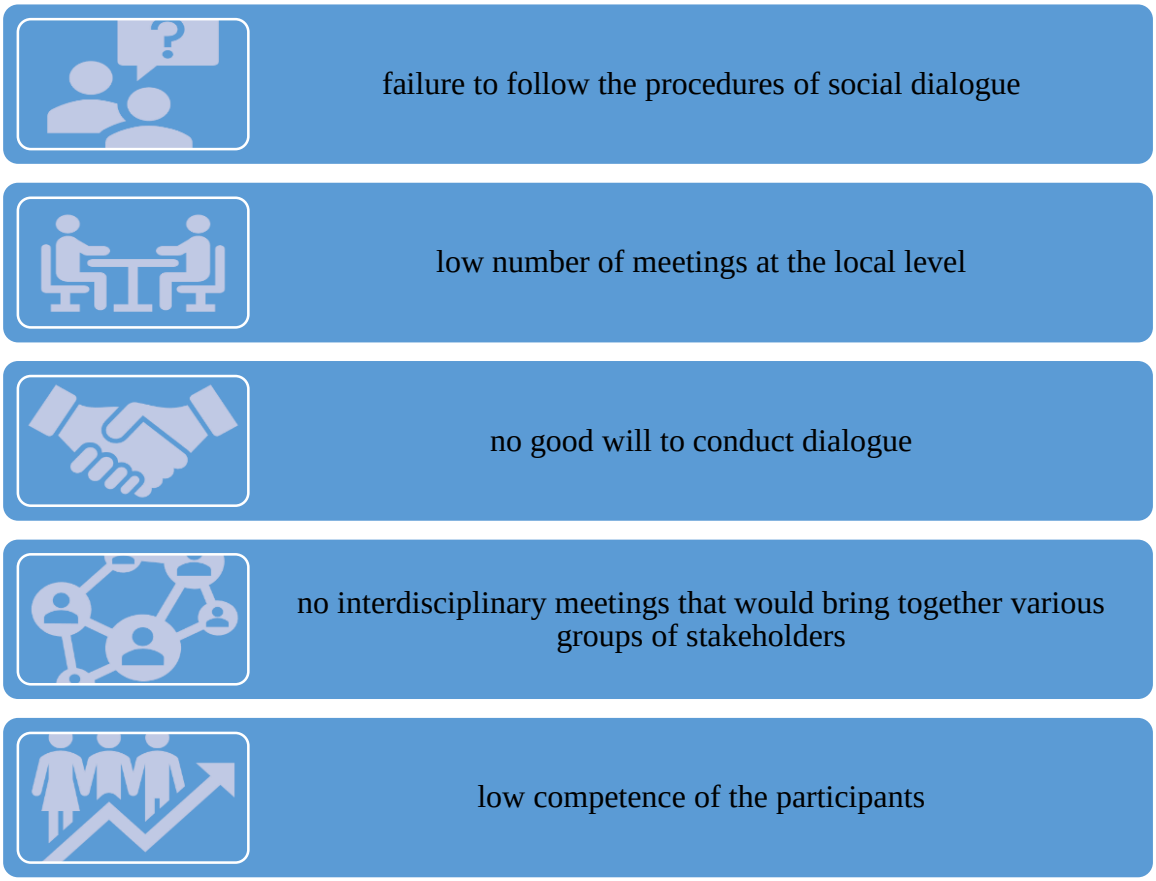

Figure 1. Reasons for limited social dialogue in the transition process, author's analysis.

Involving stakeholders in social dialogue on just transition

The FGI research in the Gliwicki, Katowicki and Bytomski subregions noted the opportunities presented by the large agglomeration with an advanced communication network enabling greater mobility, which is missing in other subregions such as Częstochowski or Bielski. The proximity of major cities, considered centres of growth and innovation (e.g. Gliwice or Katowice), means that a part of the districts need not be concerned by the changes, but smaller districts that are away from these centres will have to face the negative impact of the transition process, such as the closure of major workplaces. Therefore the experts believe that the residents of small mining districts need to be particularly prepared for the changes, since it is the people who are the subject of transition. To achieve this, they propose above all:

- raising social awareness,
- sharing knowledge on the transition process through the exchange of good practices,
- seeking dialogue and cooperation at a local level.

The next question regarded the course of the ideal involvement of stakeholders in social dialogue to establish a socially effective and responsible system of transition management in mining subregions, based on dialogue and open communication. According to the participants, for the transition process to be effective, it is necessary to plan all action before the final closure

of a mining plant. The plans should primarily concern the retraining of employees and changing the use of the infrastructure and mining land, factoring in social participation, as well as determining the options for financing the changes. Another suggestion offered by the experts is to simplify and shorten the procedures for transferring the post-mining land to the districts and for introducing changes in the area development plans. It was stressed multiple times that the organisation of regular interdisciplinary meetings for local authorities, company management personnel and lower-level employees is crucial for the future of local communities in mining districts. An institution managing financial means is a significant partner in such meetings, and the role and activity of such was assessed positively. Regardless, action such as the following is still expected:

- exchange and dissemination of knowledge on the transition directions,
- frequent and regular meetings concerning various aspects of transition,
- promotion of the opportunities offered by the Just Transition Fund in mining subregions.

Social contract

The participants devoted great attention to the social contract (MAP, 2021) concerning the transition of the hard coal mining sector signed on May 28, 2021. The contract constitutes the basic transition instrument for the mining industry and was reached as a result of dialogue conducted between the government and the mining companies and trade unions. The experts stressed that the contract secures the interests of mine employees in the perspective of the planned dates of mine closure. However, they indicated the lack of its notification at the European Commission, the change in the geopolitical situation related to the war in Ukraine as well as the likely necessity of revising the provisions of the contract. Some of the experts also expressed concerns that the social contract will eliminate a significant group of workers from the labour market, even though they could still function as part of it. Therefore the planning and introduction of changes for the empowerment of human resources is necessary, as was defined e.g. in the Development Strategy of the Silesian Voivodeship 2030 "Zielone Śląskie".

The experts representing trade unions stressed that they are aware of their role in the social dialogue process, but they believe that their demands are typically not considered outside the social contract. At the level of autonomous dialogue (bilateral, non-formal and undertaken without the participation of public authorities), the trade union representatives indicate the lack of direct dialogue with the employer and the lack of access to information e.g. on the financial situation of a company as well as the deficient sharing of such data, plans, visions, company development strategies, or the involvement of trade unions in such a process. The employee organisation representatives spoke critically of the relations with mining-related company management. The experts claim that they sometimes learn of planned changes at the workplace from media, and they are not invited to meetings with the management, therefore as a result the union leaders and members of their organisations are underinformed. Another aspect stressed

by the union members was the necessity to empower their competence as social dialogue participants.

Social Dialoque instruments

The participants were presented the social dialogue instruments below and asked to rate their effectiveness in terms of accomplishing the goals of just transition.

- trade union negotiations with the employer,
- signing a social contract/industry contract,
- information meetings for employees dismissed from mining plants (e.g. concerning retraining, options for starting employment at another employer),
- exchange of information and good practices at the management level among companies that dismiss and wish to employ mining personnel,
- information meetings for local mining district communities, concerning the upcoming changes and the future of the residents,
- social consultation of regional development documents, including local development strategies,
- participation in social dialogue institutions at a regional level (e.g. provincial councils for social dialogue),
- Local Development Strategies,
- exchange of knowledge and information during the sessions of the Regional Just Transition Team of the Silesian Voivodeship,
- establishing grass-roots partnerships to accomplish specific projects,
- public hearings concerning the planned action related to the transition process in mining subregions,
- lobbying, extra-institutional dialogue, e.g. participation in unofficial meetings and talks.

The experts participating in the research noted that they were overwhelmingly familiar with instruments such as the Council for Social Dialogue, both at a national and provincial level. However, action at a local level was deemed the most effective form of dialogue, given the knowledge of local stakeholders regarding the problems of a given community. Therefore, the most desirable forms of supporting local dialogue in the opinion of the participants included:

- stable cooperation in interdisciplinary groups, bringing together stakeholders from various groups and fields, determined by the directions of transition,
- supporting existing structures of cooperation and the exchange of knowledge, particularly in areas of small urban-rural or rural districts, such as village headman councils, country housewives' clubs etc.,
- supporting informal grass-roots movements of district residents,
- good practices and exchange of knowledge on the topic among regions in transition,
- study visits in areas where projects related to transition have already been accomplished.

At the same time, the necessity was noted to involve entrepreneurs in the dialogue as well as to understand their expectations and problems as entities with the best knowledge of the market and the current trends in the economy.

4. Conclusions and discussion

Issues of social dialogue are referenced in program documents concerning just transition on the European, national and local level. The planning process of the Just Transition Fund itself was established through dialogue between the European Commission and every member state. This led to the identification of regions (territories) that are likely to constitute areas facing the greatest negative social and economic impact of the transition, particularly in terms of the expected loss of jobs and the transformation of the manufacturing processes of industrial plants with the greatest intensity of greenhouse gas emissions. The document stresses that multilateral dialogue and exchange of information proved critical to guarantee collective progress and transparency, and to undertake the most effective action to alleviate the socio-economic repercussions of the transition (EC, 2020).

Dialogue, participation and cooperation with all the local and regional parties served as the basis for the work on the Territorial Just Transition Plan, which is a document of extreme importance for the transition process at the regional level. It emphasises that open communication and dialogue are the basis for cooperation between local government bodies and social and economic partners participating in the transition process, which serves to accomplish operational goal no. 4 that entails the effective and socially responsible system of transition management in mining subregions.

This also finds confirmation in GIG's research, where the experts see the primary purpose of social dialogue above all in the necessity to prepare people for the changes that arise from the transition process. To achieve this, the following is proposed in particular:

- raising social awareness regarding energy transition, including through regular interdisciplinary meetings concerning various directions of transition as well as the changes undergoing globally and in the immediate socio-economic environment,
- disseminating knowledge through the exchange of good practices from EU regions that have already accomplished their energy transition processes,
- seeking dialogue and cooperation at a local level.

However, the basic problem is the low social awareness regarding the transition process itself. Therefore the primary goal of SD in the transition process should be to raise social awareness, while the language of communication in this process should be diverse and adapted to specific target groups and their demographic and social characteristics, such as: age, education, qualifications, professional experience etc. In many cases, a barrier can also be found

in the lack of skill in conducting social dialogue, resulting from low social competence and insufficient knowledge of available SD tools.

As indicated by the GIG research results, social dialogue meant to facilitate reaching a compromise and meeting the needs of various stakeholder groups is limited and irregular. In order to establish a social agreement around the transition process in the region, the stakeholders of this process and the authorised parties must conduct transparent, substantive and regular social dialogue. All the forms and tools of social dialogue need to be applied for this purpose by engaging these stakeholders in particular who will be affected the most by the socio-economic impact of the energy transition process, and by communicating this to the communities of local districts that undergo mining transition.

The correctness of this assumption finds confirmation in the principles of the Territorial Just Transition Plan for the Silesian Voivodeship. Using the instruments for the cooperation and inclusion of economic and social partners in the decision-making process as well as providing a cohesive system of information and promotion regarding the purposes, action and benefits of just transition is key for the effective implementation of partnership. Animating broad social dialogue within the scope of just transition is to be done through informational, educational and promotional action that will be primarily aimed at the potential beneficiaries of the program and the residents of the mining subregions (Territorial Just Transition Plan, 2022).

All the stakeholders who participated in the GIG research noted the lack of sufficient dialogue at the national level. The conduction of social dialogue is irregular and limited to information exchange and consultation on basic principles or drafted program documents. Due to this, the interviewed parties to the SD have no perception of actual influence on the transition process. At the same time, it should be emphasised that the research participants do not use the available SD tools to their fullest and do not engage in the process, therefore the existing opportunities and legal solutions should primarily be promoted as well.

Transition projects that are to result in major changes should be adapted to the specifics of a given district. Therefore the knowledge of the stakeholders should be complemented with ways in how the changes as part of the transition can be directed and used to empower the mining subregions and companies.

The importance of dialogue in the process of development policy implementation at the level of the Silesian Voivodeship, including the significant role of the Provincial Council for Social Dialogue and other consultative and advisory bodies working within the Marshal's Office of the Silesian Voivodeship, is stressed in the new development strategy of the Silesian Voivodeship – "Zielone Śląskie". On the other hand, the lack of skill in conducting dialogue is perceived as a barrier in establishing and maintaining new relations, which is particularly visible in the context of certain groups' social competence (Marshal's Office of the Silesian Voivodeship, 2021). The interviewed experts believe that interdisciplinary cooperation in the context of the socio-economic transition is currently being conducted in the Silesian

Voivodeship, but its level depends on the location of a given district undergoing mining transition and the level of its socio-economic development, which has a negative effect on the situation of small and remote districts.

There is no consensus among the transition process stakeholders due to the divergence of goals and interests. Solutions for motivating the stakeholders and facilitating the pursuit of common interests should be sought and promoted, e.g. by establishing cooperation networks. By undertaking challenges related to the transition process and seeking new opportunities of development, the local administration bodies of districts in transition and the local provincial government should establish cooperation networks of various stakeholder groups in order to deliver solutions that offer compromises and benefits for all the parties involved (win-win strategy).

The energy and socio-economic transition process also requires the greater involvement of entrepreneurs in social dialogue at the local and regional level, particularly small and medium enterprises belonging to various branches of the economy, and not only the mining and mining-related industries, the goal of which would be to better inform employers and simultaneously also to better understand the interests of employees. Great emphasis should be placed on motivating entrepreneurs by exposing the opportunities presented by the transition process. Another suggestion offered by the experts is to simplify and shorten the procedures entailing e.g. the transfer of the post-mining land to the districts or the introduction of changes in the area development plans.

The key conclusion obtained from the conducted research is the necessity to develop various forms of supporting social dialogue at the local level. The most desirable forms of this support include:

- stable cooperation in interdisciplinary groups bringing together various stakeholder groups and concerning various substantive issues related to the energy and socio-economic transition process of the Silesian Voivodeship,
- supporting existing structures of stakeholder cooperation and information exchange in the transition process, particularly in small rural or urban districts located in the 7 mining subregions of the Silesian Voivodeship that can apply to the Just Transition Fund, such as village headman councils, country housewives' clubs etc.,
- supporting informal grass-roots movements of mining district residents,
- good practices and exchange of knowledge on the topic among mining regions in Poland and the EU,
- study visits in areas where projects related to transition have already been accomplished.

It should be concluded that the primary purpose of social dialogue in the mining region transition process is above all to empower the involvement of various stakeholders at different stages, which grants the potential for a greater perception of agency and social adaptation to the upcoming changes. Therefore, the basic challenge in terms of SD efficiency will concern elements such as the identification of stakeholders, the regularity of social dialogue, the method

of involving stakeholders at various stages of transition as well as the ability and competence to conduct dialogue on different levels.

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COMPETENCES OF THE LEADER OF AN EDUCATIONAL INSTITUTION IN THE OPINION OF STUDENTS OF SILESIAN UNIVERSITIES

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Purpose: The purpose of this study is to analyze the role of the school director in terms of the competencies necessary for a leader of an educational institution.
Design/methodology/approach: The goal was achieved through literature analysis and analysis of a survey questionnaire.
Findings: Based on the analysis of the results of the questionnaire survey, it can be concluded that, according to the respondents, the leader of an educational institution is, first of all, a person who takes action based on shared values that are accepted and shared by the school community. This is the opinion of 31% of respondents. Among the soft leadership competencies, respondents considered communicativeness to be the most important. Among the activities that enhance the image of the director of an educational institution, respondents mainly included the development of the school's culture and programs that enhance the development of students and teachers (74% of indications) and the provision of appropriate school management, including the resources necessary for a responsible learning environment (73% of indications). On the other hand, respondents cited team management as one of the key challenges for the directorl as a leader of an educational institution (42% of indications).
Research limitations/implications: The research conducted was a pilot study with more than 200 respondents, management students from Silesian universities. Future surveys are planned on a much larger scale.
Practical implications: According to respondents, the school directorl's key challenges do not include "the need for self-awareness." Relatively the fewest indications from respondents concerned the school director's challenges related to self-awareness - adequate self-image (4%), self-development (6%), or control of one's own emotionality (11%). Also, the competency "developing self-awareness" was considered important by only 12% of respondents. Which confirms that this is an area that requires constant awareness of the importance of self-improvement and awareness of one's own competencies and strengths and weaknesses. Lifelong education and learning is one of the most important tasks facing the countries under the Sustainable Development Goals 2030 (Kuzior et al., 2023) and one of the main elements of the European social model of successful human existence (Lukianova, 2023), so this competence is all the more important for those responsible for educating others.

Social implications: The research helps to change the public's stereotypical perception of a school director, identifying him or her as a leader with a range of diverse competencies and pursuing ambitious challenges.
Originality/value: An innovative approach to the director's function and attention to the need to develop leadership competencies so that he can effectively achieve his goals and mission.

Keywords: competences, leader, educational institution, educational leadership, management.

Category of the paper: Research paper.

Introduction

The development of the information society requires schools to permanently evolve, as well as to develop intellectual and pro-social skills among students intellectual, and the ability to perceive the world correctly. Ethical education, which plays an important role in shaping the world of values of young people, can become helpful in this process (Kuzior et al., 2019). It also becomes a challenge to develop in them the need for lifelong, continuous education. The realization of these goals is only possible by taking appropriate measures both inside the educational institution and externally (through cooperation with the local environment). Awareness of these trends is a prerequisite for effective leadership, and the responsibility for their implementation lies with the school director.

Currently, there are both socio-economic changes (Drucker, 2000) and changes in the education system. Schools and educational institutions are forced to adapt to the changing environment. Equally important is becoming an innovative approach to exercising the function of the director of these units (Kupis, 2018). As M. Rosalska notes, "a school director is not only a person who manages resources and processes" (Rosalska, 2016, p. 206) but who takes care of the school's images (Cieśla, 2022).

In general, the term "director" is defined in the Act of January 26, 1982. - Teachers' Charter. article 7 (1) and (2). From this provision it follows that the tasks of the school director consist primarily of: managing the institution, coordinating the work of those employed therein, and supervising pedagogical activities. Directors are required to be leaders who set new directions for the development of the educational institution. Their main tasks include: management of pedagogical problems, care of students and alumni, pedagogical supervision of teachers and tutors, chairing the pedagogical council, acting as a workplace manager, as well as taking care of the place of learning and work in terms of material and technical aspects, which in practice means issuing administrative decisions related to the school year in force, and hiring and firing school employees (Leśniak, 2011). In addition, directors of educational institutions face ambitious, multifaceted challenges, which include, among others, effective human resource management related to both attracting and retaining top talent (Ober, 2016), operating in

a multicultural environment, or creating an organizational culture that is tailored to current conditions, while continuously investing in their own development.

Therefore, the purpose of this study is to analyze the role of the school director in terms of the competencies necessary for a leader of an educational institution. The literature review (which presents the concept of a leader, the competencies necessary to perform this function effectively, or educational leadership) was complemented by a pilot empirical study. They were conducted from April to June of this year among 200 management students of Silesian universities, verifying the respondents' views on the issue at hand.

1. Leader vs. manager

A leader can be defined as an individualist who is aware of his own differences (Urban, 2007). According to T. Krawczynska- Zaucha, being a leader means inspiring others to achieve a goal (Krawczyńska-Zaucha, 2020). The basis of its success is to build its own credibility and of great importance in this process is the atmosphere in the team and the level of mutual trust (Szafran, 2013). Leaders who lead by example, who are consistent in words and deeds, take care of the fundamental factor of building credibility of their leadership (Williams, 2009).

In global companies, the concept of leadership is often contrasted with the concept of directing (like the person of a leader and manager). There, management is defined as "doing something through others" (Tokar, 2015, p. 32), and leadership (leading) as "getting others to want to do something" (Tokar, 2015, p. 32).

P.F. Drucker repeatedly stressed that a leader, in order to carry out his tasks, must have followers (Hesselbein, 1997). Preferably people who will constitute his team. Only then will the implementation of tasks be possible and make sense. For someone to be called a leader there must be people behind him (Maxwell, 2007).

In attempting to define the relationship between a leader (leader) and a manager (manager), one should refer to the theory of management issues. For example, L. Krzyżanowski considers leadership to be "the information-decision-making influence of the management apparatus, transmitted through information channels shaped by organizational rules to the organizational cells of the real sphere. These interactions cause the material-power interactions emitted by these cells to aim at achieving the goals of the organization" (Peszko, 2002, p. 46). In turn, J. Kurnal referring to the definition of a manager (manager) indicates that in order to perform certain tasks, he performs a number of functions (Kurnal, 2001). He plans the use of resources, creates an activity structure and sets tasks, motivates his subordinates to carry out specific tasks, and monitors the status of their performance. A manager, when undertaking the management of people, acts in a way that corresponds to one or more concepts of human resource management. These are based on various theories and premises including technological,

philosophical, bureaucratic, human relations, motivational, integrative or rational behavioral, among others. The result of a manager's actions should always be the task accomplished, the satisfaction of subordinates' needs, including their professional development, and the strengthening of an organizational culture conducive to the efficient performance of tasks (Bartkowiak, Niewiadomski, 2011). Meanwhile, a manager can be seen as a leader when he bases his influence on his subordinates not only on the service hierarchy, but also on the authority he has built (which, among other things, he builds through his leadership). This is evidence that leadership is seen as a certain ability, skill or trait of rallying followers, exerting influence, as well as creating a vision, inspiring and spurring people to action (Tokar, 2015). Moreover, it is a collective effort to achieve the goal (By, 2021). It is also worth mentioning that leadership is an integral part of entrepreneurship (Audretsch, Tamvada, 2023).

Sometimes in practice the terms leader (leader) and manager (manager) are used interchangeably. According to the authors, wrongly, since these two roles are not only different, but sometimes contradict each other. Only exceptional personalities are able to combine them (Kupis, 2018).

The diverse challenges facing executives today require a range of different competencies. These must include both hard competencies related to the specifics of the industry as well as social competencies and psychological skills (Tokar, Oleksa-Marewska, 2021). A manager's influence on employees determines his leadership, since formal authority gives managers power, and leadership determines the extent to which they use it. P.F. Drucker stresses that the only proper definition of a leader is the one that says he is a person with followers. According to him, an effective leader achieves positive results from his actions, is an example for others and is a responsible person. The domain of effective leaders is the ability to anticipate threats and opportunities facing the team (Tokar, 2015).

The effective functioning of a school requires proper management, and preferably proper direction by a leader who will create a strategy, create and implement changes, build interpersonal relationships, help the group with interaction, motivate further development, as well as generate change. Thus, it can be noted that the role of a leader is not the same as the tasks of a person who "only" manages. The task of managers is to manage human resources, value the results of work (diagnostic, formative, summative), organize and control the solution of problems. Thus, it becomes a desirable situation for a manager to acquire the ability to perform the tasks of both a leader and a manager, and thus combine these two roles (Moos, 2010). A manager-leader is a director who manages not so much by the power of his position, but by his ability to convince employees and arouse their enthusiasm to build the school's potential.

2. Competences of the school director

The modern director is a manager, a negotiator and a creative advisor. It is no longer just a person to properly maintain the records and reporting of the school (Kupis, 2018). Today, building a school's capacity requires leaders who are not only able to look holistically at each component of a school, but those who seek to bring all of these elements together to strengthen potential. This confronts school directors in a situation where they should manifest both excellent knowledge of the interrelationships operating between the various areas, and possess excellent skills in working to bring the various elements together for the development of the school (Hadfield, 2006).

The primary tasks of school principals include improving the quality of school work, developing teachers, including motivating them to improve their competence and qualifications, enabling the full development of all school employees. Assuming the function of a school director is associated with an in-depth knowledge of the processes involved and an awareness of the need to take on new roles, tasks as well as to act under time pressure and stress. These tasks require having broad competencies in both personal, social, professional, business and managerial areas. In recent years, changes have been introduced in the education system and educational realities are clearly raising the profile of school principals, increasing their responsibilities. They are faced with challenges such as building an individual path of school development, or organizing pedagogical supervision to efficiently control the achievement of set standards (Kupis, 2018).

Constant review and continuous improvement of the director's work, willingness to cooperate on many levels, and attentive listening and consistency in action are his daily activities. Undertaking these activities has become a prerequisite for the effectiveness of performing the function of a school director. According to J.M. Michalak, the strength of the school principal as a leader comes from his righteous character and the application of certain principles (Michalak, 2006). These elements have a significant impact on the quality of the school's work and its operation.

The director of an educational institution is not only an expert in education. Nowadays, due to a significant transformation in the labor market (Kochmańska, 2012), he is also required to have leadership competencies. J. Madalińska-Michalak emphasizes, “that high competences of educational managers - is one of the conditions for effective school management, both in terms of carrying out the school principal's own tasks and supporting the development and learning of teachers“ (Madalińska-Michalak, 2016, p. 10).

A. Ludwiczyński i H. Król define competencies as "predispositions in knowledge, skills, and attitudes that ensure the performance of professional tasks at an effective and/or outstanding level according to the standards set by the organization for the job” (Król, Ludwiczyński, p. 82).

Among the leadership competencies that a director of an educational institution should possess can be the development of self-awareness, defined as subjective and accurate knowledge of one's own inner self, for example, mental state, emotions, sensations, beliefs, desires and personality (Showry, Manasa, 2014). Self-awareness at work, on the other hand, is an accurate assessment of one's own behavior and skills in the workplace (Showry, Manasa, 2014). Another competence is managing stress through, for example, the use of varied behavioral techniques (Schwartz, 1980). Creative problem solving (seen as the creation of high-quality, original solutions in response to complex, novel and ill-defined problems) (Bresemer, Quin, 1999), influencing while motivating employees (using tools to increase employee engagement) (Brown et al., 2011) or delegation (which occurs when a manager delegates authority and responsibility for making and implementing decisions to subordinates) (Yukl, Fu, 1999) are also extremely important. J. Ober, on the other hand, draws attention to communication (both internal, which is aimed at changing the beliefs of the audience) and external (which defines the main goals of the company) (Ober, 2022). When analyzing the leadership competencies of the director of an educational institution, one should also not forget about conflict management (the principle that not all conflicts cannot be resolved, but knowing how to manage conflicts can reduce the likelihood of unproductive escalation) (Bakhare, 2010). It is also important to make decisions as a team, taking into account in this process the evaluation of various forms of information (Halvorsen, 2010) and their ethicality (Kuzior, 2021) or building the right interpersonal relationships (which are usually associated with a certain level of interdependence) (Velmurugan, 2016). Building relationship is also mentioned by E. Wiśniewska. The author believes that they should be based on sincerity, openness and trust. This allows, according to the author, to create not only one's own mastery, but also self-confidence and trust in one's competence (Wiśniewska, 2016).

3. Modern educational leadership

The continuous processes taking place in the field of education, as well as achieving optimal results in school work, require educational leadership (Alzoraiki et al., 2023). As J. Kołodziejczyk points out, "a key role for the formation of the identity of educational leadership and management is played by the identification of the dominant discourse taking over the current way of thinking about education and leading it (Kołodziejczyk, 2019, p. 14). There are many definitions of educational leadership in the literature, both in a specific and more general context (Kwiatkowski, Michalak, 2010). Its meaning is often difficult to describe, due in part to the difficulty of defining the concept of leadership itself (Leżucha, 2019). The concept of leadership refers to various fields and disciplines of science, but also applies to the business sphere. According to G. Cęcelek, "educational leadership occurs in the area of the

sphere of education, so it is a process that relates to the related activities of the teacher and students: teaching and learning, and to a large extent is similar to them in that it involves striving to unleash in others the ability to perform to the best of their abilities, and at the same time with a sense of respect for others and respect for their dignity" (Cęcelek, 2020, p. 130).

The right approach to leadership requires the appropriate adaptation of its specific elements to other fields and the deepening of the essence of the concept (Kaczmarek-Śliwińska, Szczudlińska-Kanoś, 2015). The standards for running an educational institution in accordance with educational leadership do not narrow the role of the principal as a leader, but only guide him. They apply to activities carried out inside as well as outside the school, and their implementation can be divided into three areas: the local environment, at the intersection of the local environment and the self-leader, and the self-leader (Kaczmarek-Śliwińska, Szczudlińska-Kanoś, 2015). Area one is mainly about diagnosing the local environment, defining the needs of the school community, creating a vision for change in education and the institution itself, inspiring, motivating and involving all those around the institution as well as educating and informing the local environment. Area two is mainly about building relationships and cooperation between the local environment and the leader. It concerns relations inside the school with students, parents/guardians, teachers and other staff, relations outside with the closer environment (for example. local media, local government, private entities) and relations with the further environment (for example, ORE, MEN). The last area, or self-leadership, involves awareness of one's own values, goals, the role of the leader as an educational leader, and functioning in a changing environment. It is also a sense of responsibility for the changes implemented in the school, as well as a sense of self-development and lifelong learning (Kaczmarek-Śliwińska, Szczudlińska-Kanoś, 2015).

Referring to the definition of the term management leader cited in the first section of the article, it can be considered that a school leader has many characteristics identical to the cited definition. First, educational leadership occurs when the principal-leader is able to stimulate the school community to realize common goals, take actions based on shared values, based on dialogue, participation and serving the common good. The director-leader recognizes and implements common goals, plans, objectives, and sees potential in people, institutions and the entire school environment. Therefore, it can be considered that educational leadership is also a process of influencing the entire school community, for the achievement of the set common goals. Modern educational leadership, therefore, requires the director-leader to possess certain personality traits, competencies as well as an orientation toward change. Taking into consideration the unstable economic, political, technological (Kaczmarek-Śliwińska, Szczudlińska-Kanoś, 2015) legal and social (Jeżowski, 2015) environment, the director must be aware of the threats as well as the opportunities coming from the environment.

4. Analysis of research results

The survey was conducted from April to June 2023. More than 200 students participated in the survey. 200 questionnaires were analyzed and all questions were answered. All respondents studied at Silesian universities (both private and public, randomly selected) whose main focus is the development of managerial competence.

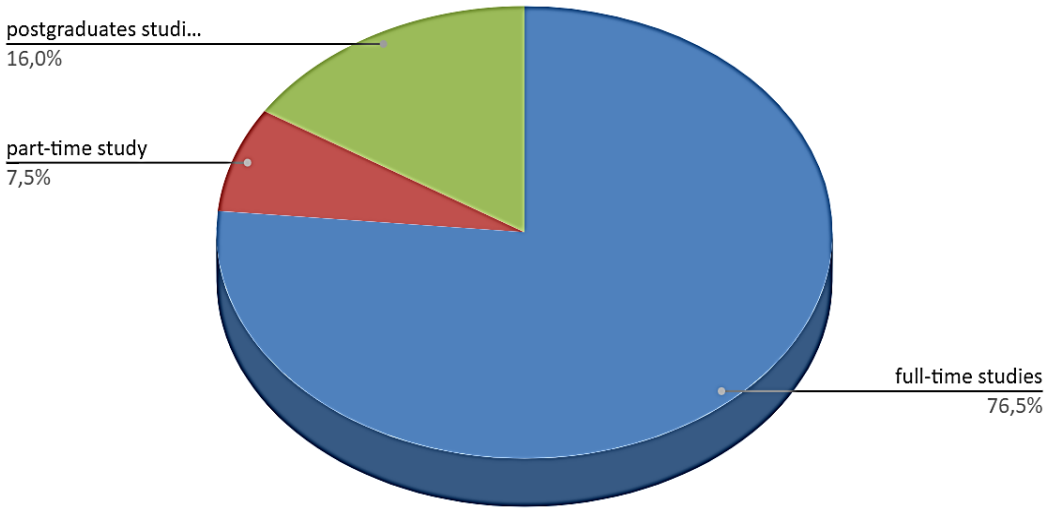

Figure 1. Student participation in the survey.

Both full-time (76.5%), postgraduate (16%) and part-time (7.5%) students participated in the survey. It is also worth mentioning that 71% of the respondents were women and 29% were men. The vast majority were between 19 and 25 years of age (76% of respondents). 18% of respondents were over the age of 33.

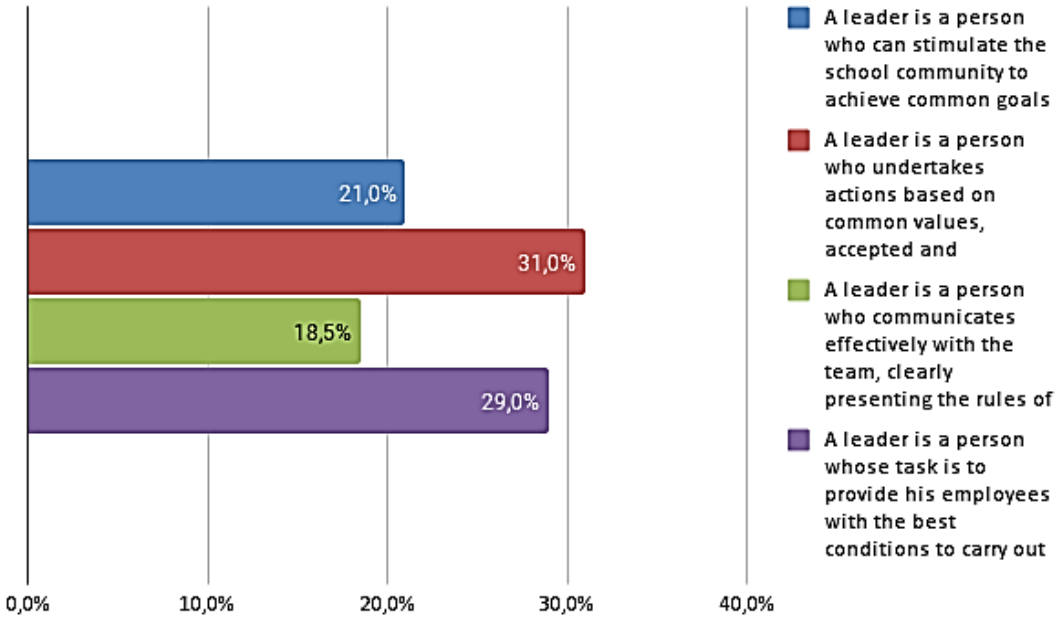

Figure 2. Definition of an educational institution leader according to respondents.

According to respondents, the leader of an educational institution is a person who takes action based on shared values that are accepted and shared by the school community. This is the opinion of 31% of respondents. However, it should be noted that the opinions of respondents are relatively even. Interestingly, the definition of a leader of an educational institution cited in an earlier section of the paper is also quite expansive and emphasizes three of the four elements described in this question. This demonstrates the need to sustain an expanded definition of educational leadership that includes the elements described so far, and possibly deepen the research to look for new elements. To the definition proposed by the experts, the study added a fourth element to the definition: "a leader is a person whose task is to provide his or her employees with the best possible conditions for carrying out their assigned tasks, so that they can perform their work as effectively as possible". As the results show, 29% of respondents chose this very element as the most important factor in the definition of a leader of an educational institution. This proves the need to constantly update and expand the definition of an educational institution leader.

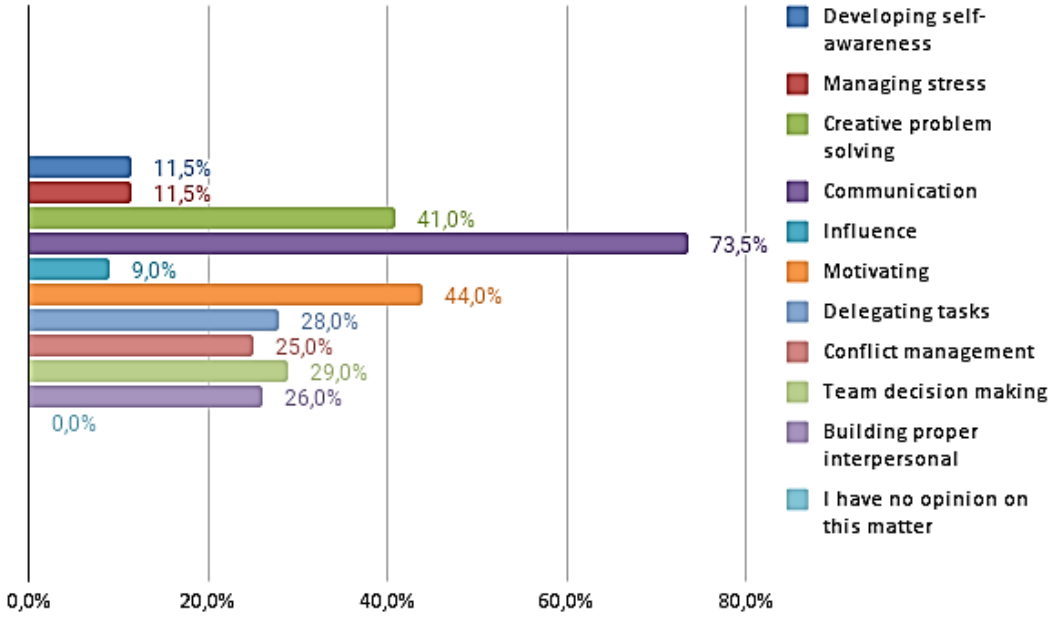

Figure 3. The most important soft leadership competencies of the director of an educational institution in the opinion of respondents.

Among the soft leadership competencies, respondents considered communicativeness to be the most important. Nearly ¾ of the respondents indicated this particular competence as the most important. The question was a multiple-choice question, but clearly in the opinion of respondents this is a key competence for the director of an educational institution. Importantly, many researchers of management issues consider this very competence as the base competence for the development of all soft competencies. Two other competencies highlighted by respondents were motivating and creative problem solving. None of the respondents took the option of not indicating any competency.

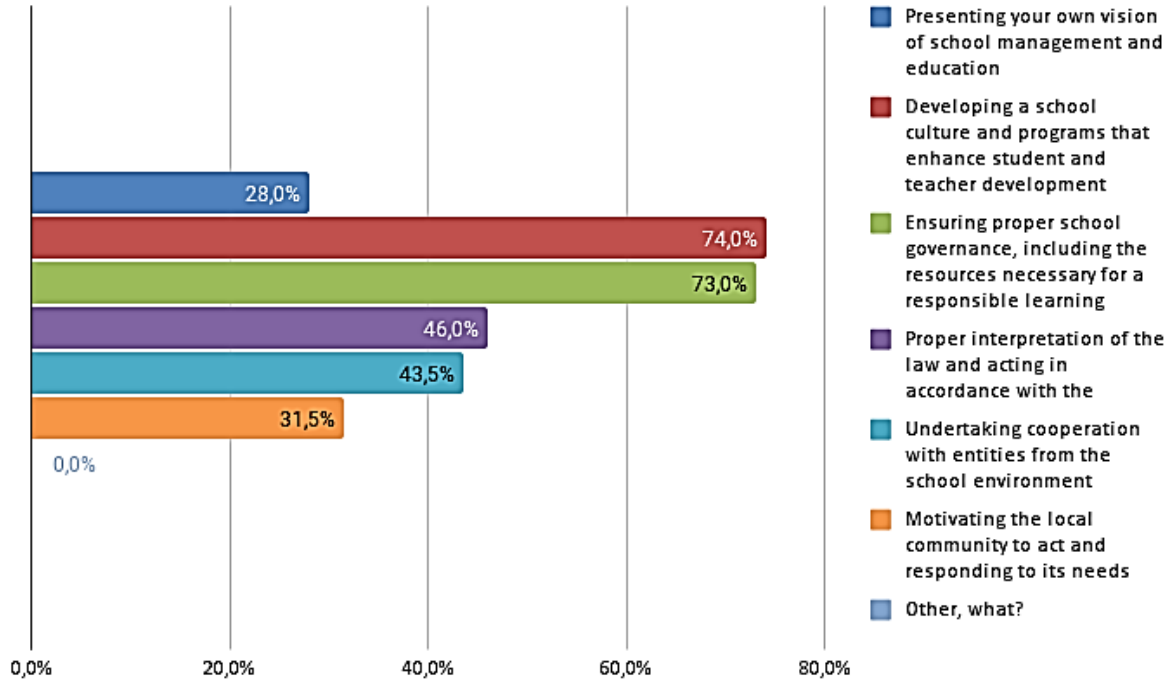

Figure 4. Activities of the director most effective in enhancing his image as a leader of an educational institution.

Among the activities that enhance the image of the educational institution's director, respondents mainly included developing the school's culture and programs that enhance the development of students and teachers (74% of indications) and providing adequate school management, including the resources necessary for a responsible learning environment (73% of indications). Interestingly, the least, with only 28% of indications, was to provide their own vision of school leadership and education. The missed potential of this situation can be seen here. It is a common view in management science that situations in which leaders present their vision are an opportunity to build team motivation and commitment. They also contribute to a better understanding of the values and principles on which the company's goals will be realized.

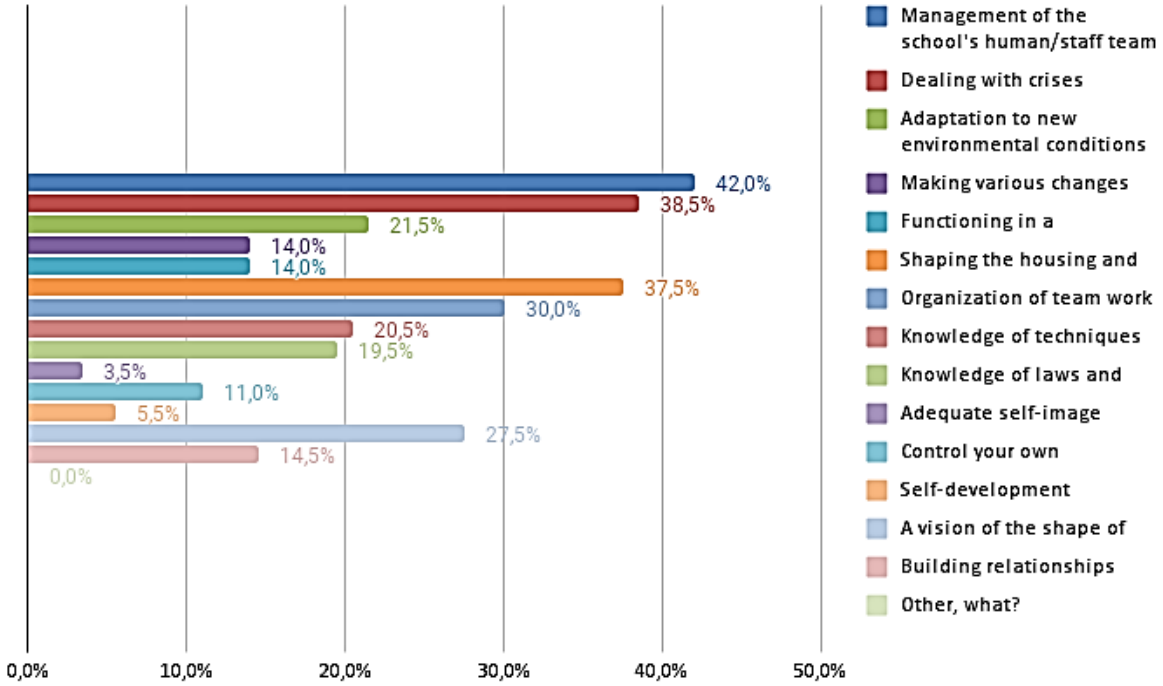

Figure 5. The key challenges of the school director in the opinion of the respondents.

Among the key challenges for the director as a leader of an educational institution, respondents included team management (42% of indications), while in second and third place in virtually the same position, respondents indicated dealing with crises (38.5% of indications) and shaping the premises and spatial conditions, including the provision of appropriate equipment and facilities adequate to the needs of learners (37.5% of indications). None of the respondents added their suggestion. Relatively fewest indications were related to challenges of self-awareness - adequate self-image (3.5%), self-development (5.5%) and also control of one's own emotionality (11%). This is an area in need of improvement and constant awareness of the importance of self-improvement and awareness of one's own competence.

Summary

Asking management students at Silesian universities who they believe is the leader of an educational institution was intended to help identify the key competencies and challenges facing this professional group. In many of the responses, a picture of the leader emerges that is consistent with the analysis of the literature. Respondents indicated how they understand the concept of "leader of an educational institution," what competencies it is characterized by, and what they believe are the main challenges that principals aspiring to be leaders face on a daily basis. The analysis of the literature and the responses of the respondents leads to the reflection that the director is perceived as. "manager of tomorrow" (Kaczmarek, 2013, p. 177)

who strives to make the school a safe, efficiently managed place that meets the needs of students, parents and all employees. Therefore, the director as a leader should develop continuously, acquire the necessary knowledge and acquire new skills through which he has a chance to gain respect and social prestige. Here it should be emphasized how undervalued by the group of respondents turned out to be the competence related to self-awareness. Working on oneself, preferably on the path of self-improvement, holistic development, affecting the whole personality is an opportunity to develop the leadership competence of modern directors. J.C. Maxwell repeatedly stressed that leadership cannot be discovered in oneself, it must be developed. The innate aptitude must be constantly improved (Maxwell, 2007). On the one hand, the director is expected to combine the qualities of a leader, a good colleague, a friend, but also a constructive critic whose feedback will motivate further development activities. This is a difficult challenge requiring, awareness of one's strengths and weaknesses and working on oneself.

Considering that "the tasks of directors of educational institutions are multidimensional. Most generally, they include pedagogical activities, as well as legal-administrative, decision-making and image-making activities" (Marek, 2016, p. 29) directors, as leaders who care about the development of the school's potential, should be expected to take care, among other things, of proper cooperation with the local government, as they should care about the best possible funding of the institution. Then their work and commitment will allow the school to develop, raising the level of education of both students and teachers. The school's leader must take care of the school's positive image in both the local and national and often global environment. The right reputation boosts the morale of staff and students, who take pride in working and learning at this particular institution. A good perception and high rating of the school also allows the director to have opportunities to take part in interesting ventures and projects, winning the favor of the local authorities and, above all, parents. As practice shows, this will be difficult to achieve if the director lacks leadership competencies or awareness of their improvement. The pace of today's changes, the scope and nature of the duties of directors of educational institutions make us reflect that it is difficult to define one specific set of competencies that would enable the implementation of tasks. Therefore, it is so important to be open to change, to have courage and to be willing to continuously develop.

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EDUCATION FOR SUSTAINABLE DEVELOPMENT AT THE EARLY CHILDHOOD EDUCATION

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Purpose: the aim of the paper is to present the role of education in developing one's awareness of sustainable development. The first educational stage is a special period of development, during which it is extremely important to develop pro-ecological and pro-social attitudes.
Approach: the paper shows the essence of education for sustainable development (ESD) in shaping the values, empathy and awareness that are needed to act for society, the environment and the economy. There are many scientific publications that present research on the implementation of ESD in school curricula, but only few of them truly analyze the role of the first stage of education, which is considered the period of greatest human development.
Findings: what formal education requires is to redefine and adopt a new experiential learning paradigm. The principal role of the school, as an organization responsible for shaping this process, and also of the teacher, is to shape specific attitudes of creativity, wisdom and reasoning. These competencies are blocked by pre-established learning outcomes that need to be verified through sets of compulsory tests.
Practical implications: currently, the implementation of ESD at the first stage of education involves changing existing curricula. However, it is also worth paying attention to the need for balance at every stage of school activity: organizational, teaching, educational, and to notice possible changes in the area of quality and standards regarding ESD in Poland.
Originality/value: the implementation of ESD at the stage of early education in Poland is not yet well recognized; the article offers threads for possible further discussion, as well as the design of practical strategies**.**

Keywords: education, early childhood, sustainable development.

Category of the paper: Viewpoint, general review.

1. Introduction

Education plays the most important role in developing awareness about society, the environment and the economy. N. Mandela indicates that education is the most powerful role we can use to change the world. In the face of the challenges of modern society, education

becomes the best way to achieve ecological, economic and social harmony in order to implement the assumptions of sustainable development. Many international and national documents establish the need to implement the principles of sustainable development in everyday education. However, few pay attention to the first stage of education, which is the period of the greatest human development, affecting further functioning and attitudes that it will present. The introduction of education for sustainable development in the education system has the potential to transform the attitudes, habits and ways of thinking of future generations, creating a more responsible, aware and active society, ready to work for a better future for our planet.

2. Education for sustainable development

Understanding the essence and the implementation of the principles of sustainable development depends only on man, therefore it is important that education around the world is aimed at promoting sustainable development. Recently, many actions have been taken that oblige UN member states to introduce Education for Sustainable Development (ESD) at all levels of education. Implementation of the concept of sustainable development, whose most important feature is realism and a multidimensional approach to the environmental crisis (Papuziński, 2007, p. 30), should be conducted through education. The Ministry of the Environment has stated that education is a basic human right and is a precondition for achieving sustainable development, it can help in implementing the assumptions of the new vision of the future (Europejska Komisja Gospodarcza ONZ [*UN Economic Commission for Europe*], 2008, p. 5). The main task of the ESD is to disseminate the knowledge and skills that are needed to implement sustainable development, it is also to create a new culture of society manifested in four integrated perspectives: economic efficiency, social justice, ecological compatibility and democratic order (Schreiber, 2005). Sustainable economic efficiency should ensure a good life here and now as well as for the future. A manifestation of its efficient functioning is the economical management of natural resources and the use of renewable energy sources, which limit the possibilities of using natural resources in the future. Tax policy should be conducted in such a way as to support pro-ecological initiatives (Jutvik, Liepina, 2005, p. 11). Social justice, otherwise known as sustainable social development, is the comprehensive development of humanity, involved in shaping the reality in accordance with ethics and morality, which sees the relationships between communities and the ecosystem (Jutvik, Liepina, 2005, p. 11).

A broader approach to ESD is the assumption that it focuses on the development not only of knowledge, but also of values and skills that are the basis for taking local and collective actions, it is to stimulate awareness of the need to improve the quality of life, taking into account the rational use of Earth's resources (Batorczak, 2013, p. 25). It is worth emphasising that this

is knowledge that helps in looking at the world in a new way, is needed for action and shapes values that stimulate motivation to participate in the life of a local society with global impact. It is important to rethink "teaching and learning as the processes of knowledge, skills, values and attitudes that shape the views and plans of individuals, schools and local communities in relation to the issues of social justice, economic security, ecological sustainability and democracy" (Jutvik, Liepina, 2005, p. 21).

Currently, the most important document is the 2030 Agenda for Sustainable Development, which was adopted at the conference in Rio de Janeiro in 2015. It is a continuation of the Millennium Declaration adopted in 2000, which contains eight Millennium Development Goals. The leaders of 189 countries under the auspices of the UN signed this declaration and committed themselves to reducing the level of poverty and hunger, striving for equality between women and men, improving the state of education and health, including the fight against AIDS, and protecting the environment (Millennium Development Goals, 2017). Agenda 2030 is the new challenges that have been called the Sustainable Development Goals-SDGs, in Poland called the Sustainable Development Goals. This is another step to achieve sustainable sustainable development. The main assumptions are 17 goals that should be achieved by 2030, and their effects will be to ensure basic material needs and human rights around the world, as well as sustainable use of the natural environment (Sachs, 2012, p. 2208).

Political changes, technological and financial solutions will not be enough to meet the challenges of sustainable development. It requires changing the way we think and act, paying attention to how it affects the ecosystem that supports our lives (Cheng, Yu, 2022, p. 1). ESD is an educational model designed to solve not only ecological, but also economic and social problems on a global scale, thus adopting a holistic approach (Pearson, Degotardi, 2009, p. 98). Formal education plays an important role in this concept, as it is the basis for shaping attitudes and values among students. As emphasised by E. Pearson and P. Degotardi – by instilling important life and learning skills in young children, early childhood education can promote change and improve the quality of life on a global scale (Pearson, Degotardi, 2009, p. 103; Pearson, Degotardi, 2009, p. 100). It is also worth emphasizing the essence of the ESD approach, which acknowledges the important role of environmental, social, cultural and physical conditions in the development and upbringing of a child (Pearson, Degotardi, 2009, p. 103). This is also an important step to make changes. Good practices introduced in the early stages of education will bear fruit in the future, both on a local and global scale (Siraj-Blatchford et al., 2010, p. 8). An important aspect of the need to implement ESD from an early age is indicated by K.G. Eriksen, on the example of education in Norway, shows the possibilities offered by integrating the social learning perspective with the concept of acquiring ecological competences and skills (Eriksen, 2013). Such an attitude allows for building foundations that guarantee the durability of this strategy. This survival in time and space means not only long-term knowledge, but, above all, it develops awareness of the volatility of society, economy and environment (Hägglund, Samuelsson, 2009, p. 59) and care for their balance.

"ESD provides students of all ages with the knowledge, skills, values and empowerment to address related global challenges, including climate change, biodiversity loss, unsustainable use of resources and inequality. It empowers students of all ages to make informed decisions and take individual and collective action to transform society and care for the planet. ESD is a lifelong learning process and an integral part of high-quality education. It enhances the cognitive, social-emotional and behavioral dimensions of learning. It covers the content and learning outcomes, pedagogy and the learning environment itself" (What You Need to Know about Education for Sustainable Development, 2023).

3. Sustainable development in programmes for the 1st stage of education

The document currently in force is the "Regulation of the Minister of National Education of February 14, 2017 on the core curriculum for pre-school education and the core curriculum for general education for primary schools, including students with a moderate or severe intellectual disability, general education for a stage I sectoral vocational school, general education for a special school preparing for work and general education for a post-secondary school" (Podstawa Programowa Kształcenia Ogólnego [*Core Curriculum for General Education]*). It assumes that at the first stage of education "education and upbringing in primary school is conducive to developing civic, patriotic and social attitudes of students. The school's task is to strengthen the sense of national identity, attachment to national history and traditions, prepare and encourage activities for the benefit of the school and local environment, including involvement in volunteering. The school cares for the education of children and youth in the spirit of acceptance and respect for other people, shapes the attitude of respect for the natural environment, including disseminating knowledge about the principles of sustainable development, motivates to act for environmental protection and develops interest in ecology" (*Podstawa Programowa Kształcenia Ogólnego* [*Core Curriculum for General Education]*, p. 14). Other important guidelines for education are the Pillars of Education included in the Report of the International Commission on Education for the 21st Century, chaired by Jacques Delaros for UNESCO. Although it was published in 1996, its assumptions are still valid and valid for ESD. The report presents 4 such pillars:

- learn to know – the first pillar that rejects encyclopedic knowledge and assumes equipping students with tools - the ability to independently acquire knowledge allowing to understand, learn and discover;
- learning to act – education is not only acquiring the skills necessary to perform a specific profession, but learning to act in the face of various social, economic and ecological challenges;

- learning to live together – recognising interdependence on others, developing conflict management skills and respect for others;
- learn to be – a pillar relating to personality development, autonomy and responsibility for one's own conduct. The authors of the report point out that developing the potential of each person, focusing on memory, reasoning, aesthetic sense, physical abilities and communication skills (Learning: The Treasure within…, 1996).

The report also emphasizes the role of formal education as an opportunity for holistic human development, but this requires looking at the learning process from different perspectives and with the participation of not only teachers, but also governing bodies and the local community. These assumptions impose on teachers the obligation to create educational programmes adapted to the needs of the modern world. "When creating curricula, it is worth taking into account 3 aspects of sustainable development, which show the theoretical layers - components of human development striving for balance between society and the environment" (Konieczny, 2022a, p. 172). When introducing sustainable development to curricula, it is worth applying the following principles, which allow for a fully qualitative design of teaching material:

- multilateralism - the first challenge faced by the creators of curricula is to notice areas not only in the field of environmental education, but also social and even economic;
- perspective - the implementation of the sustainable development goals requires long-term design and rejection of focusing on immediate results;
- activation – introducing changes requires active participation and acquiring the ability to act, involve students and apply knowledge in practice;
- communication without barriers – emphasising the importance of cooperation and respect towards different social groups;
- local action, global impact - taking into account the needs of the immediate environment, recognizing its needs, and developing respect for culture. This action also allows for the implementation of the global sustainable development goals;
- interdisciplinarity – the integration of many fields of science allows for a broader view of the problems of the modern world;
- cooperation - the introduction of changes requires cooperation at all levels of education and organisations operating in the local environment;
- inclusion – equal opportunities for all pupils, taking into account special educational needs.

The introduction of changes is limited by the mechanical understanding of education through the use of prescriptive forms of learning, with predetermined, verifiable learning outcomes (O'Flaherty, Liddy, 2018, p. 1044). It is worth paying attention to the role of the school as an organization influencing all dimensions of social life and serving as a role model for other entities (Mathar, p. 25). The concept of the whole school approach (WSA) is based on the assumption of developing competences as personal development and not the

implementation of an assumed subject (Mathar, 2018, p. 49). Sustainability is emphasized at every level of school activity (didactic, educational, organizational) and not only the student's activity.

4. Teachers' and students' attitudes towards education for sustainable development

The future of Polish education at all levels depends on well-educated, competent, dedicated and capable teachers. Knowledge combined with the appropriate skills shapes the teacher's abilities, which have a key impact on the knowledge, skills and attitudes that his students will display. The role of a modern teacher is to shape the student's awareness and need for development, to sensitise him to the problems of contemporary reality and to support his self-development and intellectual autonomy. In the face of the dynamics of civilisational, social and cultural changes, the constant development of knowledge, and the needs of a modern student, the new paradigm of the teacher is the model of a specialist who helps the student to meet newer and newer requirements, supports in a critical understanding of reality, and helps to evaluate the excess of incoming information. Reflection on the quality of education prompts the adoption of a new direction of education, where a space is created that allows ongoing understanding and integration of new information, a high level of flexibility and adaptation (Konieczny, 2022b, p. 36).

Many of the most fundamental values of tomorrow's society are formed in early childhood, and early childhood education has a fundamental role in achieving sustainable development (Siraj-Blatchford, 2009, p. 9). Educators can make a difference and support children's learning for sustainability (Cheng, Yu, 2022, p. 1). At the first educational stage, it becomes very important to stimulate the cognitive functioning of the child. It is a complex process of processing impulses coming from the world around us. ESD requires society to learn to live in balance with the natural environment from an early age, so it is important to develop creativity, wisdom and reasoning.

Creativity understood as the ability to tackle the right problems, i.e. those that have not yet been noticed or are the subject of interest of a small number of people. It is essential for building a modern and effective society and for introducing changes in the world aimed at increasing collective well-being. Wisdom is the application of tacit as well as explicit knowledge for the common benefit by balancing personal, interpersonal, and transpersonal interests in the short and long term to achieve a balance between adaptation to the existing environment, modification of the existing environment, and selection of a new environment. Wisdom is a life attitude that enables the individual to engage their potential to achieve their own life goals, taking into account work for the common good. Reasoning is the thought process of drawing

inferences from principles and data, moving from what is already known to formulating new conclusions or evaluating proposed ones.

An equally important, yet overlooked aspect of learning in education is the development of critical thinking skills. Practicing critical thinking skills is a complex process that affects the emotions, skills and abilities of a child. In terms of emotionality, independent thinking is supported. In order to gain intellectual independence, one must learn to look at the problem from different points of view. One should be aware of one's own thinking, but also of seeing it from the perspective of others. The sense of the essence and importance of one's own reasoning stimulates the acquisition of skills that allow you to learn the rules of defining words and transforming them into complex chains of thought. Such cognition allows a positive attitude to the task to be performed to arise in the mind. Discovering the goals and expected effects of your activity gives you greater opportunities to understand the world around you.

Appropriate projects to check and evaluate the work performed are multi-element intellectual, physical and social challenges. They develop students' thinking and planning skills and make their abilities and interests the starting point for developing their competence later on (Barron, Darling-Hammond, 2013, p. 325).

Therefore, it is important for the development of creative and critical thinking that the teacher, parents and students ask questions skillfully, so that it leads to curiosity/surprise and to take the trouble to look for original answers. In order to stimulate the development of critical thinking, it is necessary to introduce into the teaching framework methods that are aimed at its development. Among them, the concept of learning through research, which is a more conventional variant of the problem-based learning method, can be particularly distinguished. Learning by research requires a lot of effort on the part of both the teacher, who has to organize appropriate teaching aids and the place where classes are conducted, and the student, who performs the task together with his peers without the help of the teacher. The student learns to use his own knowledge, acquired skills and intuition, which will allow him to perform the task correctly. Learning by research or practice is the most appreciated working method in the modern school. Its biggest advantage is the fact that it develops the cognitive independence of students, their creativity and interests are stimulated. The nature of learning through research is very creative, as students expand on known didactic problems with scientific problems. Education through research is effective because knowledge is better assimilated when a person generates it himself than that which is given to him in ready-made concepts. Thinking procedures that lead to a solution affect better memorisation. Adoption of such a working strategy allows for the development of critical thinking (Bąbel, Wiśniak, 2008, p. 73). While working through the study, not only does the level of knowledge of students increase, but also cognitive independence develops, students function better in society and are able to express their opinions. This method makes it easier for students to get to know the reality directly, has a very large impact on the level of skills as well as their school achievement results (Kupisiewicz, 2012, p. 140). As F. Bereźnicki points out, the education system should not only

support the student in the intellectual sphere, but also the aesthetic and moral aspects should be stimulated. The purpose of education is to prepare students for life, shaping its character and attitudes, however, it should be remembered that the goals will not be fully achieved if it does not take into account the world of values, its understanding, acceptance and respect (Bereźnicki, 2011, p. 33). Learning through research is a method that requires a lot of activity on the part of both teacher and student. However, it is worth emphasising that it has many advantages that affect the development of the mind and also shapes the ability of critical and creative thinking, teaches cooperation and empathy.

5. Conclusion

The article summarizes some considerations for developing education indicators for ESD. In the research conducted on the implementation of ESD into school curricula, J. Boeve-de Pauw et al. (2015, p. 15712) not only indicate the potential of this strategy, but also emphasize the need to adapt it to the needs of the recipients to whom it is addressed. It seems worth observing that specific attention should be paid to the first stage of education, which is the period of the greatest development of learners. The quality of education at this level affects functioning at further stages. The role of the teacher is to stimulate creative and critical thinking, which is the basis for noticing oncoming problems and searching for their solutions. It is important to develop the ability to tackle the right problems, acquire the ability to introduce changes and care for the common good.

ESD should be perceived through the prism of an approach based on action competence (Mogensen, Schnack, 2010, p. 59). In developing cognitive independence, an effective method may be education through research, as it not only offers learners freedom in learning but also rejects memorizing encyclopedic knowledge often recognized as the only correct way of learning. In this concept, the teacher, while ceasing to be the only source of knowledge for the student, takes on the role of a companion and support in learning. Thus, in early childhood education ESD not only shapes responsible attitudes and habits in children, but also helps build the foundation for future generations, in hope they will be more involved in creating a better and more sustainable world. Additionally, improving teaching and learning by reflecting democratic values appears to be one of these important threads of discussion that mark the beginning of a discourse that will lead to practical progress in schools.

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THE IMPACT OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT AND CORPORATE SOCIAL RESPONSIBILITY ON OCCUPATIONAL HEALTH AND SAFETY

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Purpose: The concept of sustainable development as well as corporate social responsibility require the company to be more active in the social and ecological areas, which translates into increased effort and financial outlays. However, they contribute not only to the improvement of the company's image among stakeholders and employees, but also to a real improvement in occupational health and safety conditions.
The article was created in order to identify the possibilities and barriers to the implementation of the concept of sustainable development and CSR in the company, based on the applicable standards, experiences and psychosocial conditions.
Design/methodology/approach: In order to determine the impact of the concept of sustainable development and CSR on occupational health and safety, the article shows the relationship between selected aspects of occupational health and safety and the strategy of sustainable development and CSR. The benefits of the actions taken in this area were defined as well as additional possibilities resulting from their implementation were discussed.
Findings: The concept of sustainable development and CSR, despite the fact that they are becoming more and more popular, do not yet play a significant role in company management. The reasons should be sought in the lack of a full understanding of these ideas as well as fear of changes and costs that may result from them.
Originality/value: The article draws attention to the necessity of successive changes in the conduct of business activities aimed at realizing the mutual correlation between the success of the company and occupational health and safety. These changes may affect the determination of new opportunities and directions of development.

Keywords: occupational health and safety, safety, occupational health, health and safety service, sustainable development.

Document Category: Viewpoint, Technical Article.

1. Introduction

The activity of enterprises is closely related to the conditions of nature. The basic definition in ecology is the concept of an ecosystem that should be protected against the negative effects of the company's impact in order to maintain its balance. The concepts of the concept of sustainable development and corporate social responsibility are often used synonymously, however, they have slightly different values and complement each other. The difference between sustainable development and CSR is based on the vision and its recipient. There are many definitions of corporate social responsibility in the literature on the subject, but there is no one universal one (Castka, 2004, p. 216). externally, which is why it is often perceived as good PR or philanthropic activity. CSR focuses on activities in line with market expectations based on organizational order, positive local impact, and respect for human rights.

On the other hand, the concept of sustainable development assumes that all units involved in the company's activities are the recipient of this idea and it is focused more closely on internal activities, which, as a consequence, strengthens the company's brand on the market and causes a higher valuation of the business entity. The concept of sustainable development, which was specified in 1987, assumed that the world has the possibility of simultaneous economic growth and maintaining the current environmental conditions. The concept of sustainable development extends the economic activity of the company with social, environmental and ethical goals, assuming that only the implementation of all of them can ensure the survival of humanity in the future (Papuziński, 2005, pp. 275-290). Currently, we can observe an increase in the role of the concept of sustainable development and CSR as solutions that, properly implemented in a company, can lead to an increase in its competitiveness among conscious recipients, as well as change the nature of the business to a more environmentally friendly one. The ideas of sustainable development and CSR more and more often appear in enterprises as an integral part of their activities, unfortunately mainly in international corporations (Amarlic, Hauser, 2006, pp. 27-38). Taking into account the impact of business decisions on the environment, after passing the stage of being just fashion and grandiose slogans, is now becoming a necessity that companies have to face. A company that takes steps to introduce sustainable development and corporate social responsibility becomes more competitive, but above all, it is able to attract and retain a larger group of not only customers but, above all, employees who are necessary for this process (Kożuch, 2007, p. 268).

Conducting business in accordance with ethical values was caused in the last century by social changes, the main factors of which were (Walczak-Duraj, 2002, pp. 237-240):

- progressing globalization that required social control,
- searching for the ethical foundations of capitalism,
- public opinion pushing the need to be interested in the effects of business activities,
- frequent changes in legal regulations in the field of conducting business activity,

- degeneration of the image of enterprises in the eyes of the public,
- promoting the idea of economic freedom as a way to push through ethical business activity.

Nevertheless, enterprises operating in a free market economy still base their operations on economic results, not ecological or social ones (Zieliński, 2014, pp. 650-660). Therefore, the implementation of these concepts in enterprises is very time-consuming and complicated. In individual industries, these tasks are additionally hindered by the specific conditions of the work process.

Therefore, this article considers corporate social responsibility and the concept of sustainable development as a challenge for enterprises and shows the impact they have on occupational health and safety.

In most of the key areas of sustainable development and CSR, it is possible to identify difficulties and actions addressed to the main group of stakeholders, i.e. employees, and aimed at their safety and health protection. On the basis of general considerations, the key difficulties and activities were identified and how they affect occupational health and safety in enterprises.

2. Sustainable development and CSR in the literature on the subject

The concept of sustainable development is not a newly created creation, but it fits into the landscape of enterprises in a new way. This concept originated at the turn of the 1960s and 1970s and was developed in Agenda 21 at the Earth Summit in Rio De Janeiro in 1992, where 27 Principles of Sustainable Development were defined. This document was signed by the ministers of most countries and aimed at establishing new forms of cooperation between states, social groups and nations, based on changes beneficial to all, which will protect the integrity of the global environment and development system.

The concept of sustainable development evolves along with the emerging challenges posed by the current civilization and technological progress, but it is also influenced by the successes and failures related to the implementation of the adopted 27 points of Agenda 21. In the 21st century, sustainable development is not only systematically developed, but also and promoted, among others, by UNESCO or the United Nations. The contemporary ideology of sustainable development is defined by the 17 Sustainable Development Goals announced by the United Nations in 2015 (UN General Assembly Resolution, 2015). These goals are:

1. End poverty in all its forms worldwide.
2. End hunger, achieve food security, ensure better nutrition, promote sustainable agriculture.
3. Ensure that all people, regardless of age, live healthy lives and strive for well-being.
4. Ensure high-quality, inclusive education for all and promote lifelong learning.

5. Achieve gender equality and empower women and girls.
6. Ensure access to water and adequate sanitation for all people through sustainable management of water resources.
7. Provide all people with access to stable, sustainable and modern energy sources at an affordable price.
8. Promote an inclusive, sustainable model of economic growth and full, productive employment and decent work for all.
9. Build a durable infrastructure, resilient to the effects of disasters, promote a sustainable, inclusive model of economic development and support innovation.
10. Reduce development inequalities between and within countries.
11. Create safe, sustainable, disaster-resilient cities and human settlements.
12. Develop sustainable models of consumption and production.
13. Take urgent action to stop climate change and counteract its effects.
14. Ensure the protection of oceans and seas and the sustainable use of their resources.
15. Protect and restore terrestrial ecosystems and promote sustainable use and management of forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.
16. Promote peaceful, inclusive, sustainable models of human development, provide all people with equal opportunities and fair treatment and access to justice; build effective, accountable institutions at all levels.
17. Strengthen the tools to implement and rebuild the Global Partnership for Sustainable Development.

Noteworthy is the orientation of the individual goals adopted by the UN, which indicate the multidisciplinary nature of the concept of sustainable development and the need to undertake multi-area research in this area (Kuzior, 2014).

These assumptions can be treated as very ethical and noble ideas, however, which will be difficult to translate into practice. This may be evidenced by the lack of concrete achievements in their implementation so far. The first assessments of progress in achieving these goals were made in 2017 and showed that the degree of their implementation is not satisfactory due to the deepening inequalities in the social dimension and insufficient climate action (SDG Index and Dashboard Report, 2017). This assessment is an important voice in the discussion on how sustainable development is still an up-to-date and sustainable development paradigm, as well as determining where and what barriers arise that prevent the full implementation of this idea at the global, but above all, local level. The idea of social equality, the need to combat broadly understood social pathology and the need to protect ecosystems were undoubtedly the basis of this concept, but the social debate on the practical aspects of its implementation is important (Ciążela, 2021, pp. 41- 56).

Sustainable development has become an opportunity for the world to ensure a better future (Kuzior, 2007, pp. 69-72), however, specific actions are necessary to make it happen.

The concept of sustainable development at the micro level began to take root in the awareness of enterprises as well as institutions and business entities through the tool, which is corporate social responsibility, in short called CSR or Corporate Social Responsibility. According to its assumptions, the realization of profits, the increase in the value of the company and its survival in the future are to depend on the balance of social, economic and ecological goals (Wolniak, 2016, pp. 115-123). The origins of the idea of corporate social responsibility can be found in antiquity, where economic activity did not have such a dimension as today, but even then philosophers, including Aristotle, condemned the so-called "the art of getting money" and separated it from the "art of managing". Sticking to the philosophical assumptions, it was assumed that the consequence of human freedom is the need to be responsible for one's actions (Filek , 2002). The beginnings of the currently known idea of corporate social responsibility can be traced back to the second half of the 19th century, and its pioneers were entrepreneurs - philanthropists such as John Patterson or John Rockefeller. The breakthrough period for the idea of corporate social responsibility was the 1950s, when the first publication was published that comprehensively covered corporate social responsibility, entitled " Social Responsibilities of the Businessman" by R. Bowen (Visser, 2008, pp. 473-479). The first definition of CSR was introduced in the 1970s by Archie Caroll, who took into account legal, ethical, economic and philanthropic responsibilities, on the basis of which the CSR pyramid was created (Carrol, 1991, p. 42).

Figure 1. CSR pyramid according to A. Carroll.
Source: Carroll, 1991.

At the same time, the first code of corporate social responsibility was published under the title "The Sullivan Principles" (Bernatt, 2009, p. 23). In the 21st century, there was a very strong development of the idea of social responsibility and with it the emergence of new standards and codes, whose authors are leading experts and practitioners and contain key definitions for a wide range of recipients in the field of CSR (Visser, 2012).

Unfortunately, most often in the case of small enterprises and individual entities, activities for corporate social responsibility focus mostly on improving the image or feigning a pro-social and pro-ecological attitude by promoting common activities for local communities and employees, which does not bring any added value (Kuzior, Knosala, 2015, pp. 119-129). Among the causes of problems with the implementation of these concepts in enterprises, the focus on the economic aspect and the lack of established ethical values should be indicated. Until recently, the fault for these failures was also seen in the lack of standards and specific measures that would enable the scope of implementation or the assessment of its level. In connection with the above, an international template was developed containing guidelines for reporting issues related to sustainable development, i.e. the Global Reporting Initiative (GRI). According to the recommendations, the report should consist of two parts, where the first part is general and contains the characteristics of the entity, and the second part includes the management approach and indicators. The report defines the impact of the conducted activity on issues related to sustainable development and presents numerical indicators that are to allow the assessment and comparison of the effects in economic, environmental and social terms. In addition, social aspects have been divided into subcategories that allow the separation of individual activities in the field of:

- employment practices,
- human rights,
- society,
- product liability.

This division results from the diversity of the company's stakeholders, who are not only employees and customers, but also representatives of local communities (Caputa, 2015, p. 44).

Nevertheless, in order to determine the scope of CSR objectives implementation, industry and universal standards should be formulated, which may raise doubts as to the reliability, cost and time-consuming nature of the collected data necessary for parameterisation.

3. Occupational health and safety issues in key areas

The basic rules for ensuring the proper state of occupational health and safety and health protection are contained in the relevant legal regulations and they shape the OHS management system in the company. Corporate social responsibility assumes going beyond legal requirements by increasing investments in the field of environmental protection, human capital, and relations with contractors. An integral part of CSR and a social obligation of the company is to care for the health of employees and ensure safe working conditions (EU-OSHA, 2006, p. 7). Systemic occupational health and safety management includes primarily human, technical and financial resources and includes the company's objectives, its structure, procedures and responsibility (Sobociński, 2000, p. 342). The modern management style adopted in the company requires the inclusion of all aspects of activity, including shaping working conditions by assessing occupational risk, analyzing the work environment and taking decisive actions to reduce or even eliminate the existing risk related to the performance of individual tasks at work positions (Borysiewicz, Lisowska-Mieszkowska, Żurek 2001, p. 46). Occupational health and safety management can also be defined as specific aspects of the overall management adopted in the enterprise, which are closely related to the development and implementation of the occupational health and safety policy (Pietrzak, 2005, p. 7). Minimizing occupational risk to an economically justified level is the overriding objective of occupational health and safety management. Risk management should be one of the elements of the organization's strategy based on the analysis and prevention as well as control of the effectiveness of the implemented countermeasures. The concept of sustainable development and corporate social responsibility in the field of occupational health and safety were initiated with the introduction of system standards and guidelines in the form of e.g. OHSAS 18001, which was then replaced by ISO 45001, and is an international Occupational Health and Safety Management Standard. Implementation of the above standards in the company brings many benefits for the company, such as:

- the possibility of joining international tenders (many companies require their contractors and sub-suppliers to implement the above-mentioned standards),
- developing cooperation with current stakeholders,
- improving the health and well-being of employees in the workplace,
- strengthening the company's reputation,
- ensuring a safe and hygienic workplace, free of injuries and diseases,
- attracting and retaining skilled workers.

The basic purpose of the standards established in the field of occupational health and safety is to improve working conditions by systematizing activities for accident prevention or reducing hazards arising from the work process. As in other international quality or environmental management systems, the concept of continuous improvement applies. It is of course important

to comply with the statutory provisions of law and other established standards, however, an important aspect is monitoring and determining the effectiveness of the measures in force and adopted for use. The success of using safety management systems in an enterprise depends on the involvement of the management, health and safety services, and all employees at various levels of the organization.

Occupational health and safety is an important element of the sense of social responsibility, as employee safety is one of the components used to measure the company's overall progress in this area. These components include:

- health and safety of employees,
- a healthy product (not having a negative impact on the environment and users),
- compliance with applicable standards and working conditions,
- observance of human rights,
- employment equality in terms of accessibility and opportunities.

Occupational health and safety is considered one of the main elements of the company's ethics due to the inclusion of business values in the activities of corporate social responsibility. Other important elements of the company's ethics are environmental protection and work-life balance. Social responsibility in the company is based on the synergy between the three areas of economy, society and environment. These areas should be perceived in many dimensions, and an important aspect of achieving synergies will be the promotion of common values through:

- involving employees in decision-making processes,
- improvement of qualifications and development,
- introducing solutions not only required by law, which will improve the organization and culture of the workplace,
- development of human capital,
- defining and specifying the organizational order that will ensure transparency and ethicality of decisions made and the manner of their implementation,

A socially responsible enterprise is conducive to shaping its image as a reliable employer, increases the safety culture, which translates into increased employee satisfaction with the duties performed, identification of employees with the enterprise and, as a consequence, increases efficiency and generates additional profits (Olesiński, 2010, p. 7; Kuzior et al., 2022). Shaping sets of behaviors based on knowledge and creativity is of key importance for the success of the company because it is people who shape and develop the company's potential and create the company's brand (Amit, Zott, 2001, pp. 493-520). Over the last decade, the dimension of occupational health and safety care has changed significantly due to the introduction of modern technology, for example in the form of intelligent robots (Kuzior, 2017, pp. 31-38), however, the employee is still the most important element in the company. Negligence in the sphere of employee development, as well as lack of care for his health and

well-being lead to the degradation of this resource. Employee education in the company should be guided by the belief that it is worth investing in their development in order to bind them to the company for a long time, hence it should be well thought out, planned and, above all, consistently conducted. The basis for shaping the required level of competence in the field of occupational health and safety in the company is assigning the highest priority to the health and life of the employee. Training should be designed in relation to key health and safety issues, and take into account the specificity of work, individual predispositions of employees and emphasize the importance of occupational health and safety for the efficiency of the individual and organization. However, occupational health and safety should not only be limited to manufacturing enterprises. An important aspect is also to draw attention to the responsibility of management and employees for occupational health and safety and the social, environmental and economic consequences of ignoring OSH. The concept of comprehensive occupational health and safety management combines three areas of business activity:

1. technical safety, which is based on the safe operation of machines, devices and workstations, their protection and inspections,
2. systemic security based on procedures, instructions and reliable occupational risk assessment,
3. behavioral safety based on the observation of behavior and reinforcing safe behavior.

Occupational health and safety management systems can be used to implement the principles of social responsibility in employment practices or employment relationships through activities in the field of:

- eliminating violence at work,
- identification and elimination of psychosocial risks,
- identification of the employee's psychophysical conditions and the selection of appropriate preventive measures,
- minimizing stressful situations and determining ways to deal with them,
- organizing training targeted at disabled and older workers,
- maintaining a balance between private and professional life,
- promoting health and increasing the level of safety,
- identifying training needs and providing opportunities to improve qualifications.

Convincing employees to the adopted CSR strategy and its direction depends on many factors, the main one being the broadly understood fulfillment of employee rights. Focusing on purely financial aspects is not enough to meet the company's objectives in an increasingly demanding society. Therefore, broadly understood occupational health and safety is one of the most important aspects of social responsibility.

4. Conclusions

Contemporary challenges faced by enterprises indicate the need to develop the competences of the staff. Attention to aspects related to occupational health and safety is part of the corporate social responsibility, mainly in relation to internal stakeholders (Kuzior, 2016; Kuzior, Staszek, 2021, pp. 307-322). It is important to maintain cohesion between the company's business strategy and the development of employees' competences, which will allow it to gain an advantage over the competition. Proper management of occupational health and safety in an enterprise enables an increase in work efficiency, improves the company's image, reduces the impact of accidents on employees and reduces the risk of failures, interruptions in work, disruption of processes and related financial losses. Occupational health and safety is an important element of the social dimension of CSR. The sense of social responsibility enables the incorporation of safe and hygienic work into the company's activities at the strategic level, and consequently contributes to the growth of social recognition, which is of great importance for the company's success.

Enterprises are increasingly implementing occupational health and safety management systems, although they are not required or regulated by law. These activities are undertaken in order to obtain economic benefits, as well as to achieve a certain prestige dictated by having a certificate. Socially responsible activities of the company can bring many benefits, not only financial, but also significantly affect the uninterrupted development, which makes it easier to run a business. However, in Poland, the approach to occupational health and safety is entrusted to the appropriate services and management, and employees are not interested in this subject (Witkowski, 2001, p. 49). Hence, individual competencies should be expanded, as they are conducive to raising collective awareness. Expanding competences in the field of occupational health and safety, high organizational culture, modernization of machinery and equipment as well as technological development guarantee high quality and safety of service for internal and external stakeholders.

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QUALITY OF PROVIDING PUBLIC SERVICES BY LOCAL GOVERNMENT IN THE LIGHT OF EMPIRICAL RESEARCH. A STUDY OF CLIENTS OF THE MUNICIPAL OFFICE IN ZABRZE

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Purpose: The primary objective of the survey was to verify the effectiveness of the procedures used to improve the management of public services by the Municipal Office.
Design/methodology/approach: The perception of customer service quality was studied among clients who personally visited the Municipal Office in Zabrze in 2023 to avail of the on-site public services.
Finding: Besides determining the level of approval for the quality of services provided by the Municipal Office in Zabrze, the study also aimed to identify the reasons that made the clients find the administrative process either satisfying or causing negative feelings. There was also a verification of the changes in the quality of the town hall's operation, especially customer service, among the surveyed individuals who had previous experience with administrative matters. Respondents from this group were asked to point out specific changes they noticed since their last visit.
Practical implications: The results of the research project described in the article will be implemented into the realm of planning new organizational solutions, improving existing rules, schedules, and procedures, and supervising the entire process of client service.
Originality/value: Conducting research on the quality of client service allows for a scientific reflection on the functioning of public administration and expands knowledge on this subject. It also enables the identification of further research areas and determining spheres for the implementation of innovative solutions that streamline the operations of local government units.

1. Introduction

One of the primary research objectives was to obtain data pertaining to the parameters influencing clients' assessment of service quality and to rank the significance of various aspects of administrative matters in the overall perception of the functioning of territorial

administration. Consequently, a detailed analysis was conducted on the influence of factors such as: the subjective assessment made by clients regarding the competency of officials, the ability of staff to provide accurate and comprehensive information about the public services rendered, staff engagement, cordiality, willingness to assist clients, empathy, and courtesy. The residents' perception of the time taken to resolve a specific matter was also examined. An essential criterion for evaluating service quality was the accessibility for respondents to avail public services offered via digital platforms. Another critical issue was determining whether a resident could effortlessly reach the appropriate employee responsible for a particular matter. In instances where difficulties were encountered, the survey questions aimed to identify barriers preventing smooth interaction between the client and the official. It was also deemed practically valuable to define the type of administrative matters being addressed and to pinpoint the specific organizational units visited. When combined with a level of approval regarding service quality, this would facilitate the introduction of solutions optimizing the operation of the office.

For efficient client service, the manner in which clients obtain information about the procedure for handling their matters is of paramount importance. Utilizing sources authorized by providers of verified and accurate information enhances the ergonomics of the process. Therefore, from both the perspective of public administration and the residents, better outcomes are achieved by familiarizing oneself with the prevailing procedures via a digital platform or the municipal website, and by preemptively downloading and completing the appropriate forms, rather than visiting the municipal office solely based on consultations with family or acquaintances.

Addressing administrative matters necessitates the drafting of applications as stipulated by regulations, issuing forms, preparing attachments, etc. For many residents, whose interactions with territorial administration are sporadic, such activities pose challenges. Hence, subsequent questions pertained to the level of accessibility, legibility, and consequently, the degree to which clients understood the documentation required for handling their matters. This topic is intrinsically linked to the service of clients with disabilities or citizens from other countries, which was also a subject of investigation.

2. Research methodology

In the research project, 922 individuals participated who personally visited the Municipal Office in Zabrze. They were approached by officials and asked to respond to questions regarding various aspects of client service contained in the questionnaire. Interviews were conducted from January 21 to August 14, 2023. Within the surveyed group, an additional 42 respondents indicated prior telephonic contact with representatives of the municipal office.

The course and outcome of such communicative relations, although mentioned by only 4.5% of the respondents, were also subjected to analysis. Thematic areas influencing the evaluation of service quality, which were not specified in the closed questions of the questionnaire, included an open-ended question addressing other factors shaping the level of approval towards the functioning of the municipal office.

3. Research project results

922 participants were requested to provide their opinions regarding the quality of client service at the Municipal Office in Zabrze. Among the respondents – unsurprisingly – the majority were residents of Zabrze, accounting for 92% of the individuals encompassed by the project. The remaining respondents were citizens of Ukraine or resided in other cities.

Considering the reason for visiting the municipal office, the majority of research project participants indicated the necessity to handle matters under the jurisdiction of the Department of Communication (34%), the Department of Civil Affairs (26.7%), the Tax Department (12.3%), the Zabrze Center for Entrepreneurship Development (4.7%), and the Property Management Department (4.5%).

Table 1.
Reasons for visiting the Zabrze Municipal Office most frequently indicated by the respondents, broken down by individual departments. Presented in percentages

No.	Department	Percentage of Respondents (in %)	Most Frequently Addressed Matters
1.	Dept. of Communication	34	Driving license Vehicle registration certificate Vehicle deregistration
2.	Dept. of Civil Affairs	26,7	Application for an identity card Resident registration Collection of an identity card
3.	Tax Department	12,3	Tax matters Submission of tax declaration Change in the tax declaration
4.	ZCED[1]	4,7	Establishment of a business Suspension of business activities Registration in CRIB[2]
5.	Dept. of Property Management	4,5	Social housing Municipal housing Land lease

[1] The Zabrze Center for Entrepreneurship Development (Pol. ZCRP – Zabrzańskie Centrum Rozwoju Przedsiębiorczości).
[2] The Central Register and Information on Business (Pol. CEIDG – Centralna Ewidencja i Informacja o Działalności Gospodarczej.

Cont. table 1.

6.	Civil Registry Office[3]	2,7	Issuance of a death certificate Copy of a marriage certificate Copy of a birth certificate
7.	Real Estate Dept.	2,6	Property tax Housing application Housing buyout
8.	Customer Service Dept.	2	Trusted profile (eGo) Archival documentation Registered mail
9.	Dept. of Construction	1,7	Building permit Decision on building conditions Certificate of housing independence
10.	Dept. of Ecology	1,5	Photovoltaics Furnace replacement Installation report

Prior to their visit to the municipal office, approximately half of the participants (48%) undertook a variety of preliminary activities aimed at gathering information concerning the procedures for addressing their specific matters. Most frequently, these involved consulting the official municipal website (24%), broad online sources (12%), engaging in telephonic conversations with municipal employees (4.5%), sourcing information from mass media outlets (4%), or inquiring among acquaintances, colleagues, or neighbors (3.5%).

The vast majority of the research project participants expressed satisfaction with the quality of public services provided by the Zabrze municipal office upon the conclusion of their errands. A notable 98% of respondents affirmed this sentiment. This result comprises a combination of affirmative responses of "yes" (93%) and "rather yes" (5%) to the question of whether the individual was pleased with the outcome of their municipal visit.

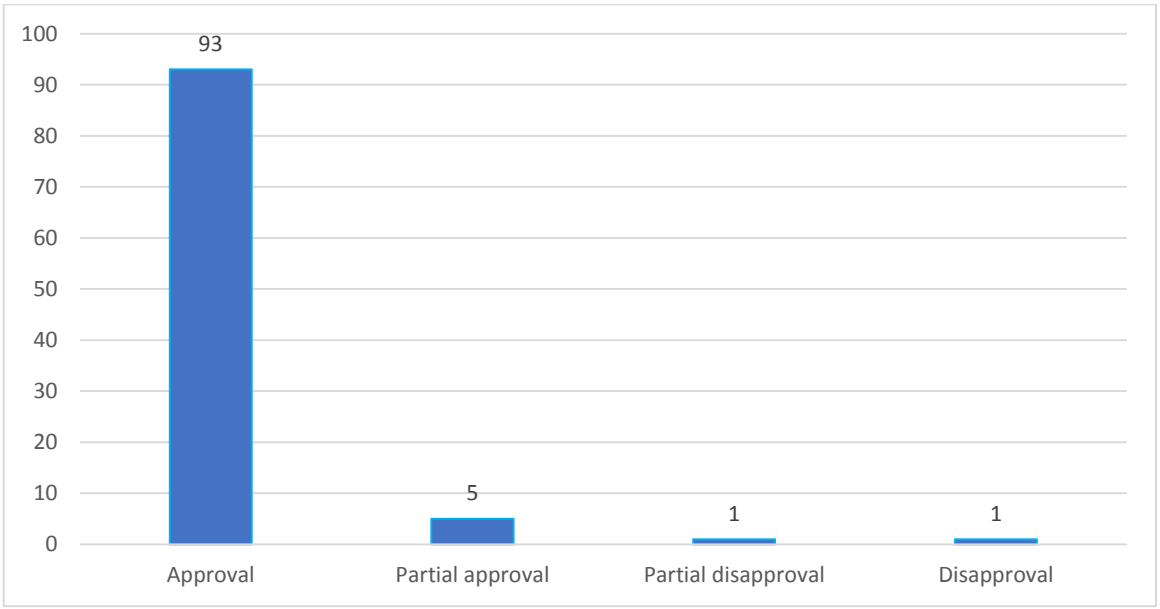

Figure 1. Overall approval level regarding the quality of public services provided by the Municipal Office in Zabrze. Percentage representation.

[3] Pol. USC – Urząd Stanu Cywilnego.

3.1. Factors shaping the level of approval for the quality of service

In the course of evaluating access to essential information for a client aiming for comprehensive, efficient, and swift service in the office, the majority of participants expressed full approval of the prevailing status during the implementation of the research project. An overwhelming 99% conveyed a positive stance on the information they deemed accessible and exhaustive (comprising 95% distinctly positive indications and 4% partially positive). A small fraction of participants (1%) marked the response "rather no" when inquired if the information is accessible and comprehensive.

In identifying the elements perceived by the participants as having the most significant influence on shaping the level of approval concerning the quality of public services in the municipal administration office, results manifested as a set of attributes affecting the efficiency of handling official formalities and the ambiance within the office. The most paramount factors influencing a client's perception of the municipal office are the of the official (19%) who maintained professional relations with the respondent, coupled with the official's ability to convey comprehensive and comprehensible information (19%), and their empathy and courtesy (19%). Slightly fewer indications (18%) were attributed to the engagement of the municipal administration representative and their willingness to assist the client.

Subjective perceptions of an official's commitment or their substantive preparation and personal traits thus prevailed over an objective parameter, such as the timeframe of case resolution (17%). Distinctly, the least significant in terms of the image aspect was the opportunity to avail of e-services (8%).

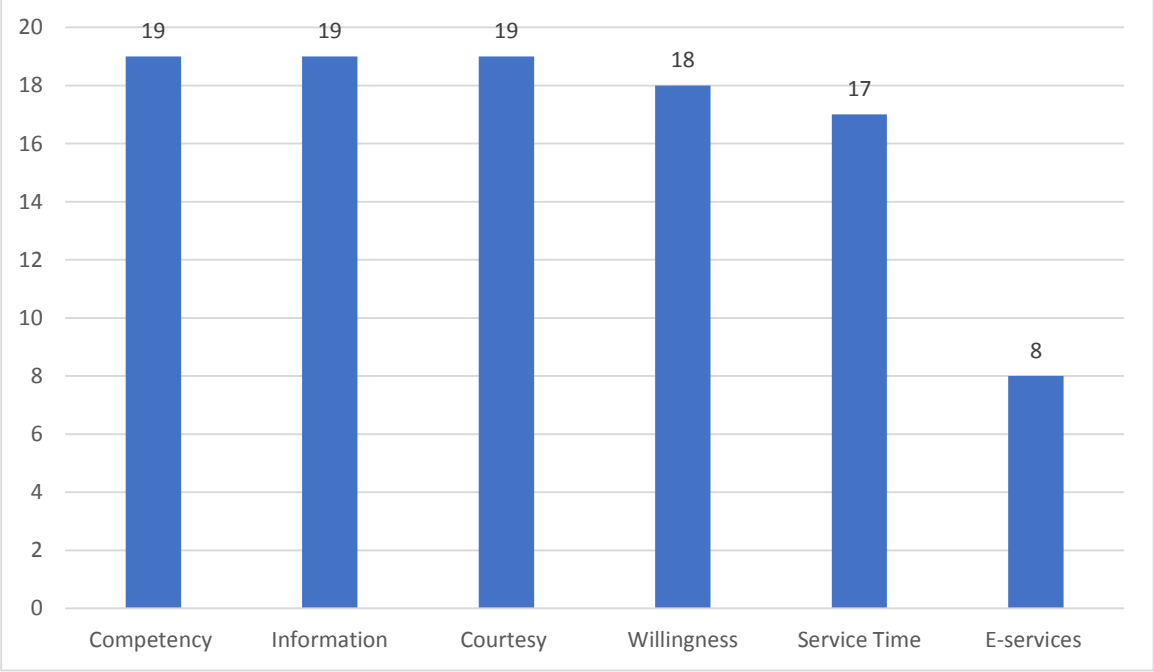

Figure 2. Factors shaping the assessment of service quality for clients. Percentage breakdown.

The vast majority of participants in the research project (99%) reported that they encountered no issues in reaching the appropriate staff member to address their matter of concern during their visit to the office. Evaluating the accessibility of applications and questionnaires used in handling administrative formalities, 91% of respondents expressed approval regarding their placement and ease of use. In this regard, 83% of respondents provided unequivocally positive feedback, while 8% were somewhat positive. A minority of 3% expressed disapproval (with a combined 2% being somewhat negative and 1% being explicitly negative). The remaining respondents did not have a formed opinion on this particular parameter.

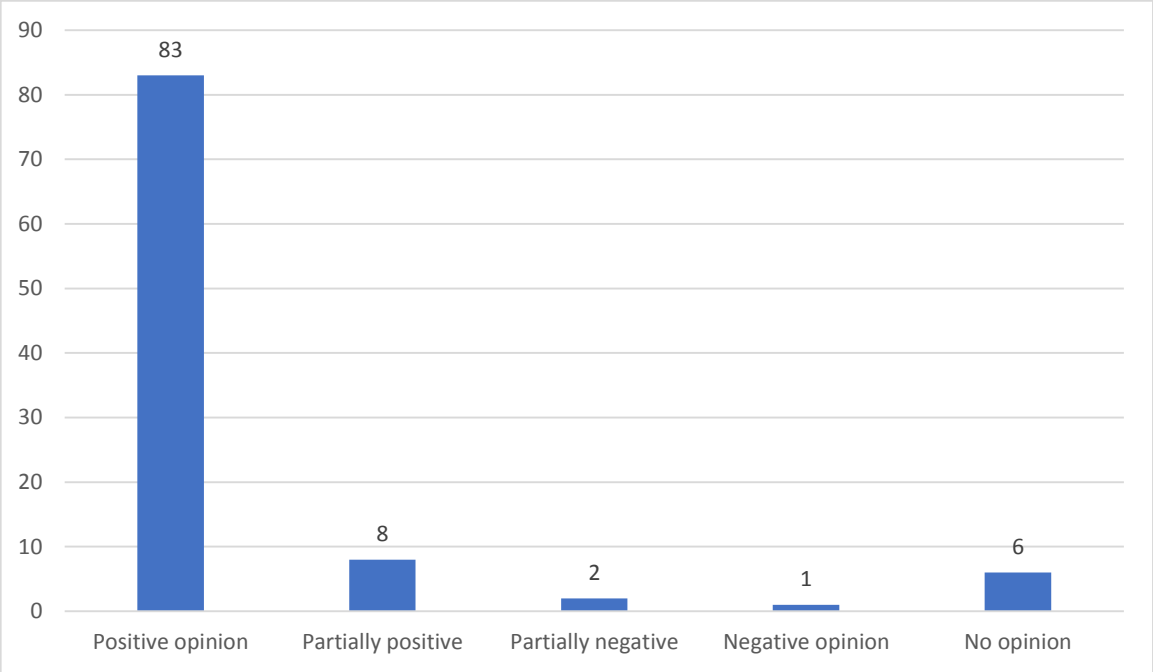

Figure 3. Evaluation of the Availability of Forms and Applications Necessary for Handling Administrative Matters. Percentage Breakdown.

3.2. Changes in the Perception of Service Quality for Clients

In evaluating the transformations in service quality observed since their last visit to the municipal office, one-third of the respondents noticed a positive change. 33% of the participants discerned improvements; however, the second-largest group, comprising 32%, opted for the response "hard to say." Following the undecided respondents, the third-largest group, making up 28%, believed that nothing had changed. This can be interpreted as either maintaining an appropriate or an inappropriate service level. Conversely, a mere 1% of the survey participants identified a deterioration in service since their previous visit. The remaining 6% indicated that they couldn't express an opinion as they were participating in the study during their inaugural visit to the municipal office.

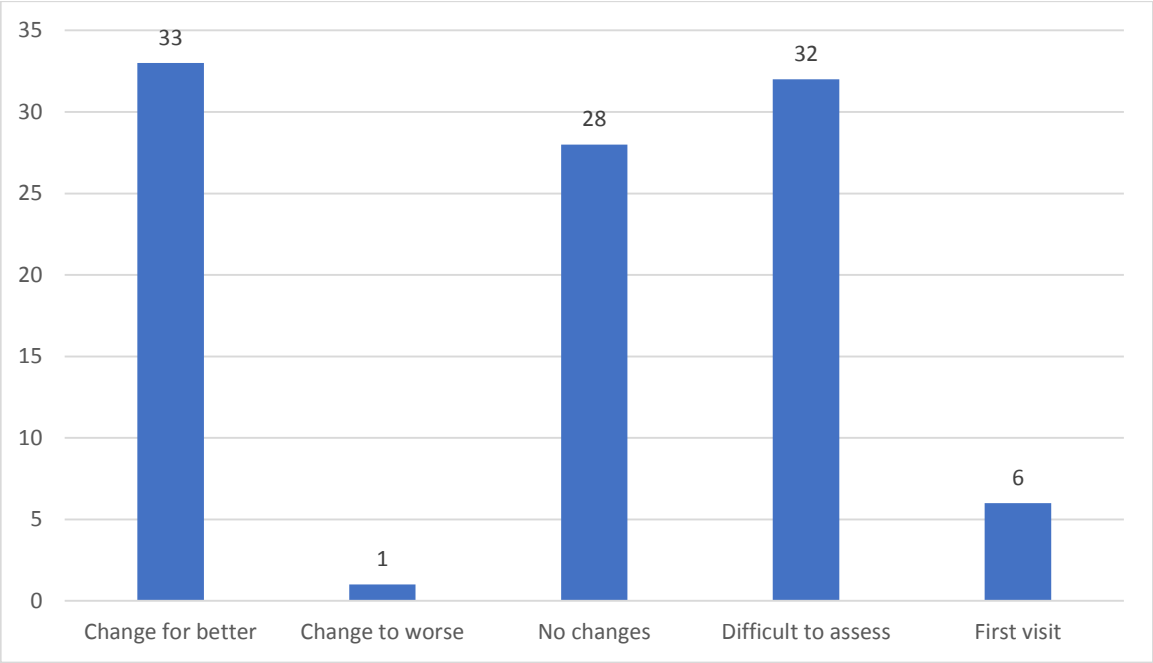

Figure 4. Identification of the trend in the functioning of the Municipal Office in Zabrze. Percentage breakdown.

In addition to the analysis of the responses provided by the surveyed participants based on the options presented by the project authors, the deeply ingrained perceptions of the respondents hold significant importance. An opportunity to reveal these sentiments was provided through comments regarding observed changes between subsequent visits to the municipal office. Naturally, the question pertained to both positive and negative shifts recognized by respondents, specifically those for whom this wasn't their first visit to the Municipal Office in Zabrze. In responding to the open-ended question dedicated to this topic, respondents frequently noted a reduction in waiting times to initiate specific procedures. Positive feedback highlighted the ease of access to the appropriate official. 73 individuals provided comments like: 'shortened wait times for processing', 'elimination or reduction of queues in the customer service area', 'no queues', 'essentially no waiting in line', 'reduced waiting times', 'fewer people in the waiting area', 'less crowded', and 'swift service', among others.

Another observed transformation pertained to expedited service once the customer had been attended to by an official. 66 respondents provided feedback such as: 'faster resolution of matters', 'quicker service', 'good performance by the service hall', 'surprised by the rapidity of service', 'matters resolved instantly', 'immediate service', and 'faster problem recognition', etc.

The study revealed that for respondents, interacting with a competent official was of paramount importance. 27 individuals gave responses like: 'good service level', 'high competence', 'competent service', 'faster service than during the pandemic', 'professional and friendly service', and 'officials are friendlier and better trained'.

In the memories of the residents, the politeness and amiability of the staff also prominently stood out. 19 respondents provided feedback such as: 'the officials in the office are smiling and willingly provide information', 'the staff are cheerful and pleased', 'kindness', 'courteous staff',

'assistance and commitment', 'friendlier service', 'a positive attitude of employees', 'more time dedicated to the customer', 'significant amiability of officials', 'kindness, willingness to help, openness of officials', 'helpful officials', 'a smile on their face', 'better customer approach, good manners', and so forth.

A significant factor influencing the image of the municipal office was the individualized approach to customers and the readiness of officials to support clients in performing necessary actions and providing comprehensive information about the various stages of the process. 31 respondents commented with phrases such as: 'unlike in other neighboring cities, the staff explain everything clearly and are helpful', 'assistance in filling out the application', 'help in completing forms, courteous service', 'after settling my matter, the official explained everything to me in detail', 'much depends on the employee - today the employee is polite, but previously not so', 'now officials willingly explain and assist, but it used to be unpleasant', and the like.

An appropriate organization of customer service also played a crucial role in the overall assessment of the municipal office's functioning. 19 respondents gave feedback like: 'better signage at the counters', 'there's a guard directing the queue', 'the cashier is onsite, no queues', 'more counters for car registration', 'more operational counters', 'more active workstations', 'good organization', 'more employees, stations, it works faster', among others".

Additional conveniences in the scope of service were also recalled, including the 'possibility of prior telephone discussion about handling a matter', 'opportunity to use e-services', and 'ability to handle matters online, which some utilize'.

Generally, for clients expressing approval of the recent changes, the following factors mattered in descending order of importance: 'lack of queues', 'efficient service', 'competence of officials', 'good work organization', 'kindness and helpfulness of staff', and a 'pleasant atmosphere'. Such a perception of the municipal office was encapsulated by one respondent with the term: 'a friendly office'.

Within the group of neutral phenomena, the lifting of pandemic restrictions was noted. 6 respondents offered feedback such as 'no need to wear a mask', 'lack of COVID-related restrictions', 'no need for prior appointment, as during the pandemic', and so forth.

A group of 7 respondents negatively identifying the changes in the municipal office's operation ambiguously pointed out 'it used to be better' or 'it is as bad as before'. Some elaborated further with remarks like 'there are many people' or 'too many papers'. One respondent complained about 'a lack of courtesy', while two others highlighted issues such as 'parking problem' and 'lack of parking spaces'.

4. Summary

The concept of a smart city is anchored in six pillars - from the social, managerial, economic, legal, through technological, to sustainable development (Sujata et al., 2016). Striving to enhance the functionality of local administration is in alignment with the realization of this idea, which focuses on utilizing resources more effectively, that is, in a creative and intelligent manner (Kuzior, Sobotka, 2019, p. 41). However, it is imperative to remember that the transformation of cities towards a Smart City paradigm must consider the competency development of the residents. This implies a focus on the needs and skills of people in using information and communication technologies, rather than solely on the information and communication technologies themselves (Dashkevych, Portnov, 2023).

The results obtained from the research project hold value not only from a cognitive perspective but also in terms of practical application. The assertion that learning is a vital factor in enhancing competitiveness, as well as fostering innovative development (Kuzior et al., 2023, p. 11), undeniably extends to the optimization of organizational management processes. Local government entities should unquestionably monitor the availability of innovative solutions, the implementation of which allows for even more effective satisfaction of the collective needs of the local community. In terms of delivering public services, this could encompass cutting-edge technological solutions based on artificial intelligence and cognitive technologies. These are revolutionizing business operations and can also be applied in designing and implementing sustainable social development (Kwiliński et al., 2019; Kuzior, 2010). Digitalization should also be viewed as an opportunity for automation and simplification of procedures, saving time and money, as well as a supportive tool in managerial decision-making (Kwaśny, 2022, p. 86). An illustration of the ongoing transformations can be seen in the number of public services provided using the ePUAP[4] digital platform in 2020 compared to the pre-pandemic level in 2019. It was observed that there was an average increase of approximately 170%. Notably, larger urban concentrations recorded an even higher growth scale, reaching as much as 228% (Kuzior, Mańka-Szulik, Krawczyk, 2021, p. 261). The presented conclusions further pinpoint another research area where the impact of Smart City solutions on residents' actual participation in the functioning of intelligent cities should be analyzed (Lebrument et al., 2021).

In designing innovative initiatives, alongside the technological perspective, the participatory aspect is particularly vital. Efforts made for the benefit of residents should undergo social consultations at both the planning and organizational stages, as well as during implementation. The evaluative process also plays a significant role. This applies to many realms of local government activity, including the provision of public services and the

[4] Electronic Platform of Public Administration Services (Pol. Elektroniczna Platforma Usług Administracji Publicznej).

associated quality of customer service. Conducting systematic research to draw conclusions and subsequently implementing improvements desired by the local community is an integral component of co-management by recipients in directing the transformations occurring in local administration.

In 2021, a similar survey on the perception of customer service quality was conducted in the same research field. When directly asked to assess this quality, the results obtained were comparable. At that time, 95% of the respondents rated the service as "very good" (compared to 93% in 2023), barely less than 2% chose a distinctly negative rating (1% in 2023), while the rest were "rather satisfied". It should be noted that the reliability of the data for this specific question is challenged by the methodology of the survey conducted by the office staff. They observed that individuals who seemed discontented typically did not want to engage in conversation or refused to dedicate time to respond. The absence of data regarding the specific number of refusals against the number of invitations to participate in the survey means that the level of dissatisfaction cannot be accurately diagnosed (Mańka-Szulik, Krawczyk, 2022). Comparing both studies, it is also essential to highlight that changes were observed in the declared purpose of the visit to the town hall. In 2023, visitors most frequently indicated the Department of Communication (34%), Department of Civic Affairs (about 27%), Tax Department (about 12%), Zabrze Entrepreneurship Development Center (about 5%), and Property Management Department (4.5%). Two years earlier, the order was as follows: Department of Civic Affairs (about 33%), Department of Communication (about 31%), Property Management Department (about 7%), Department of Construction (about 5%), and Department of Real Estate Trading (about 5%). During the 2021 survey, when describing the trends of service quality transformations since their last visit, most respondents did not perceive any difference in the town hall's operation. 34% of the participants noticed no change in work quality. However, during the described 2023 study, this number decreased to 28%. Conversely, in 2023, the most significant number of responses were from those convinced that improvements occurred, at 33%, and in 2021 it was 31%. Meanwhile, in 2021, 29% had no established view regarding the nature of the changes, and two years later, this undecided group reached 32%. In both studies, only 1% believed that the outcome of changes resulted in the deterioration of customer service quality. In 2023, the number of participants who stated that they had no point of reference for comparisons, as they were visiting the office for the first time, increased by 1 percentage point (from 5% in 2021 to 6% in 2023).

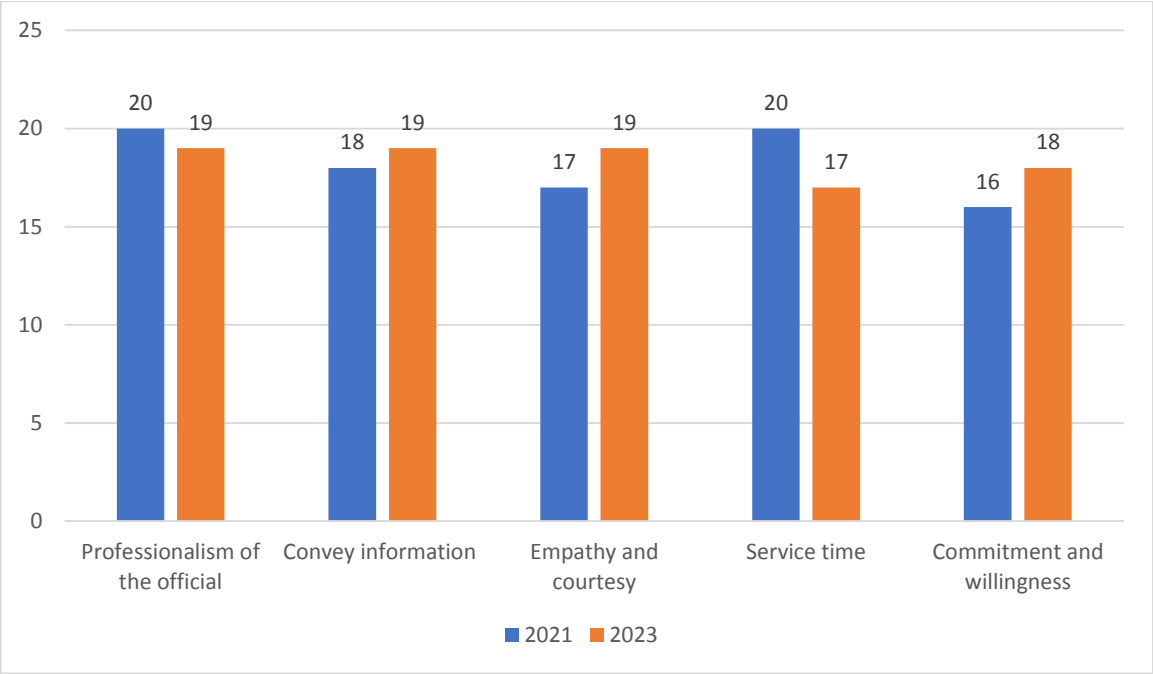

Figure 5. Transformations in the factors determining the assessment of customer service quality as declared by the respondents, based on studies in 2021 and 2023. Percentage representation.

Among the factors most significantly influencing the perception of service quality in 2021, the professionalism of the official was most frequently indicated, accounting for 20% of the responses. The competence of the employee retained its top position in 2023, albeit garnering 19% of the responses. The role of the employee's ability to convey information increased from 18% in 2021 to 19% in 2023. Empathy and courtesy of the employee also received slightly more mentions, rising from 17% in 2021 to 19% in 2023. Similarly, the commitment and willingness to help by the employee increased from 16% in 2021 to 18% in 2023. Interestingly, a slight decrease was observed in the number of respondents for whom the basis for assessing service quality is the time taken to handle administrative matters, dropping from 20% in 2021 to 17% in 2023.

Conducting systematic research on the quality of service for constituents using public services through local government facilitates scholarly reflection on the functioning of the administration and expands knowledge on this subject. In an applied dimension, it provides the opportunity to identify and rectify irregularities, while simultaneously facilitating the execution of routine tasks, oversight of the effectiveness of the process, and the introduction of improvements. Indeed, among the respondents, 33% noticed a positive change since their last visit to the Zabrze town hall.

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THE ROLE OF FOREIGN AND INTERNATIONAL POLICY IN THE ENERGY AND CLIMATE POLICY OF THE EUROPEAN UNION

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Aim: In order to show the role of foreign and international policies in shaping the EU's energy and climate policies, the history of the European Communities has been traced through the prism of individual policies. Combining several of them (energy, climate, international and foreign) in this analysis is the result of viewing them in the context of causal effects.
Methodology/approach: The method of the paper was based on an in-depth analysis of the European Union source documents, published on websites and in documents of the European Commission and the European Parliament. The information gathered was extended through a library search and based on the library resources of several prominent Polish universities, as well as the Oxford Institute for Energy Studies. Moreover, the analysis included academic publications, websites of institutions, companies and organisations monitoring the course and changes of energy and climate policy.
Limitations: The referenced, quoted, analysed documents or packages aim to produce and regulate a common EU energy policy. However, this multitude of documents, directives and regulations does not seem to have helped the Union to demonstrate to the rest of the world that it has a coherent energy policy.
Implications: Energy and climate policy issues are analysed and described based on the historical experience of the European Union and its previous economic and, above all, political structures.
Value: Managing energy security in such a complex and diverse structure as the European Union requires experience and a sense of responsibility for the decisions taken. Responsibility for mistakes is often only political, which is why it is so important that any documents, decisions, directives or regulations are the work of responsible people, so energy policy should be managed like a potential crisis, based on consensus. Energy and climate policy issues are analysed and described based on the historical experience of the European Union and its previous economic and, above all, political structures.

Keywords: Foreign policy, international policy, energy and climate policy, management, European Union, consensus, diplomacy.

1. Introduction

The European Union's foreign and international policy is a set of policies, or rather a process, because there is no clear beginning or end, and it is difficult to identify binding or unquestionable rules and principles, not least because the policy is constantly being reconstructed. The EU can be seen and treated as a process (Bugdol, Szczepańska, 2016) because it operates in a continuous, often reliable, diverse and environmentally sustainable way, fulfilling a basic social need: ontological security in a broad sense (Kretek, 2021, 2016). By safeguarding this need for security, the Union takes into account and protects the geopolitical and geo-economic interests of this extremely heterogeneous structure, which is a collection of 27 states, diverse in every respect, and a myriad of peoples, or representatives of different nationalities, living in the EU Member States, but also in the Union's candidate states.

Politics is an activity associated with the struggle to gain and retain power, while also guiding the development of a particular structure or organisation (Malmon, Opoka, 1998). With regard to foreign policy and the shaping of international relations, it has undoubtedly been a success and even a political gain for the EU to elevate this political structure to the role of an international policy maker. After all, it is from this position that we can consider the EU's participation in meetings of groups of states representing the world's most developed economies, where the directions of multilateral dialogue are defined and political responses to global challenges or threats are formulated, and undoubtedly such is the energy and climate policy (Rola G7, 2020). Thus, any political, economic or social measures prepared in Brussels are transferred from the European level to the global level, increasing the chances of achieving the goal of climate neutrality by 2050. This idea has already become a necessity, as the people directly affected by climate change realise that achieving this goal is absolutely essential for the future and survival of Europe and even life on Earth (Climate Neutrality, 2022).

Thus, in order to demonstrate the role of foreign and international policy in shaping EU energy and climate policy, it is necessary to trace the history of the European Communities through the prism of individual policies. Indeed, the combination of several of them (energy, climate, international or foreign policy) in this analysis is the result of viewing them in the context of causal effects (Popkiewicz, Kardaś, Malinowski, 2019). All the more so because the term 'policy' usually refers to a more or less clearly defined set of ideas about what can be achieved in a particular field or a particular subject of study. And, furthermore, in academic language, the term 'policy' does not only mean adopted and implemented political programmes, but inaction or the maintenance and continuation of the *statu quo* is also policy (Świeboda, 2005).

2. European Coal and Steel Community (ECSC) – the start of EU energy policy

The impetus for the creation of any common policy on the European continent after the Second World War by the former Allies was provided by the aggressive distribution by the United States of America (USA) in war-ravaged Western Europe of primarily steel, so necessary for the reconstruction of the often bombed-out infrastructure, and in this group mainly engineering structures (bridges, viaducts, power stations, railways, roads, etc.). It was at this time, and on the basis of several years of experience, that the initiative of Robert Schuman, the French Foreign Minister in the 1950s, to establish a common market for coal and steel emerged. This idea was to encompass the two main branches of the destroyed economies: coal mining and the development of metallurgy based on hard coal, which at the same time satisfied 90% of the energy needs of the six signatory states of the emerging structure (France, the Federal Republic of Germany, Italy, Belgium, the Netherlands and Luxembourg). The newly-emerging structure was given the name European Coal and Steel Community (ECSC), in which each word – a component of the name - was of crucial importance, both politically and economically, as well as socially. After more than 70 years, it can be said that the Treaty of Paris signed on 18 April 1951, which entered into force on 25 July 1952, marked the beginning of a "common energy policy". The founders set out the overarching goal of this project, which was to be peace in Europe, but the most important action leading to unification in terms of needs was the allocation of resources for **joint research** related to the coal and steel industry, the instrument for which was the creation of the Research Fund for Coal and Steel. It is a fact that the Treaty of Paris lacked an explicit articulation of energy security issues, however, such a symptom was the indirect recognition in modernisation and restructuring matters - of coal and steel - as fundamental energy raw materials. Thus, this supranational trade agreement was intended to ensure the unhindered movement of both coal and steel between the signatories to the agreement.

It is extremely difficult to make any policy in such a diverse structure as was created at the time. The essential criteria for the community established at the time were common interests: the need to rebuild destroyed economies and states, immediate borders, independence from a single steel supplier (the USA) and diversification of supply sources for fossil and, at the same time, energy raw materials.

The determination of those who ruled the various countries of Western Europe at that time united around clearly defined objectives, and these required the establishment of the appropriate structures, forms, organisations or institutions necessary for safeguarding the basic needs and expectations of citizens, which resulted in the corresponding treaties. The first was the Treaty of Paris in 1951, and this document proved to be fundamental, as it laid down the first milestones which the determination of the "founding fathers" (Pioneers of the European Union, 2022) had enabled to be achieved.

3. European Atomic Energy Community (EURATOM/EAEC)

EURATOM, as an institution, was essential to achieving the objectives set at the founding of the ECSC, and may even have added value, since it was created in response to the need for a more stable source of energy than that derived from coal. Thus, as early as 1957, the Treaties of Rome recognised the atom as a source for ensuring Europe's energy independence, and nuclear power thus became an important step towards providing an integrating Europe with multiple sources of both thermal and electrical energy. In addition, the costs of building nuclear power plants were too high for individual states to make such investments alone, hence the possibility and necessity of cooperation in the field of energy diversification. The Treaty envisaged an even greater merger of the economies of the countries recovering from the Second World War, which were already united in the ECSC. The Treaty of Rome, through EURATOM, enabled the signatories not only to lay the foundations for the nuclear industry, but also to develop it, while providing guarantees in the peaceful use of this type of energy (Meadows, 1973). The members of the Community were also bound by a common policy on the supply of energy resources, which provided for the diversification of the EAEC's nuclear material supply routes in order to avoid dependence on a single source or supplier.

Among the key tasks assigned to this Community was to contribute to raising the standard of living in the Member States and developing relations with other countries (both partners in the project and other European countries), by laying down the conditions necessary for the establishment and rapid development of a nuclear industry. EURATOM, as a community, was already imposing specific roles on itself, important both for itself and for the future of the European continent. One of the roles of the assumed and pursued international policy was to ensure wide access to energy resources, consequently leading to the modernisation of technical processes and ensuring, through many other applications, the prosperity of the member nations.

The European Atomic Energy Community (EAEC), playing an extremely important role in the European Union's foreign and international energy and climate policy, has not merged with the EU, retaining a separate legal personality (Doliwa-Klepacki, 2003).

An important aspect of international politics on the European continent was the attitude of the Union of Soviet Socialist Republics, which was against the establishment of EURATOM. Wishing to prevent its creation, on 12 November 1956, the USSR took the initiative to create a coordinating pan-European atomic organisation to foster cooperation among member states for the peaceful use of atomic energy (Doliwa-Klepacki, 2003). However, this initiative was not welcomed by the West, pointing at the same time to the divergence of political interests on both sides of the "Iron Curtain".

4. The foundations of a common energy policy for the European Communities based on a crisis

In the Parliamentary Assembly of the European Economic Community, which has been active since 1952, there was an ongoing discussion about broadening the remit of the constituent states of the community (ECSC) in order to develop a coherent energy policy. In the following years, discussions took place in the changing parliamentary assembly until, in 1964, the Member States signed a protocol on the development of a common energy policy, thus expressing the hope of creating a common energy market. This document also mentioned the need to secure, stabilise and reduce the cost of the supply of energy raw materials, fair competition in the energy market and the creation of a general framework for a common policy in this area of the economy (Apostoł, 1995). On the basis of this document, the Commission (the EC's executive body), set up by the European Communities and operating since 1967, drew up the initial principles and guidelines of this policy, which were adopted two years later by the Council of the European Communities imposing an (Winiarski, Winiarska, 2006) obligation on Member States of the European Economic Community (EEC) to maintain minimum stocks of crude oil and/or petroleum products (Council Directive 68/414, 1968). However, no major undertakings were made in the following years to clarify and implement the above provisions. Only in January 1971 did the Council oblige the states to notify the Commission - each year - of investment concepts for oil, natural gas and electricity as well as plans for the importation of oil and natural gas (Doliwa-Klepacki, 2003).

However, there was still a lack of decisive and concrete action in Western Europe and it was only in 1973, when Egypt and Syria attacked Israel and the USA supported Tel Aviv, that a crisis erupted which highlighted the need for decisive measures. The Arab countries responded to the actions of Europe and the USA with an "oil weapon", as they reduced oil production and imposed an embargo on countries supporting the Israelis, with the result that the price of oil "spiked" by almost 300%. The oil crisis that erupted then, and how it was dealt with, is still a useful lesson in geopolitics (Borejza, 2022**).** As early as December 1973, the EC Council set up an Energy Committee to draft coherent energy policy documents and to verify their implementation in the Member States. A year later, the Commission presented a report to the Council entitled "Community energy policy objectives for 1985" (Directive 68/414, 1968) indicating the need to take decisive steps towards the adoption of a new energy policy strategy for the Communities. The final document obliges Member States to build up and store stocks of liquid fuels in three categories (automotive and aviation petrol, diesel, heating oil) for a period of 90 days. In addition, the following were assumed: a 15% reduction in consumption of the above, an increase in the use of nuclear energy, as well as in the use of energy of falling water [generated by pumped storage power stations], geothermal energy and natural gas, and a reduction in the use of oil as an energy source.

Thus, already at that time, attention was drawn to the problem of Western Europe's dependence on oil imports, setting the maximum level of energy imports at 50% and, if possible, reducing demand even to 40% (in 1973, the level was set at 63%) (Nehrebecki, 2008).

The joint action taken to resolve the energy impasse in which the Community countries found themselves at the time of and as a result of this crisis was similar to that taken in this situation at the OECD International Energy Agency, where there was already an obligation to share oil reserves with other countries. It is therefore possible to point to these measures as the foundations of a common energy policy (realised, however, only after successive energy crises).

5. Single European Act (SEA)

The 1970s and 1980s saw successive enlargements of the European Communities[1], culminating in the entry into force of the SEA, which included a plan for the creation of an Internal Market. During this time, four-year research programmes were implemented between 1976-1979 and between 1980-1983 to study the development of new energy sources and ways to save the produced energy. A further four-year plan allocated almost ECU 3.8 billion (ECU, 2022) for research into increasing the efficiency of energy sources (Doliwa-Klepacki, 2003). Thus, the Communities had already at that time devoted a great deal of attention and resources to the development of a uniform energy policy, and with this experience and the results of research, the SEA was signed in Luxembourg on 17 February 1986 by the countries of the united "12". This document was accompanied by a Declaration, according to which the Community's action in the field of the environment must not interfere with the national policies of the Member States concerning the exploitation of energy resources, which in turn was to have the effect of stopping the predatory exploitation of the remaining energy resources, while at the same time it was emphasised that environmental action must not influence the energy policies of the signatories and jeopardise the energy security of the Member States.

The provisions in the SEA clearly indicated the need for a sustainable energy and climate policy, with mutual respect for the natural resources of the EC Member States. The implementation of a common energy policy was to be assisted by the introduction of new technologies in the energy sector (the THERMIE programme), which resulted in 1991 in the launch of the five-year "SAVE" programme, the aim of which was to reduce energy use per unit of gross national product by 20% within five years. On the other hand, on the basis of the Trans-European Networks (TEN) programme, which also includes the TEN-E or TEN-Energy networks, a number of projects for the construction of oil and gas transmission systems between

[1] 1973 - first enlargement of the European Communities, accession of Denmark, Ireland and Great Britain; 1981 - second enlargement - accession of Greece; third enlargement - accession of Spain and Portugal.

EC countries, and later the EU (Biały, Janusz, Ruszel, Szurlej, 2018), have been implemented since then.

Furthermore, at that time, on the initiative of Dutch Prime Minister Ruud Lubbers, the European Energy Charter (CIRE, 2022) was being drafted, containing principles on which international cooperation in the energy sector should be based, taking into account the common interest in securing energy supply and sustainable economic development (Belohlavek, 2011). The Charter was signed on 17 December 1991 in Hague and the parties were: the European Community, the 37 European members of the Organisation for Economic Co-operation and Development (OECD) and the 12 former Soviet republics [the event took place during the break-up of the USSR, hence the Russian interest in possible cooperation with Western Europe] (Steinhoff, 2022). The aim of the event was:

- to create the right climate for energy access,
- to indicate the possibility [not yet at the time - the necessity] of accumulating reserves of it,
- to facilitate access to the energy market,
- to liberalise energy trade,
- to strengthen security in the use of energy,
- to protect the environment when using energy,
- to develop research and technology in the field of energy production and use; and
- to train staff in the field of energy (Doliwa-Klepacki, 2003).

6. Treaty on European Union (TEU)

Recognising the need to ensure greater energy security for the members of the EC and, from then on, the EU, on the basis of the EU Treaty signed in Maastricht on 7 February 1992, a number of projects were launched in the field of energy in the broad sense. A number of long-term programmes were initiated, among them Alternative Energy (ALTENER), the aim of which was - and still is - to support research into the use of so-called alternative energy sources, i.e. the sun, wind, rivers. The programme promoted and financed innovative research and development of equipment using energy from alternative sources, including the construction of hydroelectric, solar and wind power plants (Zajączkowska, 2011). The programmes that were launched at the time not only helped the members - now the European Union - to pursue a sustainable energy policy, but also pointed to the need to protect the climate. The Altener programme, which continued after 1997 as Altener II, also set specific targets to be achieved by 2005, including: increasing the use of renewable energy sources in EU countries from 4% in 1991 to 8%, reducing carbon dioxide emissions by 180 Mt and increasing the share of

biofuels in the energy mix to 5% (Capstick, McCubbin, 1995). Efforts to diversify energy sources needed to be more decisive, because despite many initiatives, the share of external energy sources in the EC's global consumption was very high, amounting to 49% in 1999, compared to only 18% for the USA in the same year (Capstick, McCubbin, 1995).

After the establishment of the European Union, in 1994 the parties to the European Energy Charter signed a further-reaching document, the European Energy Charter Treaty, which entered into force in 1998, and was ratified by 38 countries, including 13 EU countries. This document regulated the general principles of energy trade, competition, energy transmission as well as technology transfer in this field (Doliwa-Klepacki, 2003).

Despite the initiatives taken, no comprehensive energy policy has been developed in the EU, only a common policy in some of its segments. International policy in this area was still imperfect. Non-committal guidelines and indicators were developed and their implementation was only subject to discussion. Often national interests were above the general good in the EU and this was due, among other things, to France blocking the activities of foreign energy companies in the EU market. Plans to liberalise the energy market were not realised until 2002, when it was decided at the Barcelona European Council to open the energy market to commercial gas and electricity suppliers, following the creation of a common market based on the freedoms of movement of goods, services, persons and capital (including the internal energy market) (Pazdej, 2022).

The fact that the prohibition of quantitative restrictions and measures with similar effects on trade also applies to the energy market is extremely important. Consequently, there has been an elimination of obstacles and quantitative restrictions to ensure the free exchange of energy, the principle of free movement of services has come into effect for energy companies providing services in Community countries, and standardisation has come into effect as a strategic instrument defining industrial and economic integration, which in the field of energy has extended to electricity generation and transmission, the oil sector, gas supply and the development of renewable energy sources (RES) (Pach-Gurgul, 2009).

7. The role, position and place of the Kyoto Protocol in international energy and climate policy

To a large extent, the EU's energy policy was significantly influenced by the 1997 Kyoto conference, which concluded with the signing of a joint protocol in which the signatories agreed that there was a need to reduce greenhouse gas emissions by at least 5% compared to pre-1990 levels. The document came into force 8 years later, and even though it took so many years to take effect, it in a way accelerated change, as it caused significant adjustments in EU policy to pursue a common and, above all, responsible and already sustainable climate policy.

It is regrettable that the Kyoto Protocol did not cover all countries. The United States signed it during the Bill Clinton's tenure, together with an annex; however, the **US Senate refused to deal with its ratification.** On the other hand, **China and India signed the document but were not subject to specific emission limits (**Protokół z Kioto, 2022).

8. Energy security and the Lisbon Treaty

It should be remembered that for the first 40 years of the Communities' existence, energy issues were not covered by any treaty provisions. The first treaty to include a fragmentary element of energy security was the Maastricht Treaty of 1992, which initiated the need to build trans-European energy networks. On the other hand, the Lisbon Treaty of 2007 (ratified in Poland only in December 2009) gave energy the rank of a Community policy, which paved the way for a multifaceted construction of EU energy security.

In the backdrop of the war in Ukraine, which began in February 2022, it should be recalled that the need to take care of the Community's energy security policy was accelerated by the Russo-Ukrainian conflict of early 2006, which had already caused disruptions in gas supplies to the EU, with the consequent strengthening of the role of the energy policy position in the Union even before the Lisbon Treaty. Under that Treaty, energy becomes a sphere of shared competence between the Union and the Member States. The Council, on a proposal from the Commission, may decide – obviously in a spirit of solidarity between Member States – on measures appropriate to the economic situation, in particular in the event of serious difficulties in the supply of certain products, notably in the area of energy, with a view to promoting the interconnection of energy networks in the Member States.

9. Energy packages in the Green Papers – a European strategy for sustainable, competitive and secure energy

Another extremely important step on the road to achieving energy security in the EU, with the consequent impact on achieving the assumed climate neutrality – the Union's goal by 2050 – was to market and prioritise the documents created, such as directives or regulations. This was undoubtedly done by enshrining the Sustainable and Secure Energy Strategy as a "Green Paper" (Zielone Księgi, 2022) and this was done for **Sustainable, Competitive and Secure Energy** in March 2006 (Zielona Księga, 2022). The fact is that although 165 (Wykaz zielonych ksiąg, 2022) Green Papers have already been published, each of them is – in a sense – significant, as it provides the impetus for specific legislative work. In this case, the result or

perhaps the outcome of the work following this (seventy-sixth) Green Paper was the **Third Energy Package**[2] passed by the European Parliament in April 2009. It set out that the EU wanted to reduce greenhouse gas emissions by 20% by 2020, increase the share of RES in the energy balance to 20% and increase energy efficiency by 20% (Sanderski, 2022).

The third package contained "market" directives – directives indicating the definitive organisational and legal unbundling of the forms of activity in vertically integrated energy companies, increased the competence and independence of the market regulator, unbundled the transmission network operators (TSOs) organisationally and legally and created a framework for cooperation between the TSOs of the member states, and strengthened the rights of consumers as regards the quality of energy supply and freedom of choice of supplier (TPA). In addition, it also included "network" directives – directives indicating the need to strengthen the principles of cooperation and coordination between Community TSOs, concretised the framework for coordinated planning and technical development of transmission networks, defined cross-border trade and supply of electricity to retail customers, clarified the harmonisation of rules for setting transmission tariffs and allocating capacity, and network codes ("rules of procedure" for the legal and technical provision of transmission service) (Directive 2009/72/EC).

The sizeable package of directives and regulations that make up the so-called climate and energy package, and which were adopted by the European Parliament in 2009 (Pazdej, 2020), led the European Commission to implement the previous arrangements in the countries of underdeveloped Central and Eastern Europe, where the ten new members implemented the prescribed standards, orders, guidelines, and similar documents through their national parliaments into their legal systems.

In June 2019, the **Fourth Energy Package** was adopted, consisting of one directive (the directive on electricity (2019/944/EU) and three regulations: the regulation on electricity (2019/943/EU), the regulation on emergency preparedness (2019/941/EU) and the Regulation establishing the European Union Agency for the Cooperation of Energy Regulators (ACER) (2019/942/EU). The fourth package was announced 10 years after the third, containing implementing documents to the - sometimes too general and non-committal - provisions of the Lisbon Treaty or other previously adopted documents. This package introduced new rules for the electricity market to meet the needs of renewable energy and to attract investment in renewable energy sources (RES). In addition, incentives for consumers have been provided and a new limit has been introduced below which power plants are eligible to receive subsidies under the capacity mechanism. There is also an obligation on Member States to prepare contingency plans for electricity crises and increased powers for the Agency for the

[2] The third package was preceded by two packages introduced in 1996 and 2003, which dealt with liberalisation in access to electricity and natural gas markets, as well as the right to free choice of energy supplier.

Cooperation of Energy Regulators (ACER) for cross-border regulatory cooperation where there is a risk of national and regional fragmentation (ACER, 2022).

The **Fifth Energy Package**, on the other hand, entitled "Delivering the European Green Deal", which was published on 14 July 2021, indicates the need to align the EU's energy targets with the new European climate goals for 2030 and 2050. The ongoing debate on the energy aspects and implementing acts of the Fifth Package (Internal Energy Market, 2022) has been halted by Russia's aggression against Ukraine (Jakóbik, 2022). The EU needs to review its energy policy as supply chains have broken down and international agreements entered into are not being respected. And most dangerous of all - and difficult to foresee in terms of potential consequences - Europe has entered a period of global energy and, probably, economic and consequently social crisis.

10. On the road to the European Green Deal

Following the 2019 elections to the European Parliament, European Commission Vice-President Franz Timmermans submitted an original draft proposing a **European Green Deal (EGD) for the European Union and its citizens to EU Member States (**Komunikat Komisji do Parlamentu Europejskiego, 2022). It updated the Commission's commitment to addressing climate and environmental issues as the most important task facing the current generation. It is widely known and felt that the Earth's atmosphere is warming up and the climate is changing every year. Out of the eight million species currently living on our planet, one million are threatened with extinction, while forests and oceans are being polluted and devastated. In such dire natural circumstances, the EGD "is a new strategy for growth, aimed at transforming the European Union into a fair and prosperous society with a modern, resource-efficient and competitive economy assuming zero (net) greenhouse gas emissions by 2050" (Komunikat Komisji do Parlamentu Europejskiego, 2022). In order to achieve such an ambitious goal in terms of international policy, the document assumes certain dangers that may affect international relations, for "as long as many international partners do not share the same ambition as the EU, there is a risk of carbon leakage, either because production is transferred from the EU to other countries with lower ambition for emission reduction, or because EU products are replaced by more carbon-intensive imports" (Kuzior, Postrzednik-Lotko, Postrzednik, 2022)' **(**Komunikat Komisji do Parlamentu Europejskiego, 2022). The document provides guidance for countries but also orders that "Member States will need to look more systematically at all policies and regulations," (Komunikat Komisji do Parlamentu Europejskiego, 2022, p. 17) and "Member States will coordinate their support to engage with partners to bridge the funding gap by mobilising private finance" (Komunikat Komisji do Parlamentu Europejskiego, 2022). And for the National Energy and Climate Plans, it is written

that "the Commission will ensure that they are fit for purpose and that Member States are implementing them effectively" **(**Komunikat Komisji do Parlamentu Europejskiego, 2022, p. 28). Therefore, in addition to obligations, both orders and the possibility of triggering sanctions against countries failing to implement the common energy policy and, obviously, climate policy to a certain extent are indicated. The document also states that "the Commission and the Member States must also ensure that policies and legislation are enforced and deliver effectively" (Komunikat Komisji do Parlamentu Europejskiego, 2022, p. 28). Based on previous experience, it was assumed that despite signing the document, there was a risk that some countries would not implement these ambitious plans. Therefore, it is necessary to prepare for potential sanctions for failing to fulfill the obligations set out in the document and adopted for implementation by individual governments.

Not all EU leaders endorsed the goal set out in the EGD assumptions, which is to make the Union a climate-neutral entity of states by 2050, in line with the Paris Agreement that all EU members have signed. Poland, at that stage, was not able to commit to this objective so the European Council returned to this issue, giving the member state time to "carry out in-depth consultations in their country", thus avoiding conflict or even confrontation, which could end in the failure of the whole project with the possible "veto" of one of the states. Consequently, in order to forge a consensus, the EU leaders considered it necessary to ensure energy security and respect the rights of Member States to decide on their own energy mixes and choose the most appropriate technologies (Ruszel, Reginia-Zacharski, 2020). Such a message seems to allow individual governments to secure the interests of lobbyists in their countries (such as the miners' unions in Poland, or the gas lobby in Germany, and the nuclear lobby in France). Ultimately, EU leaders recognised that energy security must be ensured and the right of Member States to decide on their own energy mixes must be respected, giving them the opportunity to choose the most appropriate technologies (Kretek, 2018).

11. Just Transition Fund (JTF)

In a period of negotiations and endless consultations on the EGD, the European Commission is putting forward another ambitious project – the Just Transition Fund (JTF). The importance of the regions in the EU has long been talked about but it seems that in the face of increasingly difficult intergovernmental negotiations, arrangements with regions may offer a better chance of reaching consensus. These are culturally and even politically more tightly knit societal structures which are able to reach agreement with the EC much more quickly than a state, especially when the matter concerns the funding of projects of regional importance. The criteria for the allocation of funds for the implementation of a transformation project in regions affected/required to restructure their industry as a result of a change in energy policy towards

zero-emissions are based on the reduction of industrial emissions in regions with high CO2 intensity. The funds are to be allocated to the restructuring of industrial employment and the reduction of – up to and including the complete abandonment of coal and lignite mining, the abandonment of peat and bituminous shale production, which will probably have an impact on the level of economic development. Member States that have not yet committed [July 2022] to the goal of achieving climate neutrality by 2050 are to receive only 50% of the planned allocation of funds. With regard to the aforementioned regional policy, it should be emphasised that the level of EU co-funding of projects is determined according to the category of the region in which the projects are implemented[3].

It seems that it will be extremely difficult for governments of Member States to devolve more competences to the regions, after all, at government level, some countries restrict the competences of local authorities, using EU funds as a tool to reward or punish compliant local authorities or those that do not toe the party line.

12. *Fit for 55* or ready for 55?

The "Fit for 55" package is another package of legislative proposals, extremely difficult for some EU Member States to accept, aimed at revising and updating EU legislation and introducing new initiatives to bring EU legislation into line with the new climate goals (Jakubowska, Kompała, 2022). It will be possible to achieve the objectives and, above all, reduce CO_2 emissions by 2030 if, among other things, EU energy consumption is reduced by 9% and the share of RES in energy used in buildings is increased by at least 49% by 2030, with the condition that Member States are obliged to spend 100% (so far 50%) of revenues from the sale of emission packages (EU ETS, 2022), on the energy transition.

It seems that 55% emissions compared to 1990 is already not enough and this ambitious target should go further, hence the figure of 60; however, the war in Eastern Europe has stopped discussions around this proposal and even allowed EU members to return to the energy policy previously implemented, including a return to technology based on fossil fuels such as coal or nuclear power as energy resources with an important role to maintain the energy security of the population.

[3] It is set at a maximum of 85% for less developed regions, 70% for transition regions and 50% for more developed regions.

13. European Emissions Trading System (EU ETS)

More than 11,000 power plants and factories in the 27 EU Member States plus Iceland, Liechtenstein and Norway are covered by the scheme and it covers around 41% of the EU's greenhouse gas emissions. The implementation of a policy of trading and marketing these allowances is another challenge facing Brussels officials, determined to negotiate an agreement with politicians, which in turn is hampered by the fact that the funds obtained from the sale of allowances by states are revenue for their budgets, so they can be (and so are used by the governments of some EU countries [including Poland]) in discussions with the public to win their favour, especially in periods before elections. Hence, in many member states, it has been decided to specifically earmark revenues from the ETS (EU ETS, 2022). In Poland, for example, discussions are under way on a comprehensive regulation of the direct redirection of these funds for climate purposes. The sums involved are substantial, as the value of allowances sold by the government, after taking into account the solidarity mechanism, may amount to as much as EUR 46 billion in the years 2021-2030. In practice, this pool is redistributed among 16 countries in need of support, with Poland being the largest beneficiary (Saklawski, Wcisło-Karczewska, 2022). The way in which state-owned companies "earn" on allowances was presented by "Rzeczpospolita" newspaper. The newspaper cited the example of a coal-fired unit at the Jaworzno power station, which was not operating due to a breakdown, and for which the operator had already bought allowances and at a time when they were three times cheaper. State-owned Tauron bought back 691,000 allowances from its subsidiary and then sold them on the market. In its stock market report, the energy giant reported PLN 134.7 million in revenue from this (Tauron, 2022). The cited example shows that trading in allowances can be an object of speculation for governments and even a tool to help legitimise so-called creative accounting. Perhaps even for this reason, Poland's idea of introducing limits on the purchase of allowances, a transaction tax for financial entities or restricting access to the market, or the idea of implementing a lower and upper limit on the price of allowances will reduce the transparency of the system, allowing governments to pursue an unclear financial policy.

14. Taxonomy and sustainable investment

Another extremely difficult to reach consensus between the political and business worlds is the regulation on the establishment of a framework to facilitate sustainable investments. This regulation of the European Parliament and of the Council (EU) (Regulation EU, 2020), which takes into account the Treaty on the Functioning of the European Union and in particular

its Art. 114 (Traktat o funkcjonowaniu Unii Europejskiej, 2022), can be described as a kind of implementing act, necessary to implement investments based on sustainable development principles, and defined in 1987 by a UN commission working under the direction of former Norwegian Prime Minister Gro Harlem Brundtland. The definition in the report *Our common future* states that "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Mytyk, 2021). And the EP and Council regulation referred to as **taxonomy** helps to implement the goal of sustainable development while counteracting *greenwashing* – the unsubstantiated claim by companies that their activities are eco-friendly.

The main task of the taxonomy is to help determine whether and to what extent a particular economic activity qualifies as environmentally sustainable. By using EU resources and funds, the EU taxonomy provides a suggestion to banks and institutions which investments are worth engaging in and which are worth and should be financed. Therefore, the taxonomy does not prohibit but prioritises pro-environmental investments as a result of which entities will be obliged to publish reports informing investors and clients how environmentally sustainable the business is (i.e. how green it is) and what financial investments have been made to achieve, for example, carbon neutrality.

Activities will be classified as environmentally sustainable if they make a significant contribution to (or do no harm to) one or more of the six environmental objectives:

1. climate change mitigation,
2. adaptation to climate change,
3. sustainable use and conservation of water and marine resources,
4. transition to a circular economy,
5. pollution prevention and control,
6. protection and restoration of biodiversity and ecosystems (Regulation (EU) 2020/852).

The above conditions stipulate that if a company's activity does not meet at least one of the above six objectives, it should be considered as not being in line with the EU taxonomy. It is also relevant here that if one of the objectives is not known or cannot be checked, the activity must also be deemed to be incompatible with the taxonomy (Płaniak, 2022). On the other hand, in order for an economic activity to qualify as environmentally sustainable, also in terms of the taxonomy, it must jointly meet the following four conditions:

1. it makes a significant contribution to at least one of the six environmental objectives;
2. it does not cause serious damage to any of the environmental objectives;
3. it is carried out in accordance with minimum safeguards;
4. meets technical eligibility criteria (Maruszkin, 2022).

By way of political negotiations, the legislator has provided for certain simplifications and introduced transitional periods for the introduction of full non-financial reporting in accordance with the Regulation, which will allow those subject to this obligation to prepare for the process and ensure that their non-financial reports meet the requirements of the legislator and are of value to the public (Płaniak, 2022).

15. Conclusions

All referenced, quoted, analysed documents or packages aim to produce and regulate a common EU energy policy. This multitude of documents, directives and regulations does not seem to have helped the Union to demonstrate to the rest of the world that it has a coherent energy policy. The Union is trying to represent a unified energy and climate policy to the outside world, which is undoubtedly a diplomatic success, as it is extremely difficult in such a diverse structure as the EU to reach a consensus securing the interests of all 27 members, especially at a time of war in Ukraine.

Any action taken by the political structures of the European Union, such as the Commission, Parliament or the Council, must be designed in such a way that it can be modified according to the international situation, such as the global crisis caused by the war in Eastern Europe. Therefore, documents must be prepared in such a way that there is always the possibility of working out changes by consensus to previously reached agreements. It seems that in the European Union and its structures, there is a great deal of flexibility in taking key decisions, so we are dealing with measures that have the appearance of crisis prevention, or in fact permanent crisis management. Therefore, it can be said that energy and climate policy in the EU is being implemented based on the highest standards of foreign and international policy conduct.

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THE NEED FOR UNCONDITIONAL VALUES IN SUSTAINABLE DEVELOPMENT

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Purpose: The goal of the paper is to analyze the axiological framework of the concept of sustainable development.
Design/methodology/approach: Critical literature analysis. Analysis of international literature from main databases and Polish literature connecting with researched topic.
Findings: The paper focus on the axiological assumptions of the concept of sustainable development. It describes the problems regarding the definitions of the sustainable development and shows that the main axiological difficulties concerning this discourse focus on the tension between intrinsic and instrumental value distinction. Definitions and understanding of sustainable development are tied with this difference. Next, author shows that the solution to this problem is the introduction of the axiological category of the unconditional values as defined by Polish philosopher Ryszard Wiśniewski. In the summary part, the author exemplifies how application of this axiological category might foster the ethical debate about the sustainable development. The concept of unconditional value not only allows us to elucidate the instrumental facets of SD but also provides an assurance that we will not veer away from the foundational principles established by critical final values.
Social implications: The introduced solution may put forward discussion about implementation policies for Sustainable Development.
Originality/value: The article presents a framework for the analysis of the problems related to the axiological aspects of sustainable development. Presented frameworks may be used in future formulations of sustainable development policies.

Keywords: sustainable development, instrumental, intrinsic and unconditional value.

Category of the paper: Conceptual paper, Literature review.

1. Introduction – the axiological problems regarding sustainable development definitions

The most commonly used definition of the term "sustainable development" (SD) is ascribed to its formulation in the 1987 Brundtland Report by the World Commission on Environment

and Development, titled "Our Common Future". The frequently quoted definition states: "Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, p. 16). It is peculiar how commenters and theorists of SD pick that line forgetting all contest of social justice that is present in the totality of the Report. As Andrzej Papauziński stated: "[...] justice is the foremost norm in the philosophical discourse of the Report on Sustainable Development. It is a cardinal condition of this development and a fundamental assumption underlying many implementation proposals put forth by the Commission. No adequate description of the philosophy of the SD in the Report can abstract from this issue. Considering various concepts and theories of SD, it must be acknowledged that the issue of justice serves as a demarcation line between appropriate attempts to develop the idea of sustainable development and attempts that misuse this term" (Papuziński, 2017). Most of the commenters omit that aspect and use a broad definition, stated in point 27 of the Report. This has allowed for various interpretations of SD from the very moment of its introduction. The definition is so broad and highly general, that had led to numerous attempts to it reformulation and adding to it the elements of direct and practical operability.

This process resulted in a growing number of diverse definitions of SD over the last forty years. It was problematic even before Brundtland's definition. In the eighties, there were already more than 60 different definitions (Pezzey, 1992). Since then the number of definitions was growing rapidly to over 300 at the beginning of the new millennium (Johnston et al. 2007), now this number is probably much higher, by rough approximation we might have reached more than 1000 (Ramsey, 2015). Those definitions may be divided into many different categories, two of which I will introduce in the second chapter. Analysis of those categories will allow us to discuss at length the crucial axiological problem associated with defining SD. The problem may be stated shortly as falling into a trap of thinking of the axiologies of SD in the dyadic distinction of intrinsic and instrumental values. This way of setting the framework for the discussion about axiological aspects of SD results in two main problems: unresolvable discussions between different absolutists from one side and seemingly amoral practical, instrumental and technical stances from the other.

The author will not discuss different values that are crucial elements of the substantive axiology of SD. The article will focus on how frameworks for articulating specific values are outlined and what are the axiological outcomes. How that frameworks might be identified in SD formulations. There is a significant body of literature on the topic of the substantive axiology of SD, considering the general context (Becker, 2011; Dołęga, 2006; Dzwonkowska, 2022; Hull, 2008; Kuzior, 2014) and specific values such as responsibility (Ciążela, 2006; Filek, 2004; Kuzior, 2008; Rosół, 2017). The aim of the article is not to discuss any of these specific values; rather, its goal is to present how more general frameworks for articulating values influence how SD is formulated. The scope of the text might be considered meta-axiological in relation to substantive axiology, analogous to the relation that metaethics has to ethics.

After introducing the axiological tension that might by fine in the different SD definition author will put it in the more general context of the axiological discussion concerning intrinsic and instrumental value, and explain why the introduction of other categories like absolute and unconditioned values might be a suitable solution for some of the important problems outlined earlier.

As a closing remark author will present a proposition of particular definition of unconditional value that is best suited to resolve ongoing problems in axiological debates around SD. I will provide general definition and exhibit few examples of how rephrasing values as unconditional rather than intrinsic might help in putting forward the discussion and implementation of SD process.

2. Intrinsic and instrumental values in SD

From the very beginning of the modern usage, the idea of the sustainable development was a multifaceted concept, encapsulating three core elements, later on called the pillars or dimensions of sustainability: environmental, economic and social (Purvis et al., 2019). Each of these aspects foregrounds distinct aspects, priorities, and refer to certain set of values. They interlink and overlap among distinct approaches that are emphasizing one of the dimensions. Concerning mainstream approach, regarding economical sustainable development we might look at three examples.

Ecological Integrity and Resource Management are rooted in ecological science. This narrative of SD underlines the critical importance of safeguarding natural ecosystems and resources. It aligns with the principles of ecosystem-based management, where biodiversity conservation, habitat restoration, and sustainable resource utilization are vital for long-term ecological resilience (Daily, Ellison, 2002; Kareiva et al., 2007).

Equitable Societal Progress are driven by social sciences, this narrative underscores that sustainable development entails inclusivity and fairness. It echoes findings in social equity studies, advocating for just access to education, healthcare, and livelihood opportunities for marginalized populations (Sen, 1999; Wilkinson, Pickett, 2010).

Economic Resilience and Green Growth are established by findings of economic studies, which stress that sustainable economies can flourish by embracing green practices. It aligns with research demonstrating that investments in renewable energy, circular economies, and sustainable technologies can drive economic growth while reducing environmental impacts (IPCC 2014; Rockström et al., 2009).

These positions are intertwined and interdependent within all three pillars, echoing the holistic perspective fundamental to sustainable development. Nevertheless, we can see that the perspective, and the background science, influence the formulation of the goals and differentiate

how the aims are formulated. We can clearly see that even within a holistic approach one aspect is put in front of the others. This is inevitable in conditions that require making decisions, we need to implement evaluative processes we cannot realize all values, and all competing ends to the same extent.

From the axiological perspective, we can assert that those decisions are exhibited on two levels of evaluation. On the higher level, there are deliberations about which value should be declared the final value of SD. In most cases, this deliberation refers to ascribing intrinsic value to some natural entities like ecosystems, biodiversity, or survivability of human species. On the other level, there is a vigorous debate concerning instrumental values, namely the ways of implementation of the SD, policies, laws, and regulations that are, generally speaking, aimed at achieving SD goals. The discussion of the second phenomenon is more crucial and important because it seems to dominate the debate, and from an axiological perspective, the route that debate went, is far more destructive for the ethical elements of SD than the debate about the final values.

2.1. Reduction of SD to instrumental value

Reduction of the axiological debate concerning SD to mere instrumental dimensions might be considered as an element of a broader tendency of assuming axiological neutrality of different aspects of our intellectual inquiries such as technology (Rosół, 2017) or economics (Kucz, 2019). Proponents of this strain of reasoning tend to assert that the expertise they are providing possesses an intrinsic, nonethical value therefore it does not need to be teleologically or axiologically examined. They believe that it is self-evident what is the goal of technological advancement or the outcome of positive economics.

I will focus on just one crucial exemplification of how the reduction of the debate about values, only to its instrumental element is problematic. The example, I would like to use, is the distinction between positive and normative economics. There are two main concerns with that kind of attitude that I would like to outline. Firstly if we agree, for the sake of argument, that there is the possibility of value-free description of the social phenomena, then those depictions of reality shall not include any kind of recommendations or advice. As William Nassau Senior famously argues, since an economist's analysis is limited to wealth, "it does not authorize him in adding one syllable of advice" (Senior, 1938).

Secondly, if we take a closer look at the works of proponents of that approach they are full of bits of advice that are labeled "expertise" or "sharing economical knowledge". Many examples may be found in the texts by neoclassical (neoliberal) authors, who had been the main proponents of the positive and normative distinction in the second half of the XX century. The example might come from Milton's Friedman response to the criticism he received for his advisory role to the Chilean junta of General Pinochet. He stated that he "[…] do not consider it as evil for an economist to render technical economic advice to the Chilean Government, any more than I would regard it as evil for a physician to give technical

medical advice to the Chilean Government to help end a medical plague" (Friedman, 1976). "I do not regard giving advice on economic policy as immoral if the conditions seem to me to be such that economic improvement would contribute both to the well-being of the ordinary people and to the chance of movement toward a political free society" (Friedman, Friedman, 1998). We see here clearly that Friedman as other Chicago economists do not restrain themselves from giving advice, it is no secret that "Chicago Boys program" was designed to influence the economy in Latin America (Valdez, 1995).

This situation might be considered as an example of "axiological deception" (Kucz, 2019). It is a situation when representants of one of the social sciences claim ethical neutrality of their inquiry and then impose evaluative judgments based on their silent evaluative assumptions. In this particular case, neoliberals from Chicago School implemented their agenda presenting it as merely technical advice in financial and fiscal policy. Implementation of free market reforms is not value-free. It is heavily value-laden. Believe in the free market as a solution to all socioeconomic challenges is a very strong evaluative judgment. It might have been camouflaged as value-free because the free market has not been traditionally recognized as a means for formulating evaluative norms. To answer the question of whether the law or reform in question is good or bad neoliberals ask themselves a question whether the change meant to be implemented creates a greater space for the free market or restrains it. If it is in favor of the free market it is evaluated as good. We can now see that what neoliberals end up doing is creating an evaluative system for socioeconomic reforms based on a free market as a final value and primary norm of validation of social actions. It is not value-free positive economics.

The problem of "the axiological deception" or " the axiological blind spot" is of course not limited to the neoliberals. Every line of reasoning that puts too much emphasis on the instrumental goals and aspects of actions is in danger of falling into the trap of losing sight of broader ethical considerations. Proponents of this perspective tend to explicitly or implicitly imply that the subject matter in consideration is so important that we cannot waste time on philosophical debates. What they do not see is that philosophical ineptitude or in some cases, ignorance will lead them to unintended and unpredicted outcomes. In this case enforcement of strong, evaluative claims.

This process influenced SD because one line of articulating SD definition overemphasis its economic dimension and then tune down the eco-philosophical aspect to one of the facets of economic development. Just to give an example of few wordings of that kind of definition:

“[Sustainable growth] means economic growth that can be supported by physical and social environments in the foreseeable future” (Pirages, 1977).

“Sustainable development involves maximising the net benefits of economic development, subject to maintaining the services and quality of natural resources over time” (Turner, 1988).

“[…] sustainable development is an economic programme along which average well-being of present and future generations, taken together, does not decline over time” (Dasgupta, 2007).

As we can see the stress between ecological and economic perspectives was apparent from the very beginning of the discussion about SD. It is also visible that some authors convey the narrative in which ecological and social sustainability is just an aspect of economic development. This might be considered as an example of a broader problem of economics imperialism (Mäki, 2009; Kucz, 2016). This results in silent implementation of the set of moral values embedded in neoclassical economics as the dominant framework in the debate concerning SD (Johnston et al. 2007).

We can name this particular set of values an anthropocentric-utilitarianism. This approach simply values non-human beings just as instruments of economic interests. This means that nature and ecosystems are valuable only as they serve as a means for ends designed by homo economicus.

But the influence goes further than only theory. "A final flaw in modern environmental laws is their anthropocentric-utilitarian approach to the environment. Most legal definitions emphasize the utility value of the environment. Typically, this includes natural resources and amenity values such as recreation and beauty" (Bosselmann, 2010). The legal landscape just shows us that this way of setting the means and ends is happily welcomed by the decision-makers because they might be measured and compared. Another unintended and unconscious, strong axiological assumption is introduced here. If we can compare all measures of SD then we need to believe that there is a single order of values and of preferences that can provide such measures. I presented here how overreliance on economic rationality focused on goals, results, and measurements leads to, the very strong, unintended axiological claims and declaring the SD as one of the means of economic development.

2.2. Intrinsic values in SD

Discussion concerning the intrinsic value of nature is, probably, the most important debate on environmental ethics. It was a revolutionary move to ascribe intrinsic moral value to entities other than human beings. The first argument was the anthropocentric attribution of value to beings that are capable of experiencing pain. The next move was finding non-anthropocentric modes of valuation of other elements of the environment and ecosystem as a whole. Different proponents of environmental ethics approach the concept of the intrinsic value of nature in nuanced ways.

Proponents of **deep ecology**, like Arne Naess, argue for the intrinsic value of nature. They propose that all living beings have inherent worth, and nature should be respected for its own sake, irrespective of human needs (Naess, 1984). This view often extends to ecosystems and the Earth as a whole.

Ecocentrism emphasizes the importance of the entire ecological system rather than focusing solely on individual organisms. Proponents, such as Aldo Leopold and Holmes Rolston III, argue that ecosystems and biotic communities have intrinsic value. They propose

that these entities should be treated as subjects of ethical consideration (Leopold, 1949; Rolston, 1988).

Biocentrism extends intrinsic value to individual living entities, including animals, plants, and ecosystems. Paul Taylor, a proponent of biocentrism, argues that all life forms have inherent worth (Taylor, 1986).

These are just a few examples of the various ways proponents of environmental ethics discuss nature's value. It's important to note that these perspectives often intersect, and philosophers within each category might have different nuances views in their interpretations. The central premise among these perspectives, however, is the recognition that nature has value beyond its utility to humans and that ethical considerations should extend to the environment.

It is worth mentioning here, that the intrinsic value is not exclusively discussed as opposing the instrumental value. Deep ecologists might also assert that nature has unconditional value, advocating for the preservation of ecosystems even when there's no immediate benefit to humans. From an ecocentric standpoint, nature's value is absolute in the sense that it's universally applicable and not subject to human whims or desires. Taylor suggests that nature's value is unconditional because it doesn't depend on human preferences or benefits. Biocentrism aligns with the idea that nature's value is absolute, transcending cultural, social, and economic contexts. To make progress, we need to engage in a more detailed axiological examination of intrinsic, absolute, and unconditional values.

3. Unconditional, Absolute, and Intrinsic Values

The terms absolute, unconditional, and intrinsic all may be considered as referring to what is often called in value theory the final value. In this regard, the absolute value might be the value that might be described as whole, total, full, or perfect. Unconditional value is a value that is valuable without any regard to conditions that might be imposed on it. Intrinsic value is the value of something "in itself" or "for its own sake". The main problem, in my opinion, is that in Anglo-Saxon axiological tradition arose a very strong tendency to neglect all those nuances and recognize all final values as intrinsic values.

An example of that viewpoint might be a statement by Michael Zimmerman and Ben Bradley in their entry in The Stanford Encyclopedia of Philosophy on "Intrinsic vs. Extrinsic Value" (2019); they open with this sentence: "Intrinsic value has traditionally been thought to lie at the heart of ethics". This statement is not entirely accurate. Many philosophical inquiries, such as questions about how to live a good life, what virtue is, and our obligations to one another, are often considered central to ethics. What I mean here is that even when the topic of final value was an element of philosophical inquiry, its intrinsic aspect was rarely the primary

focus. In Western ethical tradition, dating back to ancient Greece, questions related to the good life and moral virtues have often taken precedence. This perspective undeniably began to dominate with the publication of Moore's *Principia Ethica*.

Undoubtedly the axiological discourse has changed drastically after Moor famously opposed instrumental value with intrinsic value. From that point, the term intrinsic has dominated the axiological debate about final value in the English-speaking world. The usage of the term intrinsic imposed the tone of axiological debates. The main focus moved to ontological and epistemological questions. There is a great body of literature concerning questions like: What Is Intrinsic Value? Is There Such a Thing As Intrinsic Value At All? What Sort of Thing Can Have Intrinsic Value? How Is Intrinsic Value to Be Computed? Many of these works are interesting, valuable, and enlightening but what I consider a problem is the fact that discourse about intrinsic value imperialistically colonized English discourse about final values.

The common reference to the Kantian concept of goodwill and human dignity might be a good example of the problematic overuse of the term intrinsic (Rønnow-Rasmussen, Zimmerman, 2006). The description of those Kantian notions as an example of intrinsic value is simplifying and clearly an inaccurate depiction of his ethical thought. The conclusions drawn from the fact that Kant uses the phrase "end in itself" which is also commonly used by intrinsic value theorists is not a sufficient argument. In most instances, Kant uses the terms: unqualified, unconditional, and absolute value. Those expressions are not random or irrelevant. Kant is known for his precision and thoughtful use of language. We should respect that, and create a space to appreciate nuanced meanings that emerge from his narration. If we conflate those differentiated words into one perspective of intrinsic value we deprive ourselves of opportunities of reach and diverse axiological debate about final values (Kant, 2012).

I agree with many critics of that situation. I would like to focus on the distinction formulated by Christine Korsgaard (1983). She correctly points out that, ways things have value might be labeled intrinsic and extrinsic, and ways we value things might be considered as an end (final values) and as an instrument (instrumental values). These are two distinct modes of stating our relation to values and mixing those levels is simply a confusion, that leads to oversimplification in the discussion of the final values. "The fact that philosophers nowadays often oppose intrinsic to instrumental value and equate intrinsic value with the value of ends may just be taken to be sloppiness, of course. But it may also mean that these philosophers are working with some theory of the sort I have described – a theory of the equivalence of the two distinctions. As the Kantian option shows, such a theory is a substantive philosophical position and restricts the possibilities open to us in serious ways. It should not, in any case, be taken for granted". (Korsgaard, 1983). This is just one of many examples (Rønnow-Rasmussen, Zimmerman, 2006) of how inflation of the term intrinsic reduces the possibility of fruitful axiological inquiry, exchange, and discussion.

This problem was also visible in the axiological debate concerning SD. One of the examples might be Tom Regan's article "Does Environmental Ethics Rest On A Mistake". In this article, his main difficulty is that none of the known theories of intrinsic value (mental-state, state of affairs, end-in-itself, hierarchical end-in-themselves theories) are able to ascribe intrinsic value to the subjects of environmental ethics. He concludes that: "If I am right there is no theory of intrinsic value that, in a parsimonious fashion, can possibly meet the demands this conception of an environmental ethic imposes on it. Thus, if I am right it would be the better part of wisdom to abandon this way of thinking about and doing environmental ethical theory" (Regan, 1992). Other authors also begin to doubt in adequacy of the term intrinsic value in SD discussions. Batavia and Nelson wrote: "But at this juncture it no longer suffices to say "nature has intrinsic value", or "we should protect nature for nature's sake", Instead, we suggest conservationists need to turn this generalized sentiment into a clearer statement about what is good, what is worth protecting, and what this means about how humans ought to interact with the world around them" (Batavia, Nelson, 2017). In the next chapter, I will describe an interesting proposition of such supplementation, derived from Polish philosophy.

4. Absolut, Unconditional and Instrumental Values by Ryszard Wiśniewski

There are many descriptions concerning different meanings ascribed to the final values among axiological traditions. I believe that reaching out to the traditions and richness of expressions that different languages provide can only put forward axiological inquiry. Here I would like to give an example taken from Polish philosophy, that as I believe, will be an interesting addition to the deliberation on the final values. In the article "Axiological Nonsense in Interpersonal Communication" Ryszard Wiśniewski (2009), provides a structure of his distinction between conditional, unconditional, and absolute values[i].

In the presented viewpoint, conditional values are a complex and multilayered space that encompasses means, conditions, symbols, and reservoirs of values. While they may initially appear to be final ends, upon closer examination, they are revealed to be exclusively means and conditions for the realization of other values.

On the other hand, unconditional values are intrinsically valuable in themselves; their worth surpasses their instrumental value. They hold value beyond their utility and can be used instrumentally without diminishing their inherent worth. This stems from the fact that they are not only useful and beneficial for certain purposes but also possess an intrinsic goodness that remains unaffected by their use.

In this description, Wiśniewski refers to his concept of Kantian unconditional value, exemplified in the humanity formula of the Categorical Imperative. He later draws from Scheler's axiology and asserts that if we follow this line of reasoning, we can conclude that if

values are subject to grading, there exists the highest grade, which represents an absolute value. The distinguishing characteristic of absolute values is that, if they were to be used instrumentally, they would forfeit their axiological status (Wiśniewski, 2009).

We have briefly outlined Wiśniewski's axiological proposition, which categorizes values into absolute, unconditional, and conditional categories. Now, let's explore how this proposition relates to intrinsic value. It is widely agreed that, by definition, all absolute values are intrinsic values. However, it's important to note that while all absolute values possess intrinsic value, not all intrinsic values are necessarily absolute.

For instance, within anthropocentric environmental ethics, the life of an antelope may be ascribed intrinsic value, but it's typically not regarded as absolute. This distinction hinges on our acknowledgment of varying degrees of intrinsic value. We might posit that the antelope's life holds value purely for its existence. However, in an anthropocentric ethical framework, it may be accepted that, if compelled to make a choice, harming the antelope is a lesser moral transgression than harming a human. In contrast, biocentrists would likely contest this perspective.

The central challenge in contemporary environmental ethics revolves around determining which entities should be endowed with absolute moral value, and, as a consequence, which should never be instrumentalized in any circumstance. Regrettably, the discussion regarding intrinsic value sometimes veers away from this critical issue in need of resolution. Bestowing such value is indeed a complex endeavor, and moral theories grounded in such assumptions carry significant ethical weight. Ultimately, it's worth noting that many individuals admire moral exemplars who regard themselves as ends in pursuit of a 'greater good.

If we examine conditional values as defined earlier, it becomes evident that they are, by nature, extrinsic values. However, Wiśniewski astutely points out that conditional values can sometimes masquerade as final values or semi-final values. This observation is exceptionally crucial.

Focusing solely on the intrinsic-extrinsic distinction might cause us to overlook profoundly significant processes. If we allow ourselves to lose our axiological focus and permit hollow and pompous ethical neutrality to permeate academia, we risk falling into the trap of what I've termed 'the axiological deception' described earlier. There should be no axiological vacuum. If we disengage from the debate surrounding moral principles, values, which serve as the telos of our actions, will not cease to exist. Instead, we'll find ourselves guided toward potential disaster by other misguided authorities, much like the blind leading the blind in Peter Bruegel the Elder's famous painting. Once more, it's worth noting that an excessive preoccupation with intrinsic values alone can divert our attention from vital observations and reflections that can be gleaned from considering conditional values.

Unconditional values possess intrinsic value, yet they can also be employed as ends, which means they might be valued extrinsically. This concept aligns closely with the famous Kantian humanity formula of the Categorical Imperative, which asserts that we should treat humanity

'whether in your own person or in the person of any other, always at the same time as an end, never merely as a means' (Kant, 2012). Wiśniewski's notion of unconditional value closely resembles this statement, albeit with some nuanced differences.

We have the capacity to utilize unconditional values instrumentally, and in most cases, doing so does not diminish their axiological significance. Additionally, we might use them without always keeping their intrinsic value at the forefront of our minds. Nevertheless, it is imperative that we refrain from misusing them. This means that we cannot assign absolute value solely to their instrumental utility, even though they may possess such utility.

Engaging in discussions about unconditional values offers a valuable platform for meaningful debate without delving into heated arguments about absolute values. While we may differ in our perspectives on the realm of absolute values, finding a reasonable consensus on the realm of unconditional values is often attainable. Defining our interactions with nature and natural resources in terms of unconditional values can pave the way for agreements on the responsible usage of these resources. Unconditionality provides the necessary space to deliberate on essential measures and quotas vital for the economic aspects of sustainable development (SD). Simultaneously, it safeguards our ethical focus on intrinsic values that hold a crucial place in the discourse. In essence, focusing on unconditional values creates an avenue for constructive dialogue and pragmatic solutions within the framework of SD, allowing us to navigate the complex interplay of ethics and economics

5. Conclusion

In this text, I have elucidated how current definitions of sustainable development are susceptible to change due to two fundamental axiological issues. In many approaches, various facets of sustainable development are treated as means to an end, functioning as instrumental values. This predicament of instrumentalization in the concept of SD often stems from a misunderstanding of its core principles, leading to the misdirection of political and social actions down alternative paths than originally intended. When we sidestep discussions about fundamental aspects like the ultimate value within the context of SD, those instrumental values can inadvertently assume the role of final values. This transition can significantly alter the essence and trajectory of sustainable development efforts, emphasizing the critical importance of addressing these axiological concerns.

The first concern revolves around the pervasive influence of economic narratives, which tend to establish anthropocentric-utilitarianism as the dominant set of values. The issue at hand is that when we cease to engage in discussions about the values and objectives of our actions, these values and evaluative aspects do not vanish; they persist in the background. Consequently, proponents of the economic rationality approach employ what can be termed 'the axiological

deception' in the debate. They subtly introduce a set of values that underpins the prevailing theory or narrative, effectively framing it as neutral. In this scenario, the axiology of the free market, as proposed by neoclassical economics, often takes center stage. As a consequence, we inadvertently overlook a crucial dimension—the sustainability of the outcomes achieved—when we focus solely on economic models built upon idealized assumptions of perfect free markets with all ceteris paribus conditions intact.

The second issue pertains to debates about the ultimate value of SD, which can become entangled in the excessive use of the concept of intrinsic value. Some proponents of absolutist models seek to enhance the current situation by addressing the root causes of the crisis, thereby contributing to the realization of absolute values. These absolute values may include human life, the continued existence of the human species, or the well-being of the biosphere. The challenge arises from debates that tend to fixate on intrinsic value itself, rather than clearly articulating the final value and advocating for distinct axiological perspectives. Additionally, the absolutization of these values can sometimes lead to prematurely closing discussions rather than fostering open and constructive dialogue.

By introducing the concept of unconditional values—values that possess intrinsic worth while retaining their capacity for instrumental use without diminishing their axiological significance. We should create a space for substantive discussions concerning the ultimate values of SD. While eco-ethicists may diverge on the realm of absolute values, the possibility of forging consensus on the level of unconditional values remains attainable. The concept of unconditional value not only allows us to elucidate the instrumental facets of SD but also provides an assurance that we will not veer away from the foundational principles established by critical final values. What may appear as a simple linguistic addition actually opens up an expansive axiological arena for deliberation, effectively addressing two of the most critical axiological limitations within the current SD discourse. Consequently, the cultivation of a durable and sustainable culture of moderation necessitates the embracement of an ongoing and fruitful debate regarding unconditional values in SD

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Footnotes

[i] A brief linguistic commentary is warranted here to illustrate the richness and nuance that discussions on final values can achieve when we open ourselves to a broader array of terms beyond just 'intrinsic value.' In the original text, the author employs Polish terms such as 'względne,' 'bezwzględne,' and 'absolutne.' The last one, 'absolutne,' poses no particular difficulty as its translation to English is straightforward—it is simply 'absolute'.
However, the term 'względne,' especially within an axiological context, is often translated as 'relative' in English, which captures part of its meaning but may not fully convey the depth of its connotations. This term implies 'seeing, through introspection, a reason for value to depend on something other than the value itself.' It is here that the intricacies of translation become apparent, as there appears to be no direct English equivalent that encompasses the essence of 'względne'.
On the other hand, the accurate translation, based on usage tradition, of the Polish term 'bezwględne' would typically be 'intrinsic.' In Polish philosophical literature, it is frequently employed as the opposite of 'instrumental.' This is where the final conundrum arises: 'bezwgledny,' when literally translated, becomes 'unconditional.' Thus, it appears that there is no single Polish word that adequately encapsulates the full spectrum of meanings associated with 'intrinsic' in the context of axiological debate. There seems to be a gap in the Polish language when it comes to a term that encompasses both the reference to an object's internal properties and its fundamental nature—two crucial aspects of 'intrinsic.

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RISK MANAGEMENT STRATEGY IN BUSINESS ORGANISATIONS UNDER CONDITIONS OF MARTIAL LAW

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Purpose: the paper investigates the current scientific problem, that is the risk management strategy in business organisations, in particular, factors caused its types and introduction mechanism, implementation features and *priority areas* under the conditions of martial law as the example of Ukrainian business structures, which conduct their production activity under critical dangerous conditions connected with permanent rockets attacks on social and production infrastructure more than a year and a half.
Design/methodology/approach: The paper uses theoretical *methods*: analysis and synthesis, induction and deduction, abstraction and concretization, mental modelling, systematization and generalization, as well as empirical: observation, description, comparative analysis and social-economic statistics.
Findings: The social reconstruction of notions "risk", "risk management" is made, and determined content, nature, functions, typological risk matrix, types of risk management in business organisations. The essential parameters and key factors of risk management strategy are justified, its subjects and objects are separated; the structure, mechanism and models of institutional and management actions of controlling subjects in the risk management system in business organisations are clarified. The attention is focused on strategic positions, methods, factors and ordinary events of *risk management* in business enterprises working under the conditions of martial law. The structure of *information-logical model* of strategic risk management is justified, as well as there are identified priority areas in Ukrainian business structures working under the conditions of full-scale aggression of Russian Federation against Ukraine.
Research limitations/implications: Promising areas of further scientific research is extended social efficiency diagnostics in introduction of information-logical model of risk management in business organisations under the conditions of Russian-Ukrainian war.
Practical implications: A research results may be used by directors or managers of various business structures, central executive authorities, regional or local authorities, as well as

scientific institutions and social services for optimization of management in critical dangerous situations, in particular, under the conditions of crisis or military conflicts.
Social implications: Results of scientific research are significant for social and economic meaning in context of use strategies and models of risk management in business organisations under the conditions of russian aggression in Ukraine.
Originality/value: Originality of this scientific research is a justification of information-logical model of risk management strategy in business organisations under the conditions of martial law, and identification its main priorities implementation by Ukrainian business structures during the full-scale aggression of Russian Federation in Ukraine.

Keywords: risk; risk management; risk management strategy; marital law; Russian-Ukrainian war; strategic models of risk management under the conditions of martial law.

Category of the paper: Research paper.

1. Introduction

Under difficult conditions of martial law caused by a full-scale military aggression of Russian Federation against Ukraine, each strategic managerial decision of a director of any business organisation (enterprise, facility or institution) is connected with a large scale of uncertainty, both external and internal environment. Wherefore, the problem of efficiency risk management strategy formation of all becomes urgent, without exception, Ukrainian business structures oriented to predication and prevention of risks related to regular rocket and artillery attacks to Ukrainian territories, in particular, social and industrial infrastructure. So, as of June 2023, the total amount of direct documented damages caused to infrastructure of Ukraine due to the full-scale invasion of Russia, is estimated as 150,5 billion US Dollars (according to replacement cost). The amount of damages in production infrastructure (transport, railroad infrastructure, road business, aviation industry and port industry) is 36,6 billion US Dollars. Business assets losses are estimated by the experts as 11,4 billion US Dollars. From the beginning of war, therefore from 24 March 2022, there are damages or destroyed at least 426 large and medium private enterprises and public companies, however, the number of destroyed enterprises may be rather more, therefore there is no information about objects located on temporarily occupied territories (Zagalna suma zbitkiw, 2023). It should be noted that during a year and a half of the military aggression, a large part of Ukrainian business entrepreneurs, regardless of daily dangerous of enemy attacks and bombing, were able to save, partially or in full, their business through evacuation to more secure regions, or through transfer it on war footing. But, an urgent need in development of business strategy oriented to stabilization of their production and economic activities in the long term under the conditions of martial law remains absolutely inquired. Then, the strategy of risk management in business organisations in this context is almost the only factor not only its competitive activity, but and

an important mean counteracting the unfavourable development of circumstances under the conditions of a long martial law.

It should be noted that the problem of risk management strategy formation in business organisations has begun actively researched by foreign scientists in the second part of XX century, and the inspire was the work of Harry Markowitz "Portfolio Selection", published in 1952 in the "Journal of Finance" (Markowitz, 1952). Basically, it became the key work in the area of investment portfolios optimization and risk management. The great advance in the notion of risks management in modern organisation was made by the leading specialist in management Peter Drucker, known as the father of modern management. His work "The Practice of Management" (1954) (Drucker, 1954). contains the original concepts related to efficient risks management in business. In 1996, there was published book "Risk Management and Derivatives" by David Garnish and Peter Plant covered various aspects of financial risks management, in particular, course of exchange risks and financial instruments (Chance, Plant, 1996).

Afterwards, foreign researchers studied the notions of risk concept, components and various stages of formation of the risk management strategy in organisations in works of I. Ansoffa, T. Barton, V. Bykov, V. Viatkin, V. Hamza, F. Maievskyi, K. Redkhed, K. Sio, A. Thomson, P. Waker, N. Khokhlov, Shenkir, and others. The problems of financial risk management were actively researched also by Polish scientists such as: M. Musial, E. Khlivka, A. Ziolek, L. Sokal. and others. The Ukrainian scientists study in full these problems, including scientific works of T. Andriieva, I. Verbytska, T. Holovach, V. Hranaturova, S. Klymenko, V. Kravchenko, Ya. Kryvych, A. Starostina, O. Taranukha, I. Fedulova, and others. Conceptual foundations of riscology in the context of solving tasks of social and economic or business activity of industrial organisations are analysed in the researches of V. Vitlinskyi and H. Velykoivanenko, but an issue on financial risks management is researched in works of R. Pikus, V. Kravchenko, and other scientists. But regardless of a large number of available researches in risk management formation and integration of it in the industrial enterprise activity, the issues of strategic risk situations management, as well as formation of risk management strategies in social organizations, industrial enterprises under the conditions of martial law implementation are left without attention of scientists. Therefore, the full-scale russian aggression lasts in Ukraine more than a year and a half, Ukrainian business structures forced to go through crisis and unpredicted conditions of regular bombarding and attacks, arising at moment and tactic experience in use the specific aspects of risk management, without having adequately adapted strategy. Because, the issue on identification the *risks management strategy* and analysis of its factors in the course of martial law is absolutely urgent and important for its stable and efficient activity. Thus, *the goal of this paper* is the identification of content and key functions of risk management strategy in social organizations, industrial enterprises under the conditions of martial law, as well as formulation of methodological approaches regarding this strategy formation in Ukrainian enterprises. The stated above goal provides for implementation the

following *tasks:* update a content, key stages and functions of risk management strategy; identification key models and methods to formalize strategic policy of subjects in risk management; study of methodological approaches in formation of risk management strategy in Ukrainian business organisations; detection the priorities in implementation of risk management strategy in Ukrainian industrial business structures under the conditions of martial law.

2. Methods

In the course of preparing and writing the scientific work, there was used a totality both general scientific methods of research (in particular, methods of analysis and synthesis, induction and deduction, abstraction and concretization, modelling, systematization and generalization), and special scientific methods to resolve research tasks, in particular, system, economic, demographic, sociological and statistical approaches, as well as analysis methods of documented sources, sociological diagnostics, social and cultural or axiological-normative analysis, and so on. Among empire research methods, there were also used in work the methods of observation, description, comparative analysis or social and economic statistics.

It should be noted that the analysis of scientific literature assisted the identification of meaningful signs of risk category, structural parameters of risk management strategy and experience of Ukrainian business organisations in the context of formation and implementation of tactical and strategic factors management in business enterprises under the conditions of war. Study of statistical informative and scientific sources permitted to systematize and generalize the structure and functions of risk management strategy in business organisations, and identify the specificity of its implementation under the conditions of Russian-Ukrainian war. By using the sociological approach that is author’s diagnostic observations of big industrial business organisations, there were identified the social and economic problems became apparent during military actions, and forced its management to search new methods of risks management with the purpose of going through difficult and non-standard conditions of martial law. A system approach assisted to search and allotment of a set of managerial decisions and approaches for improvement the risk management strategies in industrial enterprises under the conditions of martial law.

3. Results

It is quite difficult to suggest the receiving of a specific result without taking into consideration the possible deviation of it. Therefore, *a risk* should be interpreted no only as impact of uncertainty factors for achievement a specific goal, but as receiving specific results (or goals) in the course of which the management of organisation should, in advance, identify the possible deviation of them. That is, it becomes clear that *a risk* is a situational feature of social subjects activity consisted not only of its results uncertainty, but in possibility of unfavourable consequences. Therefore, *a risk* is always a probability of arising specific losses or reduction of incomes of any organisation in comparison with expected version. Study *a risk* on the merits, according to the analysis, is possible both statistical, and dynamic meaning. In statistic meaning, *the* risk is the way of its expression differentiated depending on its areas of order. Pursuant thereto, the *risk* divides into various types: political, economic, social, ecological, and so on. In dynamic meaning, *the* risk is the difference of its level allocation in proportion to expected losses due to arising of risk situation. So, the minimum level of unfavourable consequences is inherent to *acceptable risk*, medium – *to critical risk*, and the highest level – *to catastrophe risk* (Encikłopedicznij słownik, 2010, p. 621).

Therefore, *a risk* exists always in various forms, then and while, where and when a specific event or situation has not only practical importance, but affects the interests at least one subject of a specific social activity. Further, *a risk* does not exist apart of ownership on production means of material and spiritual welfare which require the determination of responsible persons for consequences of risk decisions. Strengthening of *risk* is a reverse of freedom in any business, therefore, a certain payment for it. Concerning *a risk* in management of enterprise, therefore, first of all, it means uncertainty connected with a real possibility of arising, while the controlling subjects implement theirs functions, or resolving by them unfavourable production situations and consequences expressed in incompleteness or inaccuracy of available information, as well as related losses and results.

On this basis, *a strategic risk*, to our point, is impossibility of senior managers of organisation to take into account competitors' behaviour in development of own strategy. But *a strategy* in any organisation, regarding *a risk,* is based on the strategy of its activity. And the more aggressive the strategy of a certain enterprise is, the higher target is, and higher risk will be. On aggressive strategy of organisation, the boundary of possible losses, as usual, the capital of enterprise, and on conservative strategy – the income of the last. In general, *a risk* in organisation company management is considered at least in four capacities: *first,* as situational nature of management activity consists of uncertainty the results, and possible negative consequences at failure; *secondly,* as a certain event or line of related accidental events resulting to losses and damages in the organisation; *thirdly,* as possibility of positive or negative deviations of organisation activity values of expected mid values; *fourthly,*

as probability of achievement positive or negative project result depending on nature of external and internal factors impact caused the uncertainty level of management activity. *Risk* in business organisation management, according to the analysis, is inherent proper features, such as: social and economic nature or objectivity of presentation; probability of implementation and uncertainty of consequences; negative consequences and graduation of measurability; instability and dynamism of consequences changing; assessment of subjectivity, difference level of completeness and correctness of information base (Menedżment: poniattnewo-terminołogicznij słownik, 2007, p. 502).

The analysis also shows that *a risk* in management of business organisation is inherent a functional nature allows to disclose its sense in a more regular manner. For example, *innovative function* of risk stimulates a search of non-standard approaches to resolve risk situations, which the management of organisation faces; *analytical function* of risk causes the necessity to do scientific intelligences in identification alternative choices at making decisions in reduction of their level impact to organisation activity; *regulative function of risk* has conflicting nature and consists of *two forms:* f) constructive provided for reliever of uncertainty through introduction new ways, which break common stereotypes; b) destructive, which does not take into account the operations of objective common factors and available information about development dynamics of production processes and thing; *a protective function* of risk becomes apparent in ensuring a social and economic stability of the organisation, which makes possible to its management to make a justified risk in the course of implementation of goals of business enterprise activity.

The theory of *risk management* knows various types of risks, in particular, such as: production, commercial, financial, credit, business, investment, insurance and so on, which do not take into account a functional activity of modern business organisations (enterprises, institutions or facilities) working under the conditions of market economy and martial law. Therefore, there is offered a *typological matrix* of available risks based on functional areas of social and economic activity of business organisations of various types of activity and forms of ownership under the conditions of market economy and martial law, presented on the scheme in Fig. 1 (Tulenkov, Czepak, Yaremchuk, 2023, pp. 369-370).

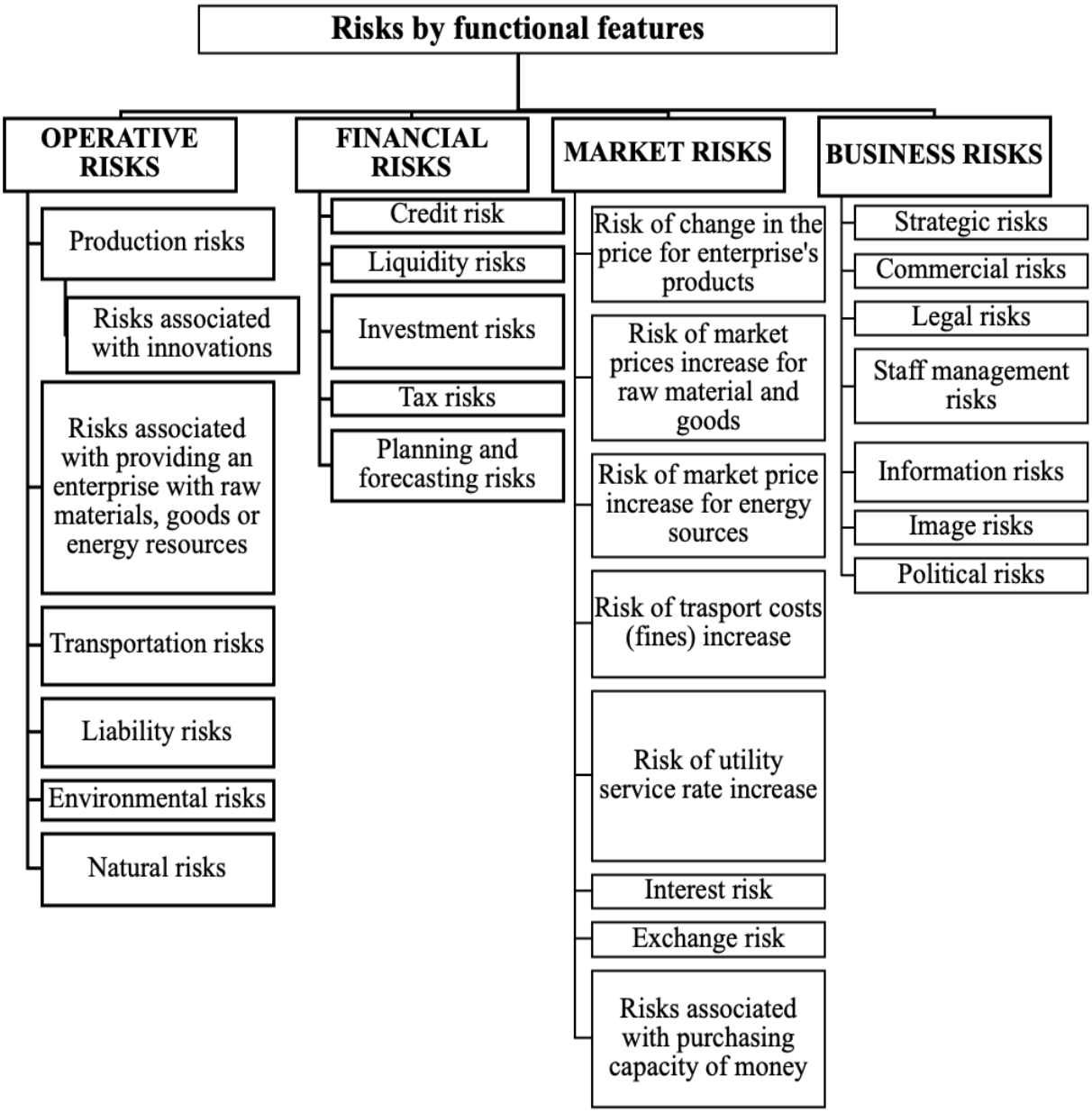

Figure 1. Typology of risks by areas of business organisations (Kovalenko, 2012).

As to the details of a notion "strategy", this notion is not clearly interpreted in special scientific literature. So, for example, American researches M. Meskon, M. Albert and F. Hedouri believe that *a strategy* is a detailed thorough complex plan assigned for achievement a task and ensuring goals of an enterprise (Meskon, Albert, Xedouri, 1992, p. 231). Other researcher, A. Chandler, accentuates that *a strategy* is a determination of main long-term goals and tasks, as well as approval of the course of actions and resources necessary for achievement of goals (Chandler, 1962, p. 129). A. Thompson and A. Streakland make suggestions that *a strategy* is a plan of management of enterprise directed to strengthening its positions, satisfying the consumers requirements and achievement of target goals (Thompson, Striklend, 1998, p. 11).

However, the Ukrainian scientists, V. Ponomarenko, O. Pushkar, O. Trydid, point out the fact that *a strategy*, first of all, is a business concept in development of an enterprise for the stated strategic extension presented in a form of a long-term program of specific actions able to implement this concept and ensure competitive advantages in goals achievement (Ponomarenko, Pushkar, Tridid, 2002, p. 549). L. Fedulova and O. Zakharova state that *a strategy* is a combination (conformity) of resources and skills of an organization, on one side, and possibilities of risk received from external environment, on other side, working in the present or future, under which an organization expects to achieve its main goal (Fedulova, Zaharova, 2003, p. 43). Therefore, *a strategy* is the stated for a long period a set of expected standards, guides, directions, areas, ways and rules of activity ensuring a high-level competitiveness of organisation, strengthens its position on the market, as well as increases the capacity to go through conditions of tough competition (Tulenkov, 1997, p. 106). As to basically *a risk management strategy*, it always is directed on identification by a controlling subject some choices at making managerial decisions which are made, as usual, under conditions of restricted resources. Therefore, *a risk management strategy* in business organisation is not only the list of managerial functions and actions in the course of achievement the intended organisational goals. It is formed not only by senior staff, but runs through all activity of business organisation based on introduction of a sole coordinated approach to management of risk events and processes, and gives possibility to reduce their impact level to organisation. A *risk management strategy* in business organisation as a *management system of* risk processes and situations consists of two interrelated *sub-systems*: controlled sub-system (or controlled object) and controlling system (or controlling subject). Subject and object of risk management in any business organisation refill each other as subjects of mental and physical labour, therefore, management and executive activity of the members of organisation in preventing and implementation of risk situations. Herewith, *a risk management object* is various components and parts of a certain business organisation, which takes controlled subject impact, and subordinate its current activity to it requirements directed to resolve potential risks, risk contribution of capital or organization of social and economic relations between the participants of production processes in the course of risk implementation. At the same time, *a risk management subject* or controlling sub-system are directors and managers of various levels of organisation assigned the rights to make decisions in resolving risk situations, which, by proper methods, modes and ways of managerial impact ensure prevention and resolution of risk processes, as well as directed on functioning of controlled object or controlled sub-system in the whole (see fig. 2) (Tulenkov, Czepak, Jaremczuk, 2023, pp. 32-36).

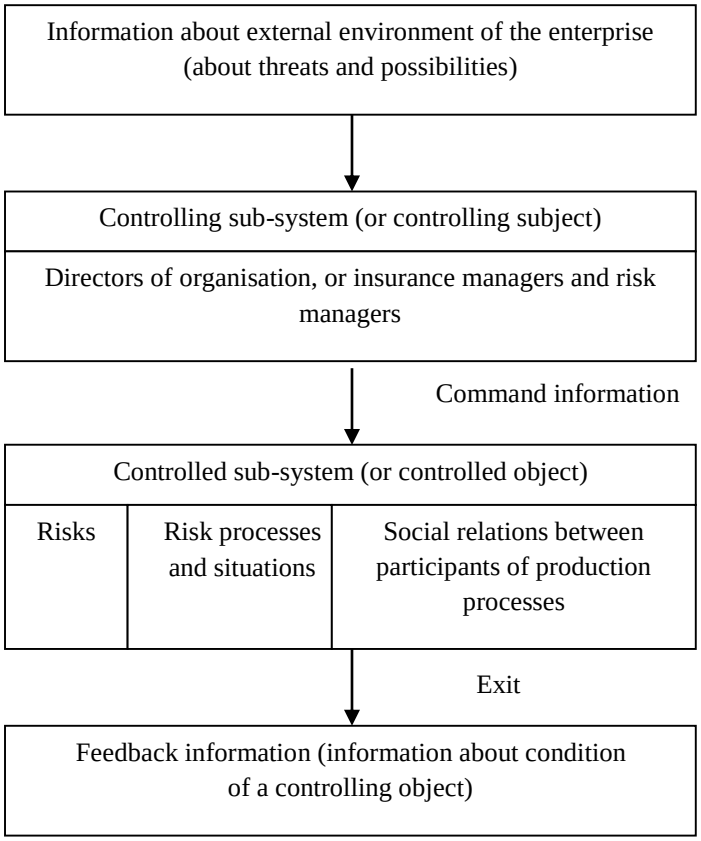

Figure 2. Flow scheme of a risk management in business organization.

4. Discussion

A risk management strategy means a certain direction and way to use by a business organisation management, available resources, especially, staff, material or financial for achievement strategic goals. A risk management strategy of this organisation as a set of crisis response measures, rules or restrictions, is more similar to the art of its guide in risk management under difficult conditions of unidentified economic situations, established not only based on a risk prediction, but using of efficient methods to reduce it, especially, under the conditions of martial law. Moreover, a formation of *a risk management strategy* in business organisations under the conditions of martial law is caused by instability of external environment and legislation; uncertainty of political, social and economic, humanitarian or military situation; discrepancy and inaccuracy of information holding by the management; uncertainty of goals orientation, interests and behaviour of subjects in management relations, change of authorities, significant destruction of infrastructure and so on (Enciklopediczeskij słownik z dierżawnogo uprawlinnia, 2010, p. 621).

Thus, the generation mechanism of risk management strategy organisation in organisation includes certain measures and rules under which the anti-crisis decisions are made and adequate ways of risk events and situations resolution are determined (see fig. 3).

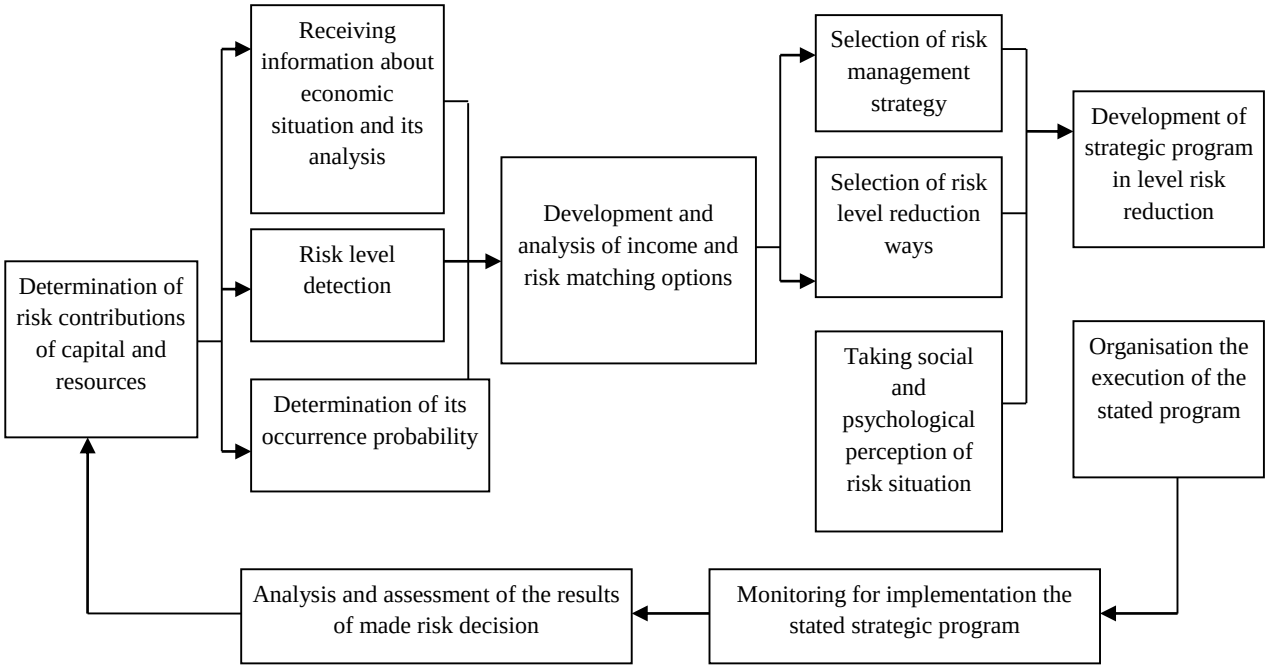

Figure 3. Generation mechanism of risk management strategy in business organisation.

However, the efficient *risk management strategy* of business enterprises, working under the conditions of martial law, is based not only on key principals of maximum catch, optimal volatility, result probability, reasonable combination of expected catch and risk rate, but includes the determined mechanism of institutional and management actions within the following stages: *at the first stage*, there is determined a risk with accompanying assessment of its implementation probability and the extent of consequences; *at the second stage* – the risk strategy is developed for reduction of risk implementation probability and minimization of possible negative consequences; *at the third stage* – the proper methods, means and guideline instruments are selected for management of found risk; *at the fourth stage* – risk strategy is implemented, therefore, a direct risk management is carried out; *at the fifth stage*, the achieved results are assessed, and, if necessary, the generated risk strategy is adjusted. As the most of researches think, the key stage in efficient risk management in business organisations is still the stage of selection of proper methods, ways and means for risk management.

Among the basic *risk management methods* in business enterprises, working under the conditions of martial law, according to the made analysis, the following *methods* are distinguished: a) risks avoidance; b) risk reduction; c) risk transferring; d) risk distribution; e) risk approval. Herewith, the modern risk instrument is more extended, and includes political, organizational, legal, economic, social instruments, and moreover, the risk management as a system allows a simultaneous use of some risk management methods at industrial enterprise.

But, the most used risk management instrument, in the period of martial law, as verified by the made analysis, is *insurance* (as the most efficient form of risk transferring). Insurance allows the liability transferring under indemnification of expected loss to stranger organisation (insurance company). Examples of other instruments may be: extremely risk activity avoidance (avoidance method); preventive measures, diversification or hedging (thus, the methods of risk

level reduction through distribution and combination); outsourcing of expense risk functions (method of transferring a part of enterprise functions or processes to strange executors on sub-contract terms); creation of reserves or stocks (approval method).

Therewith, *a risk management strategy* provides for planning and implementation of proper measures, which, on one side, provide for reduction of negative consequences level probability, and, on other side, increase the probability of positive results of business organisation activity in the course of the stated goals implementation. A risk management strategy in business organisation, under the conditions of martial law, stipulates the necessity to improve technologies of managerial decisions making, as well as methods of its implementation under the specific existing circumstances. Typical measures of risk management strategy in business organisation in prevention risk situations are contingency planning (method of stability system checking, method of project parameters adjustment, method of formalized uncertainty description); availability of coordination centre in the structure of organisation in the event of contingency; formation of mechanism in protection of organisation members interests, the participants of production activity and prevention of illegal or threatening actions by individual participants of production relations (Tulenkov, Czepak, Jaremchuk, 2023, pp. 397-399).

As we see, *the efficient risk management* in business organisation is evidence-based *risk management system* contains, first of all, the strategy and tactics of enterprise management directed on achievement the strategic, tactical or current goals in organisation activity. Accordingly, *the strategic risk management* at enterprise is oriented, mainly, to ensure the long-term stable existing of the organisation, from 5 to 10 or more years, which provides the identification of risk capacity levels and a certain "risk appetite". These limit values are fixed in organisational provisions established the management standards for enterprise. The strategic risk management is implemented and controlled directly by the senior staff of any business structure.

However, *a tactical risk management* at enterprise is directed on implementation of risks management strategy by using proper methods, ways and procedures within from 1 to 3 years. This management is implemented by mid-level managers of organisation or a special committee in risk management, since *a tactics* determines specific and adequate methods and modes for achievement the stated goal under specific conditions. Tactics task in risk management consists of a selection of optimal decision and determination of the most acceptable methods of managerial affect in a specific situation according to identified risk tolerance level.

Operative risk management at enterprise provides for identification and quantitative and qualitative assessment of risk situations, implementation of managerial decision impact on risk processes, as well as control and monitoring over risks in the course of the organisation activity within from 1 month to 1 year. This management is carried out by low-level management or a special structural sub-division in risk management relying on daily activity of other sub-divisions. Risk and income, in this meaning, are interconnected and stipulate each other. Besides, large income causes large risks, and vice versa. Each controlling object within

administrative hierarchy of a certain organisation identifies its acceptable level of risk, and has the personal responsibility for it (Tulenkov, Czepak, Jaremchuk, 2023, pp. 309-315).

Therefore, a conceptual approach in generation a *risk management strategy under the conditions of martial law* consists of the following: *at first,* prediction and identification of possible consequences of production and economic activity in risk situation; *at second,* creation of adequate and certain measures in prevention or reduction of losses amount from unexpected risk circumstances impact; *thirdly,* implementation this risk management strategy at enterprise not only allowed to counteract by most operative way or compensate probable negative results, but make the best use of available possibilities in order to receive large business income. Herewith, *the efficient risk management strategy* is based on, as usual, three key factors: 1) rational system of risks management; 2) evidence-based system of identification and measurement of risks; 3) productive system of accompanying, monitoring or control over risk situations. Besides, *a risk*, within a risk management theory, is interpreted as probable event at which occurrence there may be positive, neutral or negative consequences. For example, if *a risk* allows the availability both positive and negative results, it is referred to *speculative risk*. If consequences are negative, or absent at all, this risk is called *net risk.*

So, the main direction of a risk management strategy in business organisation is a level increase of competitive activity of economic objects based on the protection against net risks implementation. Therefore, *a risk management strategy* in organisations, under the conditions of martial law, according to the analysis, should be based on *three* the following basic notions: usefulness, regression and diversification of production and economic activity of enterprise. Usefulness idea of risk management was studied in the middle of XVIII century by Swiss mathematician, D. Bernulli (1700-1782), who added the method of usefulness (or attraction) of certain events results to the probability theory. The idea of Beranaulli consisted of that human, at making decisions, pay more attention to the rate of various results consequences than its probability. However, English psychologist, F. Halton, (1822-1911), in the end of XIX century, proposed to consider a regression (or return) to a mid-level value as a universal statistical law. The sense of regression was interpreted by the scientist as a return of certain things to standard in due time. Later, there was proved that the regression law works in various situations starting from probability calculation of accidents, and finalizing with the prediction of tides in economic cycles. At the same time, the American economist, Nobel Prize winner, H. Markowitz (1927-2023), in the middle of XX century, mathematically proved his own strategy of investment portfolio diversification, thereby presented how to minimize income variance of expected value through considered distribution of contribution.

The results of made analysis also certify that in the course of formation *a risk management strategy in business organisation,* working under the conditions of martial law, there occurrence an issues in solution of dilemma "risk – income" implemented within two main strategic *models of risk management,* which formalize any strategy of controlling objects behaviour in the course of approval or implementation of risk decisions.

First strategic model of risk processes management under the conditions of martial law maximize the expected income by administration of organisation (I) with simultaneous restriction of risk level (R) based on establishment a maximum acceptable value (R max) (formulas 1 and 2):

$$F(I) \rightarrow \max, \quad (1)$$

$$R(x) \leq R \max. \quad (2)$$

This behavioural strategy of the participant of the market means conscious taking of a maximum acceptable risk by the administration of organisation in order to maximum increase of income owing to the following factors: favourable market position, progress trends of stable market or enterprise's possibilities to improve its positions on the market. The key task of risk management within this approach is exclusion of an acceptable risk transformation into critical or catastrophe risk which treats the economic entity existing, and leads to bankruptcy. Under such approach, there is developed not only a target value of income, but proper routine procedures in restriction of certain risks in form of the stated tolerance to available risks which the management of enterprise may face in the course of its activity.

The second strategic model of management of risk processes, under the conditions of martial law, means a minimization of risk based on holding the income value of organisation at a certain level not lower that the stated level (I min) (formulas 3 and 4):

$$F(R) \rightarrow \min, \quad (3)$$

$$I(x) \geq I \min. \quad (4)$$

This behavioural risk management strategy is applied when the amount of net income, expected or received by the enterprise, fits for its administration, and the main goal of which is stabilization of activity results in the whole. The management of organisation achieves this result through application adequate and balanced management methods and modes with available assets and liabilities. Formalized or non-formalized management strategies allow identify available risks that are on the way of one or other strategy implementation. The level of restriction on risks subject to use this approach is higher that proves the stated risk-appetite. Such strategy may be a consequence if there are low possibilities for enterprise development on the existing market, as well as in the absence of possibilities of the last to enter to new markets (Fedulova, Zaharova, 2003, pp. 65-66).

At the same time, the results of research in formation of strategic position of risk management in national business organisations, under the conditions of martial law, give grounds for description of *information-logical model* of strategic risk management allowing the administration of business organisation to implement an efficient mechanism of institutional and management functions execution directed on resolution of a set of issues connected with prediction, prevention, and, if necessary, resolution of risk processes, events and situations at the enterprise. This strategic risk management model in social organisations includes 26 (twenty-six) aggregative topical blocks of information, meaningful, assessment, normative, reference, methodical or calculation nature presented in scheme in figure 4 adapted by Kovalenko (2012).

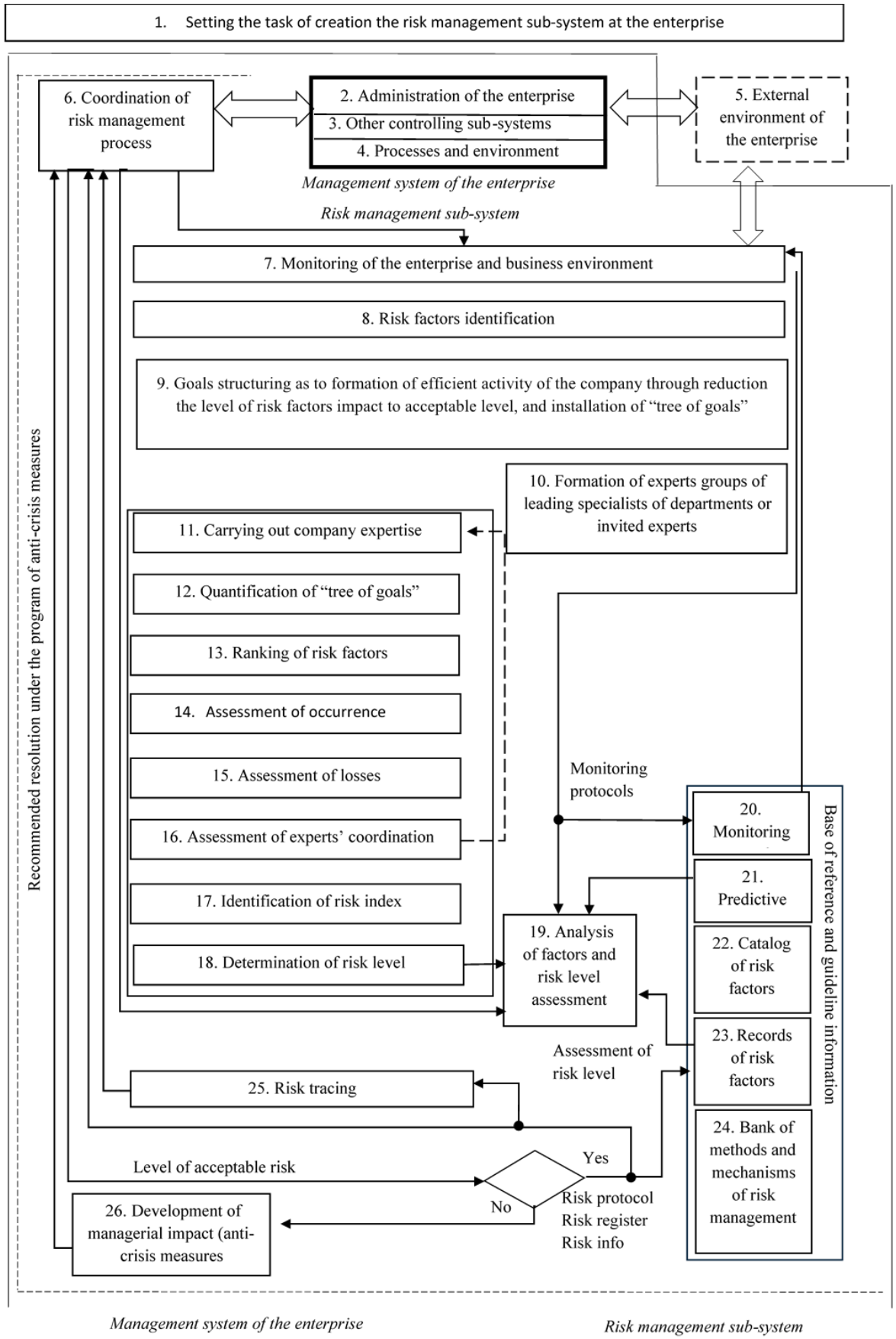

Figure 4. Information-logical model of risk management strategy (Kovalenko, 2012).

Block 1 provides for setting the task in creation, within the management system of industrial organization, a special sub-system of risk management headed by the Director of the enterprise or his/her Deputy. At this stage, the ideas are generated, and proper decisions on attraction and selection of correct ideas made based on which the tasks are set.

Blocks 2-6 present the business operation system of the enterprise, which directly interacted with external environment of organisation (block 5), and ensures the coordination of risk management at the enterprise (block 6).

Blocks 7-9 is a complex of proper measures under which the monitoring over the activity of enterprise and environment is implemented, determination and identification of internal and external risk factors, making of a tree of goals for the organisation focused on increase the probability of its efficient activity by reduction of the impact level of risk factors to a level accepted to the administration of organisation.

Blocks 10-19 contain various procedures of analysis and assessment of scale, types and difficulty level of risks, in particular, the following: expert groups, quantification of the tree of goals, ranking of risk factors, assessment of its probability, level identification, and so on.

Blocks 11-18 establish an original methodical body of sub-system of risk management of the enterprise ensuring the expertise and assessment of risks arising in the course of the enterprise operation.

Blocks 20-24 make a unified data base of meaningful, normative reference and methodical information about risk things, processes and situations, which, in the course of the operation of risk management sub-system of the enterprise, is formed and gained within each block of this model, and transferred for storage and use during the risks management at the enterprise.

Block 25 ensures a protocol inspection of risks (arising during the enterprise activity), its fixation under nine main factors detected at ranking (block 13), as well as additional inspection (blocks 14-18). This data composes the so-called rating sheet (block 9), which consists of due list of the most critical parameters of risk situations on every assessed target point (or direction) sent to the management of organisation for coordination of risk management processes (block 6).

Block 26 ensures the formation of controlling impact of the management of organisation on risk situations through making anti-crisis measures, and preparing, approval and implementation of reasonable managerial decisions in prevention of undesirable risk events development and reduction of its level at the organization, as well as reduction of losses value to prior accepted values (Kovalenko, 2012).

It should be emphasized that a testing of information-logical model of risk management strategy demonstrated that it used, in full or partial, by a management team at Ukrainian enterprises under the conditions of martial law. Ukrainian business structures (as opposed to business organisations of other countries) faced with serious challenges determined by military aggression of Russian Federation against Ukraine, in particular, loss of the sales market, tight credits, calling employees to armed forces, electrical power deficit and regular rocket and

artillery attacks not only near-front regions, but almost all regions of Ukraine. According to the European Business Association (EBA), 83% of Ukrainian companies-members of the Association had a business decline in 2022. Herewith, 29% of them had a decline by 20%, and more than a half had a decline by 21% and more. And only 6% of polled companies did not feel negative changes, and 11% of companies had increase of income in this difficult year. According to the experts' assessment, the total amount of direct losses of enterprises (including state enterprises) is 13 billion US dollars during the year of full-scale war, and the total indirect losses are more than 33 billion US Dollars. However, it is necessary almost 25 billion US Dollars to recover enterprises. Generally, the national economic collapse in Ukraine, as of 2022, is unprecedented 30.4%, and consumer inflation is 26.6%, meaning that increased goods and services prices by a fourth average. There was significant national currency devaluation – from 29 UAH/US Dollar before invasion up to 40 UAH/US Dollar (Żirij, 2023).

Herewith, the full-scale invasion of russian forces into the territory of Ukraine posed the entrepreneurs of all regions of country not only before the risk of business loss, but destruction of their industrial capital. Spelling destruction with rockets attacks of enterprises enforced the entrepreneurs in the zone of military actions (or on the temporarily occupied territories during the first months of the war) to find an opportunity to remove their enterprises to more secure West regions of the country. So, during the first two months of the war, 1171 Ukrainian enterprises were evacuated. Over 400 companies, in full or partially, transported their production capacities, and only 216 of them restarted their operation. In addition, about 500 entrepreneurs were founding secure sites to place their production capacities. The places of location became at least 8 regions (Zakarpattia, Lviv, Ivano-Frankivsk, Ternopil, Khmelnytskyi, Chernivtsi, Volyn and Rivne regions) in the Central and West Ukraine (Olenin, 2022). And during the first year of full-scale war (as on March 2023), over 800 enterprises were transferred under the relocation program to secure region, and 623 of them restored their operation at once on a new place (Za rik vijni…, 2023). Therefore, the enterprises relocation was important step of risk management in business organisations at the beginning of war, which assisted to safe a significant number of national business structures.

Regardless of regular military actions and threat of destruction, the Ukrainian business organisations adjusted bit by bit dangerous challenges of military time; thereby they started to use, except the relocation, other priority strategic direction in its risk management strategies. For example, introduction the strategy of weigh up risks *management*. According to Yu. Atanasov, the CEO of Centravis company, the one of the largest global producer of seamless stainless steel pipes, which production capacities are located in Nikopol, the town living and functioning in terms of chronic rocket terror of occupants, "the war regularly provokes new challenges and tests the business's strength. Reality reveals that you can lose your own safety at any time; is a high risk to lose property due to regular rocket attacks; are risks of new attacks on energy infrastructure; there is increase of enterprises, which cannot execute its obligations" (Atanasov, 2023). Therefore, it is highly important to identify possible risks, analyse its

occurrence probability, predict priority works with it, respond effectively to conditions under which can occur, as well as keep continuous control over situation. And the most important, it is necessary analyse regularly and assess risks security-wise, this is the highest priority for every business organisation functioning.

The important part of risk management strategy in Ukrainian business organisations during the war, according to the made analysis, is a production diversification that is an issue of more diversified product line, expansion of sales geography, increase sales exports, first of all, to the European Union. Using certain privileges provided for Ukrainian business by the European Union, the Ukrainian business organisations try to maintain business foreign contacts formed before the war (Żirij, 2023). At the same time, many Ukrainian business enterprises began use actively such the latest strategy as turnaround to arms industry. As stated by *Yu. Husiev, the CEO of the Concern "Ukroboronprom",* which attracted about 100 new companies during the year of war, which did not produce anything for armed forces before. As a result, about 6 thousand of new employees were engaged; developed cooperation with regional military administrations under which the industrial enterprises of regions began actively perform tasks for military industrial complex; implement a program in production and repair of equipment at safe locations; repairs old soviet and captured military equipment given by foreign partners of 14 countries, with whom there were signed 33 international treaties on cooperation (Mi zobowiazani zrobiti wsio…, 2023).

The success implementation of risk management strategy during russian aggression is impossible without stable team with "culture of regular improvement", which ideas have their origin from Japan enterprises during the economic recovery after the Second World War, and proved with efficiency of the following companies: Toyota, Nissan, Canon, Honda. These companies management could survive during the economic crisis, and hold stable positions on the market up to the present. The management of Ukrainian business structures choose the same priority, since the war forces regularly review the anti-crisis plan and business processes ensuring constant enterprise operation (Atanasov, 2023).

The current hybrid war is based, basically, on a system information base of business organisations, especially financial, loss of which means, first of all, loss of economy at all. Therefore, the implementation of digital risk management at business structures, first of all, in bank facilities of Ukraine, became one of the basic priorities of risk management. For example, the largest bank of Ukraine "Privat", kept the clients' confidence and stable during the war owing to a careful work of IT-business specialists who transferred its IT structure to a cloud storage, and then rolled out and launched all important programs and services of the cloud storage for 45 days, however, during "usual" project cycle, this work could take no less than 1.5 year. As said the Head of the Board of PrivatBank, Herhard Biosh, "according to a classical model of risks management, a war is "red" zone when banks do not finance economy, or do it with caution, increased credit risks and necessity to form reserves for them…. PrivatBank did not stop crediting as of the war beginning. The volume of business credits is not

reduced, but increased. For nine months of 2022, we have supported the national economy through development of farm and business credit programs – almost by 10 billion UAH, and through increase individuals' credit for 4.3 billion UAH" (Stabilnist ponad use…, 2022). It became possible due to implementation of a new for Ukrainian business structures strategy of digital risk management covered in fact all bank and industrial structures of Ukraine which continue to hold "financial front" in a year and a half.

5. Summary

Therefore, the results of research of strategic factors of risk management in business organisations, under the conditions of martial law, allow make the following *conclusions:*

Phenomenon a *risk* in the area of organisations management is a situational activity description of any social subjects consists of uncertainty of its result, as well as the occurrence of negative consequences, and allows interpret this phenomenon as objective probability of occurrence certain losses or income reduction of any industrial organisation in comparison with predicted version.

The risk in management of organisation is studied in four key meanings; (1) as a situational description of management activity, which consists of uncertainty of results, and possible negative consequences if default; (2) as a certain event or a line of similar casual events resulted in losses and damages in organisation; (3) as possibility of positive or negative values deviation in organisation activity from the predicted average values; (4) as probability of positive or negative project result achievement depending on nature of impact of external or internal factors caused the uncertainty level of management activity.

The risks management strategy means a proper way use available resources by the management of organisation, especially, human, material or financial resources in the course of achieving strategic goals. This method is complied with the risk management strategy in organisation, thus the stated list of rules and restrictions as to approval of anti-crisis decisions. The risk management strategy of any organisation likes more the art of its guidelines in risk management under the conditions of unidentified economic situations based not only on risk prediction, but introduction of efficient methods of its reduction, especially, under the conditions of martial law.

Strategic risks under the conditions of martial law, according to the analysis, may very quickly cause significant damage to any organisation, for example, they are able to damage significantly used nets of supply of raw materials, infrastructure, technologies, staff, capital, reputation, basic corporate values, and so on. They still are out of the most programs in risk management industrial enterprises, since it is difficult predict, measure, control and manage. Therefore, in order to efficient resolving of various risk situations, the administration of

organisations should introduce the system of strategic risk management with inherent guidance instruments for the system analysis of strategic risks, monitoring changes and visualisations of its data.

The strategy of efficient risk management in industrial organisation is based on three main factors: 1) rational system of risks management; 2) scientific proved system of identification and measurement of risks; 3) productive system of accompanying, monitoring and control over risk things, processes or situations.

The formation of strategic risk management position at national enterprises under the conditions of martial law is carried out through implementation of adequate *information-logical model* of the strategic risk management, which allows the management of organisation to introduce an efficient execution mechanism of organisational and managerial functions oriented on solution of long-term and current topical issues connected with expectations, warning, and, if necessary, resolving risk processes, events and situations at the enterprises, which consists of 26 aggregated topical blocks of information, meaningful, assessment, normative, reference, instructional and calculation nature, and is based on the following priorities: 1) relocation (displacement of business) from the zone of military actions, near-front zone or temporarily occupied territories to more secure regions of the country; 2) weigh risk management, which takes into account realities of the full-scale war; 3) production diversification, in particular, expansion of good and service range, search of new sales markets, in particular, manufacture of military and defence products; 4) "stable management team" with "culture of regular improvements" in any areas of business regardless of the martial law; 5) introduction of digital risk management ensuring the transferring of information base of business structures to a cloud storage within a short time, which assist to save and use it at further business. Whereas, russian aggression in Ukraine continues, the Ukrainian business organisations face to new threats and challenges, but received practical experience in introduction of various risk management strategies within the year and a half of war, should not only actively be used, but regularly be improved based on the latest developments and innovative projects in the area of modern theory and practice of a strategic risk management.

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MODERN SPECIFIC LEADERSHIP STYLES FOR SUSTAINABLE DEVELOPMENT

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Purpose: The presented research aims to update theoretical knowledge in the field of studying sustainable development to systematize information on the styles of interaction of a leader with followers to improve the life of every member of society. The search for modern leadership styles for the effective implementation of sustainable development is a necessary part of the development of society in three main directions - economic, social, and environmental.
Design/methodology/approach: The authors used theoretical general scientific research methods in the article - literature review, content analysis, historical method, comparative analysis, and synthesis.
Findings: The article examines the strategic content of the concept of sustainable development to improve the living conditions of every member of society. By analyzing two concepts of sustainable development, "sustainability" and "development," the authors emphasize the human-centric nature of the concept. The social activity of people, which is responsible and justified in the consumption of resources in the present time and the preservation of resources for future generations, ensures the sustainable development of society. In the work, scientists presented the results of the analysis of modern articles on the topic of effective leadership style for implementing sustainable development in organizations.
Research limitations/implications: Further research can be related to empirical studies of modern leadership styles in the implementation of the concept of sustainable development in organizations.
Practical implications: The results of the article can be used by the leaders of any organization when choosing an effective style of interaction with followers to achieve the organization's strategic goals.
Social implications: Implementing the concept of sustainable growth ensures the achievement of an improvement in the state of social processes. Using the research results presented by the authors in practice will contribute to sustainable development in society.

Originality/value: The systematization of modern data in the development of managerial activities and the analysis of existing leadership approaches in implementing sustainable development is essential in forming effective interactions between a leader and followers.

Keywords: sustainable development, environmentally specific servant leadership, environmentally specific transformational leadership.

1. Introduction

Sustainable development involves a process where people's activities occur within the limits of the ecosystem's ability to support the livelihoods of current and future generations. Economic, social, and environmental interests of society form the basis of the concept of sustainable development. In today's changing world, changes of various nature are taking place, but man remains responsible for preserving the environment to ensure the needs of future generations.

The concept of sustainable development is of great importance for improving the lives of people around the world. (Holmberg, 1992**).** Sustainable development is a strategic vector of social activity for countries worldwide at every level of relations between people - from individual responsibility for a proper attitude to the environment to support at the state level by authorized persons of this large-scale idea. This is important for many reasons and is already being implemented in various directions (Kuzior, 2008, 2010; Kuzior et al., 2019, 2021, 2022, 2023; Kuzior, Lobanova, 2020; Kwilinski et al., 2019, 2021; Babenko et al., 2020, 2021; Bugayko et al., 2021; Gontareva, 2019; Starchenko et al., 2021, Vasylieva et al., 2019; Ober, Karwot, 2022; Ober, Kochmańska, 2022; Belgibayeva et al., 2023; Ingaldi, Ulewicz, 2019; Ulewicz, Blaskova, 2018; Vakulenko, 2023; Ciążela, 2005, 2006; Shvindina et al., 2022).

Economic, social, and ecological factors of sustainable development (Harris, 2000) ensure the formation of a society capable of meeting the modern needs of people and handing over a certain reserve of resources to future generations. For the balanced development of each element of sustainable development, an important figure is a leader with such a style of interaction with followers that aims the team at effectively implementing the human-centered concept of sustainable development.

2. Sustainable development

The classic definition of sustainable development was formulated in the Report Our Common Future 1987, published by the UN: “Sustainable development is meeting the needs of present without compromising the ability of future generations to meet their needs” (WCED,

1987). That is, in terms of content, the concept has a long-term character (Ekins, Dresner, 2008) and represents a strategic vector of society's activities for preserving environmental resources, considering future generations' interests. The intelligent production and consumption behavior of the present society will ensure that future generations have a specific supply of goods for use. Sustainable development indicates that any existing social system can operate indefinitely without depleting essential resources (Marin, Dorobanțu, 2012). That is, implementing current tasks and using environmental resources must be justified from the point of view of preserving the system's vitality.

Sustainable development involves a process of change in which resources are collected, the direction of investments is chosen, development technologies are directed, and the institutions concerned increase the capacity to meet public human needs. (Vare, Scott, 2007; Kuzior, Kwilinski, 2019) The concept of sustainable development includes the preservation and accumulation of various resources, considering constant transformational changes in the environment. The resource potential that is formed provides an improvement in the standard of living over some time.

Philosophical and scientific approaches to understanding the content of the concept of sustainable development (Reber, Duffy, 2019) reveal its anthropocentric orientation (Kuzior, 2008). From a philosophical point of view, namely axiological, the concept of sustainable development supports such human values as human dignity, freedom, equality, solidarity, democracy, and respect for the law, as well as responsibility, justice, and tolerance (Kuzior, 2014). The valuable focus of sustainable development on improving the quality of social life of people, taking into account the need for respect for the individual, ensures the formation of a society with developed spheres of activity. From a scientific point of view, the concept of sustainable development is considered in terms of three constituent aspects of the idea - economic, social, and ecological spheres of activity (Surampalli, Zhang, 2020).

The economic component should ensure maximum income and preservation of capital, which brings public benefit (Maler, 1990). The combination of profit-making and rational use of resources ensures a high standard of living in the present and affects the development of social processes in the future.

The social component of sustainable development contributes to maintaining the stability of communal and cultural spheres of public life, including health and education, gender equality, and political responsibility and participation (Murphy, 2012). The social directions of public activity contribute to developing a healthy, educated, and responsible society, which is the basis of the modern and future world.

The ecological component of sustainable development includes the maintenance of various functions of the ecosystem, which are not classified as economic resources, to preserve the environment (Duran, Gogan, 2015). Careful and rational use of environmental resources is a necessary and relevant process for humanity at any time. The task of every member of society is the organization of life activities aimed at preserving the environment.

The basis of all three components of sustainable development refers to the current state of the spheres of activity, considering the preservation and accumulation of potential for future generations. The concept of sustainable development, as a single process, implies the same qualitative changes in each constituent part. That is, the sustainable development of the economy, social sphere, and ecology occupies an equal share in the general idea. The balance of sustainable development in the three aspects of sustainable development ensures a positive state of the current society with the forecasting of resource provision for future generations (Duran, Gogan, 2015). The three-pillar conception of (social, economic and environmental) sustainability, commonly represented by three intersecting circles with overall sustainability at the centre, has become ubiquitous (Purvis, Mao, 2019).

Sustainable development, as a long-term process of social processes, includes two categories, "sustainability" and "development," which ensure the viability of social activity's ecological, social, and environmental spheres.

2.1. Sustainability

Sustainability indicates the need for structural changes that must occur over long periods related to technological changes in all spheres of human life. (Hallin, Karrbom-Gustavsson, 2021) This definition of sustainability, in a broad sense, indicates the complexity of the concept. In today's changing world, there is a human need for specific stability. However, this category predicts transformations in various spheres of social activity.

In the context of sustainable development, sustainability is defined as a well-being-oriented challenge to traditional thinking and practice. The complex concept covers decision-making issues and defines the connections between people and the biophysical foundations of life. Sustainability combines the understanding of inviolable limits and specific opportunities for process innovation (Elliott, 2012). Innovative approaches in various professional and personal areas of life to realize opportunities should be done by observing restrictions to preserve the environment's potential.

Unsustainability refers to the systematic deterioration of the capacity of a system (e.g., the ecosphere) to perform, recover, and develop (Robèrt, 2000). Thus, maintaining stability ensures the vitality of any economic, social, and ecological system, which positively affects society's current and future state.

The main characteristics of sustainability are the focus on people and the preservation of nature and normativity, which is the benchmark for the standards of society's behavior in meeting its needs (Rout, Verma, 2020). This means that ensuring stability in various spheres of human activity includes specific reasonable actions of people regarding the use of economic, social, and environmental resources. A rational approach to the consumption of goods supports people's livelihood in the present and future; that is, it creates conditions for improving society's standard of living.

The identification of sustainability with the level of well-being (Aminpour, Gray, 2020) a concept related to human orientation. Raising people's standard of living, equality of rights, and legally justified obligations form a society with long-term views and goals capable of creating favorable conditions for life in the present and future.

The primary levels in the implementation of complex sustainability include:

- an integrated management system that provides financial, social and environmental results; risk management; and knowledge management;
- definition of such business models, which provide for a balanced solution of social, financial, and environmental aspects of efficiency;
- integrated management systems that can provide a comprehensive approach to sustainable development (Giovannoni, Fabietti, 2013).

The considered levels of implementation of sustainability reveal the need for practical and modern approaches in management activities. The activities of organizations, as social entities with different missions, should be aimed at implementing sustainable development to create decent living conditions for people.

2.2. Development

Development is challenging to define in general terms because of the complexity of this process. Development is the process of achieving a better life, the focus of development analysis being on the nature of people's lives and achievements (Sen, 1988). This definition of development indicates the qualitative nature of the concept and reveals the importance of people's needs in improving the standard of living.

As a result of development, there are qualitative changes in the object's structure. Development is a described measurable characteristic of society (Wallerstein, 1984). Development is an essential and complex process in the social life of people. In order to improve the quality of life and meet the needs of different levels, people need to focus on specific changes, the result of which will be a transition to a qualitatively new level of life in various spheres of activity.

Development is defined as the process of evolution in which human capacity increases as new structures are created, coping with challenges, adapting to constant change, and purposefully and creatively pursuing new goals (Du Pisani, 2006). Constant changes in social processes require people to have the ability and skills to adapt to a changing environment.

In the context of the concept of sustainable development, development is a complex social process aimed at moving underdeveloped peoples from their state of economic backwardness and slow socio-cultural transition to a dynamic state characterized by sustainable economic growth and socio-cultural and political transformation that improves the quality of life of all members of society (Rabie, 2016). The balanced development of the economic, social, and environmental components of the concept of sustainable development ensures the

realization of the goals of sustainable development, the implementation of which creates opportunities for improving life.

Whereas all development theories reference the natural environment and view nature as a source of wealth (Willis, 2011), the development of economic, social, and ecological spheres is an essential strategic vector for improving the living conditions of society.

Considering the two main concepts of sustainable development - sustainability and development, these two processes should ensure an increase in the standard of living of current and future generations. Sustainability provides future development paths (Pachauri, 2015), because it implies a relationship between the three components of the concept. The complexity and long-term nature of sustainable development requires the implementation of the idea at all levels of social life - from a person's personal responsibility to the state level of support for the implementation of the concept of sustainable development.

3. Leadership for Sustainable Development

Generally, a leader with followers knows how to achieve goals that are important for him and, at the same time, for the surrounding environment (By, 2021). Considering this definition and the content of sustainable development, it is clear that the focus of the leader's activities on introducing the idea will contribute to improving people's lives.

As a strategic vector of social development, the concept of sustainable development needs a leader who aims to implement the idea in his activities (Sroufe, 2017). The leader of any organization should consider the concept of sustainable development as a strategic part of his management activities.

Leadership styles in the context of their contribution to sustainable development play an essential role in building long-term relationships with followers and stakeholders to realize the concept (Piwowar-Sulej, Iqbal, 2022). A balanced approach in managerial work meaningfully consists of uniformly developing three main directions of social activity - economic, social, and environmental.

Scientists who study leadership styles have repeatedly compared servant leadership and transformational leadership. These two styles of leader interaction with followers have a people-oriented character and are aimed at developing the team to achieve goals effectively. The use of these leadership styles in the implementation of the concept of sustainable development is very effective in targeting followers to achieve long-term organizational results. Table 1 shows servant and transformational leadership characteristics for studying the nature of the leader's interaction with followers.

Table 1.
Transformational and servant leadership

Authors	Transformational leadership	Servant Leadership
Smith, B.N., Montagno, R.V., Kuzmenko, T.N. (2004)	The drivers of the transformational leader are idealized influence, inspirational motivation, intellectual stimulation and individual approach. The result of transformational leadership is: high ethical standards, self-care and needs of others, clear communication of expectations, creation of a shared vision, innovativeness of activity, and risk acceptance.	Servant leader drivers value and develop people, build community, demonstrate authenticity, and share leadership. The result of Servant leadership is highly qualified and ethical staff, strong interpersonal communication relationships, creating a common vision and clear goals.
Choudhary, A.I., Akhtar, S.A., Zaheer, A. (2012)	Transformational leadership influences the behavior and thinking of followers in an organization. Such leadership creates a unified understanding of the organization's goals among team members.	When using servant leadership, the leader is primarily interested in serving others. Servant leaders focus on the development and well-being of followers.
Parolini, J., Patterson, K., Winston, B. (2009)	Transformational leaders focus on the organization's needs, strive to be the first, are committed to the organization, and influence the team through charismatic approaches and control.	Servant leaders focus on the needs of the individual, inclined to serve, devoted to the person, and influence through unconventional service, offering autonomy.
Humphreys, J.H. (2005)	Transformational leadership is effective in dynamic situations.	Servant leadership is effective for static environment.
Lowder, B.T. (2009)	A transformational leader emphasizes increasing employee innovation and creativity and is focused on intellectual stimulation.	A servant leader emphasizes the development of followers' potential and promotes their personal growth.

Source: summarized by the authors based on (Smith, Montagno, 2004; Choudhary, Akhtar, 2012; Parolini, Patterson, 2009; Humphreys, 2005; Lowder, 2009).

As seen from Table 1, the central characteristic of servant and transformational leadership is the leader's focus on developing followers to achieve the organization's goals, including the team's orientation to implementing sustainable development. The distinguishing feature between servant and transformational leadership is that the transformational leader works more dynamically, while the servant leader's activity is static.

Let us consider expanding the traditional transformational and servant leadership concepts to include environmental goals in leaders' strategies.

3.1. Environmentally specific transformational leadership

Expanding the focus of purposeful transformational leadership to the environmental context (Beauchamp, Barling, 2010) has led to the emergence of environmentally specific transformational leadership, which involves a specific management practice in which the leader focuses on environmental issues (Li, Xue, 2020). The transformational leader's focus on implementing sustainable development occurs through the intellectual stimulation of followers and an ethical attitude toward them.

According to the Scopus scientific database, scientists have been researching the topic of environmentally specific transformational leadership since 2018. Figure 1 presents a graph with the analysis results of the number of scientific works indexed by Scopus by year for the "environmentally specific transformational leadership" keyword.

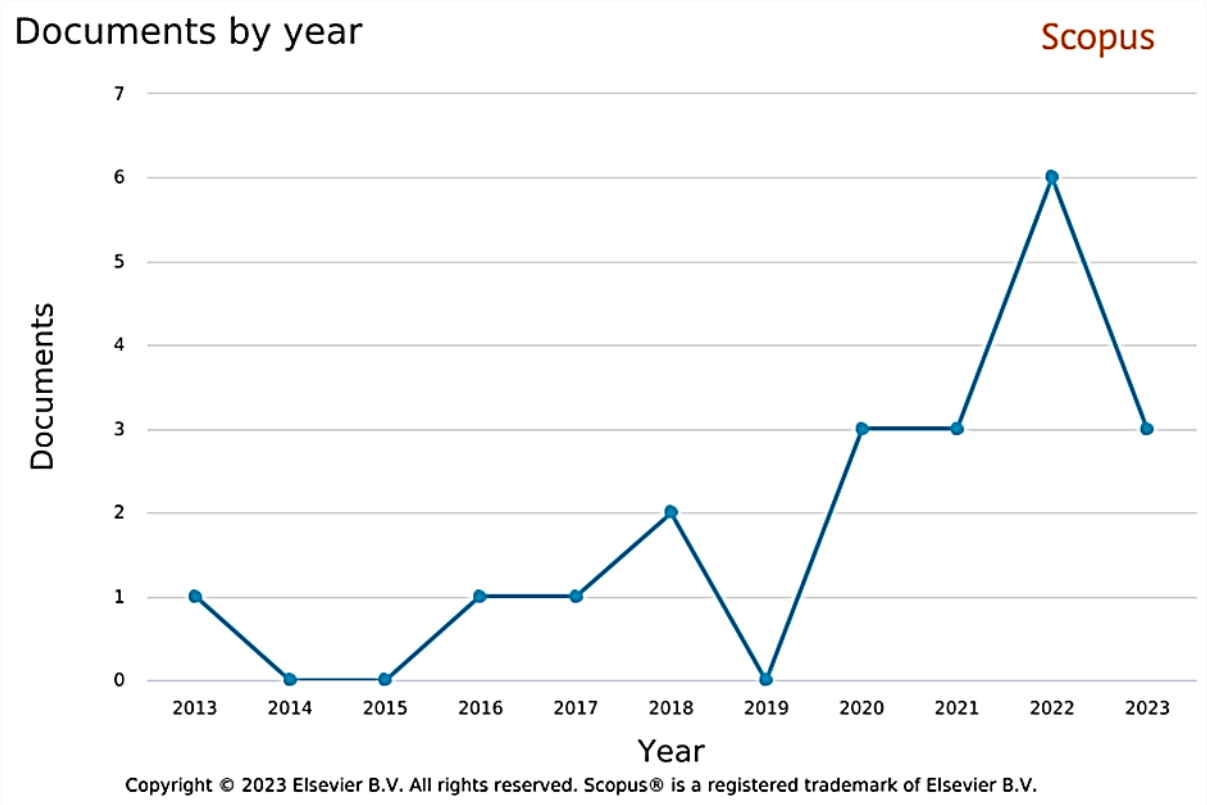

Figure 1. Documents by year for the request "environmentally specific transformational leadership".

According to the graph, the trend of studying environmentally specific transformational leadership has been increasing since 2013. Since 2020, the number of scientific articles on this topic has increased.

3.2. Environmentally specific servant leadership

Scholars have expanded the focus of servant leadership on environmental sustainability and defined environmental servant leadership as role-based leadership with environmental values that serve and help employees contribute to sustainable development (Hou, Gai, 2023; Țăpurică, Ispășoiu, 2013). That is, the servant leader influences his followers so that their attention is focused on fulfilling the organization's economic, social, and environmental tasks. A servant leader achieves this goal by serving each member of his team.

According to the scientific database Scopus, research on environmentally specific servant leadership has been conducted by scientists since 2018. Figure 2 graphically shows the analysis results of the number of scientific works by year for the search query "environmentally specific servant leadership".

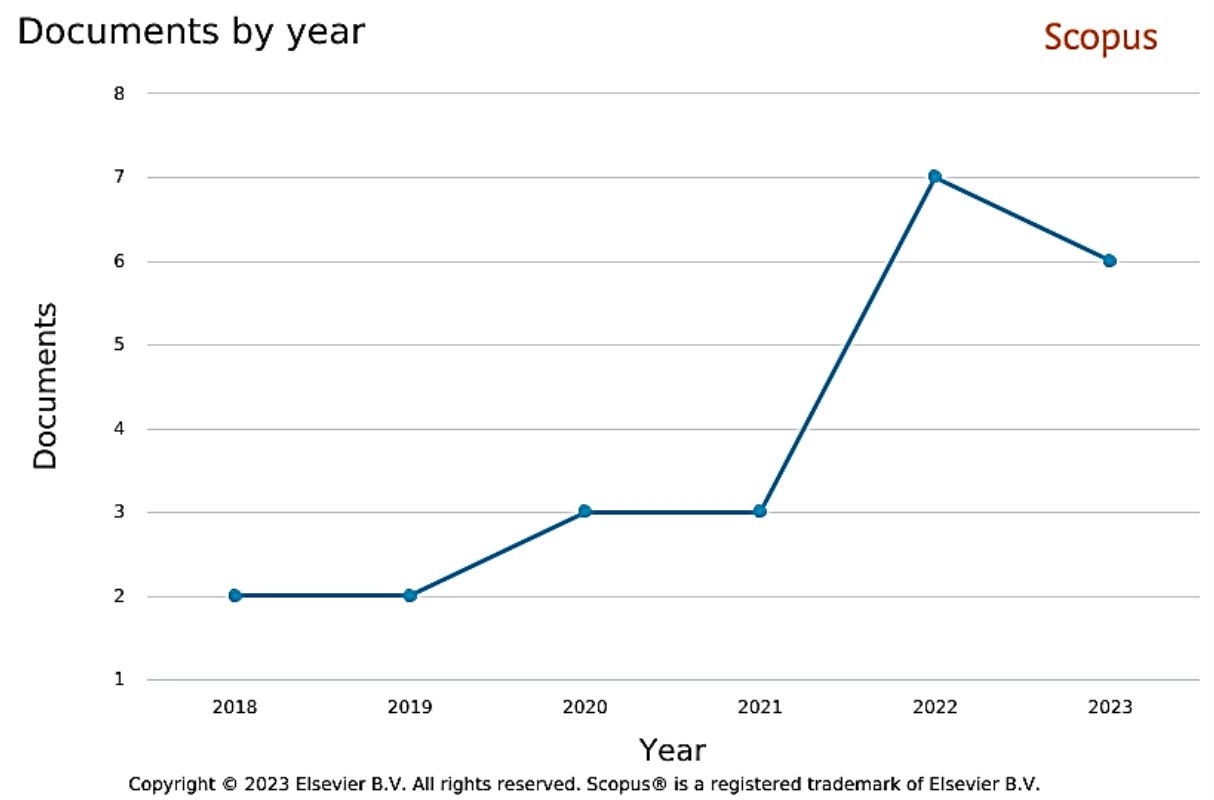

Figure 2. Documents by year on request "environmentally specific servant leadership".

So, the leadership style is environmentally specific servant leadership is a relatively new direction in the development of management science.

3.3. Specific leadership styles for sustainable development

The analysis of scientific publications on effective leadership styles shows that environmentally specific transformational leadership and environmentally specific servant leadership ensure the development of organizations in three main directions of sustainable development - economic, social, and environmental.

Table 2 presents an overview of scientific works with studies of ecologically specific transformational leadership and ecologically specific servant leadership indexed by Scopus.

Table 2.
Environmentally specific transformational leadership and environmentally specific servant leadership

Source	Citations	Characteristic leadership style
Environmentally specific transformational leadership		
Robertson, J.L., Barling, J. (2012b)	505	Leaders establish relationships with followers in which they communicate their environmental values, model environmental behavior, and address environmental issues.

Cont. table 2.

Robertson, J.L., Carleton, E. (2017)	114	A transformational leader's environmental behavior allows followers to observe a positive impact on the organization's environmental sustainability. Formation of environmentally responsible behavior in the organization includes the development of environmental values (idealized influence), their motivation followers to environmental behavior (inspiring motivation), innovative ways of solving environmental issues (intellectual stimulation), relationships with each employee, with the help of which is carried out influence on the environmental behavior of followers (individual consideration).
Peng, J., Chen, X., Zou, Y., Nie, Q. (2020)	64	Leadership promotes a harmonious team's passion for environmental protection. By idealizing the environment, leaders serve as charismatic role models. Leaders create pro-environmental attitudes in the team. Such emotional contagion is particularly evident among teams with high membership stability.
Environmentally specific servant leadership		
Afsar, B., Cheema, S., Javed, F. (2018)	136	A servant leader who respects employees' environmental behavior can increase their self-esteem by being a pro-environmental citizen in a socially responsible organization.
Luu, T.T. (2019)	107	Environmentally specific servant leaders are a proximal lever for strengthening environmental and organizational resources and finding resources for the team in other teams and managers. Leaders encourage followers to new ones green projects.
Tuan, L.T. (2017)	106	Environmentally oriented leadership is considered a leadership practice. With this approach, environmental benefits outweigh economic benefits. Cultivating pro-environmental values in the organization's stakeholders is an essential task of the leader.

Source: summarized by the authors based on (Robertson, Barling, 2012b; Robertson, Carleton, 2017; Peng, Chen,2020; Afsar, Cheema, 2018; Luu, 2019; Tuan, 2017)

The characteristics of environmentally specific transformational leadership and environmentally specific servant leadership presented in the table indicate the relevance and necessity of their application by leaders in organizations whose activities affect social, economic, and environmental processes. These two leadership styles are relatively new in manageement science and are based on two traditional people-oriented styles of interacting with a leader and followers - transformational and servant. The expansion of generally recognized leadership styles in the context of solving environmental problems contributes to the effectiveness of implementing sustainable development in the modern world.

4. Conclusions

The concept of sustainable development envisages strategic relations between society and the environment, which satisfy the current needs of people without harming future generations. Improving the standard of living and well-being of people is the result of the effective implementation of sustainable development. Sustainable development becomes achievable only when stability is formed in three spheres of social activity, which are components of the concept - economic, social, and environmental (Trusina, Jermolajeva, 2021). The balanced

(Kuzior, Kettler, Rąb, 2021) development of these areas forms a responsible and visionary society.

The implementation of sustainable development requires a leader who is focused on long-term results in the organization. Implementing economic, social, and environmental organizational tasks (Kuzior, Postrzednik-Lotko, Postrzednik, 2022) requires effective interaction with followers from the leader. The chosen leadership style must correspond to the implementation of sustainable development tasks.

Personal commitment to sustainability, intrinsic motivation, and passion are essential but often forgotten dimensions of leadership (Horlings, Padt, 2011). Leaders with a people-oriented interaction style are aware of an effective behavior style that brings high results from people for sustainable development.

The expansion of traditional leadership styles, transformational and ethical, to those more oriented towards sustainable development has led to the emergence of such forms of interaction between a leader and followers, which are more effective in comprehensively solving economic, social, and environmental problems. Environmentally specific transformational leaders (Schippers, Den Hartog, 2008) achieves the organization's sustainable development goals by motivating followers to contribute to the organization's environmental goals, a Environmentally specific servant leaders (Tripathi, Priyadarshi, 2020) seeks to encourage, serve, and help followers become individuals with environmental values that contribute to the organization's and society's sustainability. These two modern leadership styles ensure the implementation of human-centered tasks of sustainable development and contribute to forming responsible members of society focused on solving current problems and preserving resources for future generations.

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THE ETHICS OF ARTIFICIAL INTELLIGENCE. CAN WE TRUST ROBOTS?

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Purpose: The purpose of the article is to identify the state of knowledge AND discuss the ethical issues of challenges associated with the development of artificial intelligence and robots. The research questions posed are: How can artificial intelligence be ethical? Is it possible for humans to trust machines?
Design/methodology/approach: The article analyzes selected literature on the problem of trust, security and ethics regarding the development of artificial intelligence and robots.
Findings: The analysis conducted showed that the ethical perspective on the development and application of artificial intelligence in robotics is not sufficient and represents a kind of research gap.
Social implications: Societies are not aware of succumbing to the influence of artificial intelligence and do not demonstrate sufficient knowledge of security from intelligent machines. The trust placed in robots has no scientific basis.
Originality/value: To point out the research gap on the ethical perspective of the application of modern technologies, especially artificial intelligence and robotics in global and individual application in the context of trust, security from modern technologies and ethics in the cooperation of humans and machines. The article also touches on the debatable issue of robot ethics, somewhat overlooked in scientific discourse.

Keywords: robot, human, trust, security, ethics.

Category of the paper: Conceptual paper, Literature review.

1. Introduction

The technologies of the 21st century have been dominated by the development of artificial intelligence. Work on artificial intelligence is consuming huge amounts of both financial and personnel resources, thus indicating the expectations in this area, including in the process of creating intelligent robots. In addition to the fascination with the positive aspects of AI development, there are also serious concerns about the negative consequences of their use in various areas of human life. These concern the economy, economics, democracy, medicine,

energy and also other areas crucial to the proper functioning of states, societies, groups and individuals (Kuzior, 2020; Kwilinski, Kuzior, 2020; Ober, 2022; Kuzior, Kochmańska, Marszałek-Kotzur, 2021). Increasingly important in this context seems to be the problem of guaranteeing the safety of humans from the side of artificial intelligence, and consequently, a clear definition of the issue of ethical dilemmas and trust in robots. Questions about security also do not evade the issue of human domination by artificial intelligence. For some time now, so-called weak artificial intelligence has been permanently accompanying humans, relying on computer system operations that mimic intelligent behavior to a limited extent. The time of so-called strong artificial intelligence, which could perform most or all of the intellectual tasks vested in humans, is likely to be possible in the near future (Siau, Wang, 2018, p. 53). Computerized devices primarily save human labor in terms of physical work. Artificial intelligence, on the other hand, is a system that allows it to perform tasks that require a process of learning and taking into account new circumstances in the course of solving a given problem, and which can, to varying degrees - depending on its configuration - operate autonomously and interact with the environment (Zalewski, 2020). Artificial intelligence and robots can assist the human mind with cognitive capabilities and the ability to learn, choose, select, in short, decide. The dynamic decision-making algorithm that controls the behavior of robots allows them to take into account past experiences. Learning from their mistakes, intelligent robots are able to modify their future actions (Kiepas, 2022; Maternowska, 2022). As robots increase their skills, their "thinking" becomes more unpredictable and beyond human computational capabilities (Michalski, 2018). Due to the lack of transparency in the decisions made by robots, their operators face increasing difficulties in interpreting and overruling the robot's decisions (Lemley, Casey, 2019). The high complexity of the decision-making algorithm and the dynamic adaptation of programming to unforeseen circumstances make robots different from other machines, which, according to many researchers, is an apex for special treatment by the law. Thus, arguments are emerging for the need to rethink legal measures applied to robots (De Chiara, Elizalde, Manna, Segura-Moreiras, 2021; Lemley, Casey, 2019; Shavell, 2019; Talley, 2019). As artificial intelligence develops, improves and reaches higher levels, concerns are being raised that it may begin to manage human systems according to the values of artificial intelligence, not humans. These issues often concern the long-term security of intelligent systems, which is important not only for individual humans, but also for the human species and life on Earth as a whole. These issues and many others are central to the field of ethics. While the above problem of machines taking control of humans may seem distant in time, or completely impossible, there is the question of creating an ever closer human-machine relationship (EU, 2018, p. 7). This raises important and difficult moral questions. One should ask about the safety of humans who live alongside intelligent, autonomous robotic machines. It is also necessary to consider the moral responsibility of humans for the unforeseen consequences of using artificial intelligence. The issue of exercising control and safe management of autonomous systems also requires rethinking. Thorough reflection is also

required on the issue of establishing regulations that would serve to build human well-being on the one hand, and ensure their safety on the other? The trust placed in machines is now so far-reaching that humans are allowing themselves to take away the freedom to determine for themselves. But what does this trust consist of? Man allows artificial intelligence to dictate to himself, as an individual, what we should buy, what road to take when traveling, which flight to take, what food to choose, what movie to watch over the weekend, what credit to choose. On the structural side, meanwhile, artificial intelligence influences stock market transactions, commodity prices, mass transportation, the industrial Internet, legal decisions and even political elections (Ike, 2018). It seems, then, that we have completely put our trust in artificial intelligence and robots. Perhaps in doing so, we have already stripped ourselves of our power over the human world? Globally, we have been put before a kind of revolution and evolution at the same time. Artificial intelligence, together with autonomous robots, arouses human admiration, but also generates a whole range of concerns that have various origins.

2. Confidence placed in machines

2.1. The basics of trusting robots

Trust is considered one of the basic psychological factors that guarantee the cohesiveness of social structures. It integrates and binds human communities together. The act of trust is dynamic, that is, activist in nature, and involves the action of other entities and systems, which are the objects of our trust. This is because, as a social attitude, it is related to a specific form of human activity and is oriented towards the future (Sztompka, 1999; Sztompka 2007). The issue of trust has been the subject of human deliberation since antiquity. Plato, for example, described it as trust, that is, in terms of an act of faith (Plato, 1997). When analyzing the meaning and nature of the attitude of trust, its moral dimension cannot be overlooked. It is believed that one of the conditions for trust, considered as the aforementioned type of social attitude, is a factor of a moral nature, i.e. the ability of individuals or certain groups to function within a unified axiological system, i.e. in a collective that adheres to common moral values (Fukuyama, 1997). The attitude of trust is seen as one of the essential elements of social relations under the conditions of late modernity. A characteristic feature of this period is the widely understood unpredictability and associated risks. This is the so-called manufactured risk, which is distinguished from natural risk. Manufactured risk, which is one of the side effects of the development of civilization (Giddens, 2001), plays an important role in the context of the development of information technology and is understood as trust in abstract systems (Giddens, 1999). This issue is included in the category of expert knowledge, because under this concept are complex technical procedures that are incomprehensible to most of the public, ensuring the

possibility of the functioning of the technologies themselves and other abstract systems. Trust, understood in this way, is related to the reliability of the individuals who design, construct and control the operation of systems. It is considered here in two dimensions: personal and impersonal. Personal trust is based on honesty, that is, it is a trait grounded in the moral beliefs of the individual. In contrast, trust in a system, or a particular technology, is instrumental. It is based on the belief that a given technology will perform according to our expectations. Its most common form is the demand for reliability and stability. The latest, widely understood information technologies and products require an increasing amount of trust from their users, both in their personal and impersonal dimensions (Szynkiewicz, 2014). Given the fact of the crucial importance of the development of artificial intelligence for the functioning of modern societies, it is worth asking how we should understand the concept of trust in this perspective? Recognizing the importance of artificial intelligence systems and the risks associated with them, the European Commission published on April 8, 2019 a document developed by an independent group of experts called Ethics Guidelines for Trustworthy AI (EC, 2021). The guidelines contained therein aim to promote trustworthy artificial intelligence defined by three components that should be met throughout the lifecycle of an AI system. The first, is compliance with the law and all applicable laws and regulations. The second is ethicality, or adherence to ethical principles and values. The third is robustness, both technically and socially, given that even with good intentions, AI systems can cause unintended harm. All three components should occur simultaneously (Turner, 2019; Gasparski, 2019). In addition, the foundations of trustworthy AI must include four key elements: respect for human autonomy, prevention of harm, fairness, and explainability. All four are based on fundamental human rights, such as respect for human dignity, individual freedom, respect for democracy, justice and the rule of law, equality, non-discrimination, solidarity, and civil rights (PDPC, 1948).

2.2. Trust in human-robot interaction

The issue of trust in artificial intelligence plays a special role in the robotization development space. Robotization is becoming an increasingly common process, being one of the key elements of Industry 4.0. There is no turning back from this process anymore. Thus, a paradigm shift is taking place in terms of cooperation between humans and machines. They are ceasing to act as mere tools in human hands, and are beginning to play the role of collaborators. The goal of robotization in the context of a factory is to facilitate the performance of tasks. It is worth recalling at this point one definition of a robot, which indicates that it is a tool whose configuration of sensors, actuators and integrated control system provides a significant level of flexible, independent and autonomous operation. To some extent, the robot has a physical installation, which makes it necessary for the robot and a human to coordinate their actions here and now (Weiss et al., 2021, p. 2). Robotization poses new challenges for today's users, such as the need to implement organizational changes, or to change human awareness, behavior and attitudes, including leveling resistance to change. Robots can support

humans in many tasks, but this requires the trust and cooperation of human operators described above. The literature on robot deployments focuses mainly on technical issues and success factors related to human-robot interaction, ignoring the role of human factors (Lambrechts, 2021, p. 24). Trust in the machines appears here as a key factor. The role of robots driven by artificial intelligence, is changing from being tools for humans, to teammates. Humans and robots are increasingly taking on complex and collaborative roles, both in the manufacturing and service sectors. This collaboration is particularly evident in the military, construction, agriculture, medicine, social care, analytical services and manufacturing (Arslan et al., 2021, p. 79). To subject human-robot interaction to research, the problems of their contacts are defined in terms of autonomy, information exchange, teams, task shaping, learning, training, and the classification of types of interaction as remote or close, i.e. existence in collocation, is applied (Tunc, 2020, p. 30). However, a distinction is made between interaction and collaboration. For this purpose, the terms human-robot interaction (HRI) and human-robot collaboration (HRC) are used. Interaction means interacting with someone else, which in the context of work is understood as involving someone else: either a human or a robot. Collaboration, on the other hand, means working with someone toward a common goal. Consequently, cooperation in the context of humans and machines should be understood as a special case of interaction (Castro et al., 2021, p. 6). The term "cooperation" also appears in the literature. It is described as a sequence of actions aimed at a common goal, while cooperation is a sequence of joint actions toward a common goal (Kolbeinsson et al., 2019, p. 453). For example, military robots in combat conditions have to make decisions that could potentially result in the death of civilians, which raises many moral disputes (Marszalek-Kotzur, 2022b). After all, machines have ceased to be mere tools of war and have become collaborators with soldiers (Kamienski, 2022, p. 18). Trust is a dynamic process that changes and fades over time, sometimes rapidly declining as a result of changing interactions between team members (Huang et al., 2020, p. 310). Trust also establishes behavioral expectations that facilitate joint action. It becomes even more important in high-risk situations. Robots are often designed to replace humans in dangerous situations. This is when human trust in machines will be particularly important. If robots are to succeed as team members, then in hazardous situations people need to believe that other team members are capable of protecting their interests (Groom, Nass, 2007). The level of trust is influenced by the robots' sense of control. It is correlated with the predictability of machine behavior. The sense of being in control of the situation and having control over the robot are the factors that determine trust building. It is also essential to have knowledge of the machine's capabilities. Transparency of the system on which the robot operates is often mentioned in definitions of trust as a desirable and even necessary component (Simon et al., 2020, p. 18).

2.3. Valley of the uncanny

One of the components of the development of artificial intelligence is to give and assign human characteristics to robots, such as appearance, behavior, thinking. It is of great importance for human beings to mirror their behavior, thus imitating their body movements, facial expressions, gestures. The interaction then becomes smoother, the feeling of liking intensifies and the level of trust grows (Fortune, 2021, p. 102). Three factors play an important role: appearance, performance and proximity. The appearance of robots, specifically their anthropomorphism, is a critical dimension affecting interactions with humans. For humans, it is important that the robot has a shape similar to the human body. A moderate degree of robot resemblance to a human has been proven to affect a significant sense of safety. However, when a machine becomes too similar to a human, it begins to induce a sense of strangeness in humans and even causes terror (Simon et al., 2020, p. 10). Humanoid robots evoke different reactions in humans. "Face-to-face" relationships with robots in the near future will occur within a wide variety of activities, including professional, caregiving, medical, or social activities. The feeling of safety in the situation of being in the company of a robot and liking it may depend on a psychological phenomenon that is referred to as the uncanny valley (Masahro, 2012; Kruszewski, 2019). The name of this phenomenon was introduced in 1970 by Japanese robotics engineer Masahiro Mori (Mori, 2012, p. 98). According to Masahiro's hypothesis, robots arouse in people the more positive feelings, the closer their appearance is to a human. Yes, for example, we like a doll-shaped toy robot more than a mechanical arm turning bolts in a factory. However, once a certain limit of realism is crossed, the robot's strong resemblance to a real human begins to give rise to an unpleasant feeling of unease instead of excitement. In short, the intensifying stimulus of the robot's increasing resemblance to a human produces an increasing positive emotional response to the stimulus in the individual, but when the resemblance approaches perfection, the individual's emotional response drops sharply and becomes strongly negative (Burleigh et al., 2013, p. 1). This decline is what is known as the valley of awesomeness. The idea is that a robot's purpose can affect the limit of tolerance towards the robot's appearance. The situation is like in a horror movie. You can describe the strangest monsters and monstrosities, but if they are to be scary, you need to show a creature that moves and talks like a human being, seemingly indistinguishable from people you see every day on the street. Only, for example, his pupils or facial expressions are a little different from humans. This is how the valley of the uncanny effect works. Some differences and unnaturalness do not bother in characters that only resemble humans, but when the resemblance is too great, a small minor detail causes discomfort and concern. Thus, making a robot too much like a human can cause a loss of a sense of security. This sense of insecurity can stem from the fear of being replaced by the robot (Schindler et al., 2017). Thus, there is a thesis that robots that imitate humans too faithfully are met with a negative reception. Masahiro, for the purpose of illustrating his thesis, created a graph, according to which, as the resemblance to humans

increases, we observe increasing comfort, until we encounter a borderline model, for which the comfort level decreases sharply. It is worth noting that this phenomenon is considered both in the field of robotics, human-robot interaction, or social robotics, but also among game designers and computer animation authors. It is also interesting from a purely cognitive perspective, as its study allows us to better understand how we categorize objects that are the object of our perception (Kätsyri et al., 2015).

3. Human safety vs. robot liability

Despite the trust placed in robots, the operation of autonomous systems based on artificial intelligence can produce effects that are not always desirable. It can be subject to error and can cause a variety of harm. There are, for example, accidents caused by autonomous vehicles. There can be damages associated with medical misdiagnoses, losses caused by a decrease in the efficiency of production systems, financial losses caused by systems supported by artificial intelligence, losses resulting from investment errors of programs that support stock market investors, or damages caused by systems used for management in the energy industry. This raises the issue of liability. As the level of autonomy of robots increases, it will become increasingly difficult to assign responsibility for accidents caused by the robots' actions to a specific party. After all, the rules by which robots operate, through machine learning, can evolve as they perform specific tasks. The traditional ways of assigning responsibility in such a case are not in line with the common sense of justice and moral norms of society. It seems that today no one has enough control over the actions of a machine to be able to take responsibility for it. So the idea of assigning robots a legal personality was born. It has been considered in both Europe and the US. February 16, 2017. The European Parliament adopted a resolution containing a recommendation to the European Commission on civil law provisions on robotics. One of the reasons aiming to draft it became the belief that humanity has just stood at the threshold of an era in which increasingly advanced robots, androids, computers and other incarnations of artificial intelligence are giving rise to a new industrial revolution. It is likely to affect every stratum of society. It is therefore necessary to develop regulations that should take into account the legal and ethical implications, as well as the effects of these changes, but without simultaneously stifling innovation. Thus, the need for new, effective and up-to-date regulations was emphasized, which would consist, among other things, of creating universally acceptable and flexible definitions of the terms "robot" and "artificial intelligence", of updating and supplementing the current EU legal framework with key ethical principles that reflect the complexity of robotics and its many social, medical and bioethical implications. In addition, issues related to civil liability for damages caused by a robot should be analyzed to ensure that citizens, consumers and businesses alike receive the same level of efficiency, transparency and

consistency while ensuring legal certainty throughout the European Union. The resolution also raises the issue of diagnosing, analyzing and considering the legal consequences of giving robots a separate legal status in the long term. The idea is to give the most developed autonomous robots "the status of electronic persons responsible for repairing any damage they might cause, and possibly applying electronic personhood when robots make autonomous decisions or their independent interactions with third parties" (RPE, 2017). Thus, we are dealing with the creation of a new legal category with specific features and implications. Taking a clear position on the necessity, as well as the rightness of giving robots the status of electronic persons with electronic personality seems to require deep and extensive analysis (Biczysko-Pudełko, Szostek, 2019). At this point, the Civil Code distinguishes between natural persons and legal persons. These categories refer to people. How, then, to treat robots in a situation where it is increasingly difficult to consider machines, which are in many respects more accurate, faster and learning behavior, as mere objects. However, the creation of a new category such as the electronic person is, one might say, a gigantic civilization change. It also raises a key question: can the development of artificial intelligence be placed within the framework of the "law of robots"? Or could it be that legal regulations will never keep up with the development of technology? It seems that the most important thing will be for possible disputes to be settled, on the basis of general clauses, by wise and reasonable people (Nightingale, 2018). That is why the May 4, 2020 draft regulation of the European Parliament on liability for the operation of artificial intelligence systems emphasizes that the entity responsible for the damage can be either a human being or a legal entity.

4. Is there a robot ethic?

The unpredictability of the formation of artificial intelligence, due to its cognitive capabilities, dictates that various forms of ensuring the safety of use should be sought. One of the more effective ones seems to be conducting research in the area of AI ethics and seeking to enforce specific ethical arrangements on legal grounds. Multifaceted political, scientific and social engagement plays a special role here. Ethics must first and foremost respond to the challenges posed by real technological possibilities. It must not be seen as a futuristic goal, but as a solid scientific field with real contributions to the creation of intelligent machines (Lipińska, 2022). A number of concepts are emerging for developing ethics regarding artificial intelligence. One of them postulates the transformation of ethics into so-called "microethics", postulating that at certain points there would have to be a fundamental change in the space of ethics. There would have to be a transformation of ethics to ethics of technology, ethics of machines, ethics of computers, ethics of information and ethics of data (Hagendorf, 2020). There are a number of discussions on trying to address the ethics of artificial intelligence

(Kuzior, Marszałek-Kotzur, 2022). On February 13, 2018, the first conference on Artificial Intelligence, Ethics, and Society (1st AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society) was held in New Orleans, United States. Its organizers were two associations: Association for the Advancement of Artificial Intelligence (AAAI) and Association for Computing Machinery (ACM). More than 300 people attended the conference. It was stated then that the ethics of artificial intelligence is part of the ethics of technology. It is divided into roboethics, which is concerned with the moral behavior of humans who design, construct and use artificially intelligent beings, and machine ethics, which is concerned with the moral behavior of artificial moral agents (Kuipers, Mattei, 2018). At the time, the US newsletter Ethikos Weekly published a text pointing out the inappropriateness of the term "AI ethics", which creates terminological confusion. It could imply that moral causality is attributed to artificial intelligence, rather than to the humans who develop its systems (Gasparski, 2019; EW, 2018). Discussions related to ethical challenges arising with the development of artificial intelligence, including the development of robots, seem to be gaining momentum. The literature offers various proposals for guidance to help evaluate the ethical dimensions of artificial intelligence. For example, it is recommended to establish a solid foundation, to use ethical principles that are focused on human welfare, to promote a holistic approach to social, economic, scientific, legal, engineering and technological issues and ethical issues in artificial intelligence research. Another is the issue of the presence of ethicists and ethics from the very beginning of the technology chain, developing and enforcing rules to ensure respect for human dignity and human rights. It is also crucial to limit military applications of AI and promote world peace through a global ethical governance framework. Also not to be overlooked is guaranteeing social equality in AI, i.e. respecting gender equality and refraining from prejudice (Gasparski, 2019). On the website of the UK's Institute of Business Ethics, as of January 2018, there is an article titled Business Ethics and Artificial Intelligence, posted with the intention of pointing out the essence of artificial intelligence (BEB, 2018; Gasparski, 2019) The bulletin identifies ten key issues organized by the following letters of the word ARTIFICIAL: Accuracy, Respect of privacy, Transparency, Interpretability, Fairness, Integrity, Control, Impact, Accountability, Learning, i.e., Accuracy, Respect of privacy, Transparency, Understandability, Fairness, Integrity, Control, Impact, Accountability, Learning. Each of these issues has been defined and dedicated to business organizations for reflection, along with the suggestion to undertake a comprehensive and multi-pronged debate on the value and impact of artificial intelligence on the business environment, with as many stakeholders as possible. Business decision-makers, employees, customers and the public should be aware of the impact of AI on their business and on their stakeholders, taking into account not only the benefits, but especially any side effects (Gasparski, 2019). EU bodies have set themselves the goal of building an AI ecosystem based on a community of European values, among which human dignity is central. Accordingly, the European approach to AI is called human-centered AI. The Union wants to become a leader in an ethical approach to technology and wants to

distinguish itself with this on the world stage. To this end, as can be read in the document, "Europe needs to define a normative vision for the AI-led future it wants to realize" (EU, 2019, p. 11.) In order to develop expert opinions on new technologies, the European Commission has set up three expert groups: the High-Level Independent Expert Group on the Impact of Digital Transformation on EU Labor Markets, the Expert Group on Accountability and New Technologies and the High-Level Independent Expert Group on Artificial Intelligence. The latter addressed ethical issues of artificial intelligence development. The Independent High-Level Expert Group on Artificial Intelligence (AI HLEG), composed of 52 experts, was established in June 2018 and worked until July 2020. During this time, four significant documents were produced: Ethics Guidelines for Trustworthy AI (April 10, 2019), Policy and Investment Recommendations for Trustworthy AI (June 26, 2019), *Assessment List for Trustworthy AI* (July 17, 2020) and Sectoral Considerations on the Policy and Investment Recommendations (July 23, 2020). These served as the starting point for initiatives by the European Commission and member states (Lipinska, 2022). In April 2021, the Artificial Intelligence Act was released: the first legislation regulating artificial intelligence. In it, the European Commission proposed the first EU legislative framework for artificial intelligence. The draft analyzes and classifies AI systems that can be used in various applications. The classification is based on an assessment of the risks it poses to its users. Technologies endowed with artificial intelligence that pose an unacceptable risk, i.e. considered a threat to humans, will be banned. These include, but are not limited to: cognitive-behavioral manipulation of people or certain vulnerable groups, such as voice-activated toys that encourage children to behave dangerously; citizen scoring, which is the classification of people based on their behavior, socioeconomic status or personal characteristics; real-time and remote biometric identification systems, such as facial recognition. Some exceptions will be allowed, such as remote biometric identification systems that identify with a significant delay and are used to prosecute serious crimes, but only after court approval (EU, 2021). In this regard, the EU document postulates a correct understanding of three fundamental values, such as human dignity, autonomy and moral responsibility. Autonomy in the ethically relevant sense of the word can only be attributed to human beings. The revolution resulting from the creation of artificial intelligence will still, and perhaps above all, concern the inter- and intrapersonal condition of each of us (Marszałek-Kotzur, 2022a). The record on the legal and ethical implications and effects of these changes without inhibiting innovation seems to be the equivalent of Collingridge's dilemma. In 1980, David Collingridge pointed out the paradox of control in relation to technology development. At the beginning of a technology's development, it may not make sense to control it due to the lack of possibility of undesirable consequences of its use. However, when these consequences manifest themselves, control is very difficult because of the integrity with economic and social systems (Héder, 2022).

5. Summary

Conducted above analysis of the state of ethics concerning the development of artificial intelligence and robotics of problems in this area, the arrival of which has so far escaped as remote or impossible. The outline of the above issues was also intended to draw the reader's attention to the issue of new challenges to the application of ethical norms relating to the use of the latest technologies both in the global perspective and the individual human being. All of the above issues are related to the question of ensuring human security, and therefore trust in artificial intelligence, responsibility and ethical action, also the observance, or violation of human rights. In the European Parliament, however, much attention is paid to ethics. It promotes the development of artificial intelligence fast and decisive, but at the same time fair and safe for humans. This is the difference between Europe and some Asian countries, where what matters is technology, its quality and the speed of its development. Asian countries many robots already resemble humans, and their resemblance to humans is still being improved. In Europe, the prevailing conception to date is that a robot is supposed to serve humans and cannot "become" a human. In the EU, it is clearly emphasized that it is unethical to program machines to do things that are socially harmful and harm humans. It is worth considering in this perspective what is the difference between humans and artificial intelligence, so as not to lose sight of the key question for philosophical anthropology: who is a human being? Overlooking this question seems to be one of the causes of the contemporary anthropological crisis. It may also threaten the definition of fundamental human characteristics and the characteristics of artificial intelligence. This paper is only an outline of the issue and does not claim to be exhaustive. It can be a starting point for conducting detailed research in the above area.

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MULTI-LEVEL COOPERATION WITHIN THE FRAMEWORK OF THE INTEGRATED QUALIFICATIONS SYSTEM AS AN OPPORTUNITY TO BETTER ADAPT EDUCATION TO THE LABOUR MARKET NEEDS

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Purpose: Presentation of the complexity of the stakeholder structure of the Integrated Qualification System (ZSK in Polish), in particular the area related to the category of the market qualifications. This system is an element of public policy, which is a response to the dynamism of change in the market, aimed at acquiring and supplementing human capital qualifications in accordance with the needs of employers. The article also shows possible scenarios for the use of the ZSK in secondary and higher education.
Design/methodology/approach: The author uses the method of analysis of the literature on the subject, legal documents of available reports.
Findings: The traditional distinction between formal and non-formal education is losing relevance. At the stage of current societal development, only offering high-quality educational services that incorporate formal verification of learning outcomes (validation) and combine standard forms of formal education with the inherently more flexible educational structures inherent in non-formal education can ensure synergies in the implementation of an effective lifelong learning policy.
Practical implications: The conclusions can be used by governing bodies of secondary schools and universities.
Originality/value: presenting the opportunities for the use of ZSK market qualifications within the secondary and tertiary education system.

Keywords: Integrated Qualification System, education, labour market, matching competences to labour market needs.

Category of the paper: Conceptual paper.

1. Introduction

On 15 January 2016, with the entry into force of the Act on the Integrated Qualification System (ZSK) (Ustawa o Zintegrowanym Systemie Kwalifikacji, 2015), changes were initiated in the Polish qualification acquisition system, aimed at ordering and standardising the various categories of qualifications awarded in formal and non-formal education. The act also introduced a new category of qualifications called market qualifications. According to the wording of the Act, this term is used to describe qualifications not regulated by law, the awarding of which is based on the principle of free economic activity. These qualifications function in the Polish system of non-formal education, however, so far they have not been regulated in any way, and their substantive scope, quality and manner of verification has been determined by various types of business entities, such as training companies, institutions dealing with certification, employers or industry associations. At the same time, these qualifications are characterised by the greatest dynamics of change in terms of adaptation to the needs of the labour market, changes in the economy, and in order to include them in the Integrated Qualification System, the cooperation of many stakeholders in the sector to which the qualification belongs is needed. In this publication, the authors present the complexity of the stakeholder structure of the Integrated Qualification System, in particular the area related to the category of market qualifications. The article also shows possible scenarios for the use of the ZSK in secondary and higher education in order to better adapt education to the dynamically changing needs of the labour market.

2. ZSK as a realisation of lifelong learning

The change in thinking about lifelong learning, which places the learner at the centre instead of the social masses and focuses on supporting the learner in fulfilling his/her own needs for development and self-fulfilment, coincided with the end of the second industrial revolution and continues to operate in the era of Industry 4.0. With the beginning of the 1990s, lifelong learning, which had previously been one of the pedagogical concepts, became the main paradigm shaping thinking about learning, education and the organisational solutions that support it (Jędrzejczak, Osowska, 2022; Kuzior et al., 2023).

With the work on the implementation of the Act on the ZSK, the special role of market qualifications in the context of lifelong learning (LLL) was somehow recognised, giving them legal status and a place in the system next to qualifications awarded in the education and higher education system (full and partial) and regulated qualifications (established by separate

regulations, the awarding of which takes place according to the principles set out in these regulations).

Although the structure of the ZSK concept developed in Poland and the division of qualifications is unique, as it takes into account the history and the entire heritage of the national education system, the basic assumptions, namely the recognition of different ways of achieving qualifications (through education, training, independent learning) and the development of reliable rules for the recognition of qualifications, have their roots in European work on the implementation of the LLL concept.

In 2008, the European Parliament and the Council of the European Union adopted the Recommendation on the establishment of the European Qualifications Framework for lifelong learning (PEIR, 2008), which was completed in 2009 Recommendation on Respecting the European Credit System for Vocational Education and Training (PEIR, 2009). The development of both documents accelerated work in the member states on the introduction of qualification recognition systems, which resulted in the development of the Polish Qualifications Framework and the implementation of the Act on the ZSK (Migałka, Panas, 2018).

3. Multidimensionality of cooperation at the stage of inclusion of qualifications in ZSK

Each institution that undertakes the submission of a market qualification to the system has to reckon with the fact that in the ZSK it will have to deal with multi-level cooperation with entities with which economic operators usually do not have many opportunities for cooperation (e.g., representatives of ministers, entities that often compete during environmental consultations, supervisory entities such as external quality assurance (QA) entities). This makes it necessary to develop new standards for this cooperation.

The first stage where collaboration is necessary is the process of describing qualifications itself, which is usually preceded by an analysis of market demand for the competences in question. The key here is to cooperate with the industry within which the qualification is defined, as well as to follow economic and social megatrends that can help to anticipate the demand for new qualifications. In the context of the fourth industrial revolution, which is entering more and more areas of the economy with increasing dynamics and includes far-reaching automation of processes not only - as was the case earlier in history - in industry, but above all in services, including advanced ones, competences that are based on the use of incremental technologies, artificial intelligence algorithms, machine learning, process automation, blockchain (Fałek, 2022; Kwilinski, 2019; Kuzior et al., 2022; 2023; Bilan et al., 2022; Babenko et al., 2021; Tkachenko et al., 2019) are becoming particularly important today.

This is increasingly evident in the market qualifications reported and described in cooperation with technology companies, among which appear qualifications such as *Programming and operating a 3D printing process, Designing business process automation or Designing and building a machine learning model architecture* (ZSK - Rejestr Kwalifikacji).

The next stage, where more formalised cooperation begins, is the application assessment process itself for the inclusion of qualifications, which is the responsibility of the minister of the sector of the economy to which the qualification belongs (e.g., for educational qualifications it will be the Minister of Education and Science, for healthcare qualifications - the Minister of Health, for technology qualifications - the Minister of Digitalisation). As part of this phase, consultations are held with stakeholders (representing the broad economic area for the qualification in question), who can comment both on the need to include the qualification in the system, as well as substantive or methodological comments on the content of the proposal. The key factors determining the success of cooperation in this phase of qualification assessment are above all: understanding of ZSK assumptions, proficient navigation in ZSK terminology and lack of conflict of interest in relation to the entity that is the author of the qualification. Despite the passage of seven years since the implementation of the MCC in Poland, there are still difficulties in carrying out this phase taking into account the above factors, mainly due to low awareness of the importance of the MCC and occasional participation in consultations.

During the next two phases, the qualification through the minister is evaluated by specialists and industry experts, who perform a detailed substantive analysis of the application, make comments and check whether the level of the Polish Qualification Framework was assigned correctly. At this stage, work on modifications to qualifications sometimes takes place in face-to-face meetings and workshops, but most often it is carried out remotely and is limited to comments made by experts and responses to them by qualification authors. This form of collaboration requires more attention to the real intentions of the reviewers due to the limitations of written communication.

4. Cooperation with the institutional environment of the ZSK

Once a qualification is formally included in the system (by way of an announcement in the Polish Monitor), it begins its functioning in a broad environment of entities that have an impact on the implementation of education and employment policy. *The institutional environment (implicit in ZSK) consists of at least: education and higher education systems, labour market (...), public administration* (Stęchły, 2021).

From the point of view of the successful implementation of market qualifications, each of these stakeholder groups has a different function. Education and higher education systems provide the audience for market qualifications that complement the skills of pupils and students.

Labour market institutions and entities provide a reference point for the demand of specific market qualifications, as well as a kind of verifier of the quality of qualifications themselves and the usefulness of formal systems of qualification confirmation. Public administration - central and local, on the other hand, should be a catalyst for programmes of implementation of systemic solutions of qualifications distribution, creation of financial solutions for the acquisition of qualifications and dissemination activities addressed to all groups of stakeholders in the system.

The institutional environment of the ZSK proposed by Stęchły would be worth extending to non-formal education entities, non-governmental organisations operating in the field of education, sectoral associations, as well as sectoral competence councils, which in the basic objectives of their activities have, among other things, the acquisition of knowledge from entrepreneurs on qualification and occupational needs occurring on the labour market in a given sector of the economy, the dissemination of information on qualification and occupational needs and the formulation of recommendations on the adaptation of the human resources of the economy to the current needs of entrepreneurs in a given sector of the economy (Ustawa z dnia 9 listopada 2000).

5. Market qualifications as additional competence profiles of secondary school students and graduates

The findings of contemporary researchers show that orientations towards learning are already formed in childhood and have a strong influence on an individual's further educational fate (Kurantowicz, Nizińska, 2012). Attitudes towards increasing knowledge in adulthood also depend on the conditions in which an individual grew up, including school-related conditions (Cincinnato et al., 2016). In this context, it is important to cooperate in the dissemination of knowledge about existing national systems of confirmation of qualifications and ways of their implementation with schools, especially secondary schools, as it is at their stage that the first contact with labour market requirements and decisions on career orientation usually begins.

Cooperation of schools with entities in the field of non-formal education (e.g. training institutions, entities providing additional classes for students) is frequent in Poland, mainly due to the availability of European funds, some of which are directly intended to raise the competencies of children and young people studying through additional extracurricular activities. *However, the link between this cooperation and the qualifications awarded by these institutions remains loose - these activities are a pragmatic development or supplement to the educational offer of educational institutions or universities* (Stęchły, 2021). A certain degree of freedom in the selection of additional qualifications offered to students makes it difficult to pursue systemic solutions that could realistically increase the market value of school graduates entering the labour market.

The remedy is to use the Integrated Qualifications System (ZSK), which makes it possible to offer market partial qualifications in schools directly linked to the student's basic education programme. This is particularly useful in trade or technical schools, where the basic profession that a student acquires during his/her education can be encapsulated with additional qualifications that make it possible to respond to current labour market needs and increase the possibility of recognising achievements from different qualification subsystems (formal, non-formal). An example of such a juxtaposition of qualifications can be the supplementation of the professional profile of a student learning the occupation of a chef (occupation no. 512001) (Rozporządzenie Ministra Edukacji Narodowej z dnia 15 lutego 2019) with the market qualifications "Preparing food in accordance with market trends and principles of healthy nutrition", „Mixed beverage and alcohol service" and „Programming and operation of the 3D printing proces" (in the context of the growing popularity of the use of 3D printing in catering) (ZSK - Rejestr Kwalifikacji).

Another good practice already implemented in secondary school is the modification of the curriculum using the market qualification and extending it to all students studying the profession. Such an approach was applied at Technical School No. 4 in the Complex of Economic and Service Schools in Zabrze, where, as part of a pedagogical innovation, the learning outcomes of the market qualification 'Customer Relationship Management with the use of the CRM system', included in the Integrated Qualification System on the basis of the Announcement of the Minister of Development, Labour and Technology of 2021-04-15 (Monitor Polski, poz. 421), were included in the curriculum. The programme modification is extended to third-grade students in the profession of economic technician. The content is implemented in a two-year system in the third and fourth grades in a vocational subject resulting from the core curriculum "Computer systems for personnel and accounting" (Opracowanie koncepcji…). At the end of the training cycle, students will take both vocational examinations offered by the school and validation of a market qualification conducted by an external institution authorised to certify.

The usefulness of linking the formal education system with market qualifications in shaping greater attractiveness of graduates of Polish schools has been noticed by the government administration and taken into account in educational policy. The formal inclusion in the Act "Educational Law" (Ustawa z dnia 14 grudnia 2016) of the possibility for trade and technical schools to use market qualifications as part of the hours allocated for the implementation of the curriculum broadens the possibilities of obtaining synergies from the combination of different qualification subsystems: formal and non-formal.

Creating an education policy that takes into account the examples presented above for the use of market qualifications in the education system can make a significant contribution to bridging the competence gaps of people entering the labour market and providing employers with job candidates who are better prepared to fulfil professional tasks.

6. ZSK market qualifications as short forms of education in the educational offer of higher education institutions in Poland

The period of system transformation in Poland was a time of prosperity for the higher education market. For the first 25 years, all indicators were growing: the number of students, the number of HEIs, the scale-up rate at the tertiary level. However, at the same time, another "indicator" was also growing, which can be called the inflation of the importance of a university diploma. At a time of a steady inflow of new baby boomers (the first decade of the transition period) and dynamic economic development in the second and third decades (the pension from membership of the European Union), this negative trend was not a matter of public concern.

However, the entry into the period of demographic decline and the appearance of symptoms of structural changes on the labour market (resulting from technological progress and consequent social trends) opens up the field for a serious discussion on the quality of the educational offer of universities, which unfortunately, due to the legal and financial system, are mainly focused on science and parameterisation.

With the changes in the labour market related to the use of ever new technologies and organisational methods, there is an increasing demand for the competence adjustment of employees, i.e. people who formally completed their education in the past and entered the labour market.

The hitherto linear career model: education-work-experience, is being transformed towards non-linearity, where the education element (the need for further training) is becoming not only a condition for improving the labour market situation (better earnings) but increasingly a condition for functioning in the labour market (providing work).

An increasingly common organisational formula for the labour market is the TaaS (Talent as a Service) model, i.e. the 'uberisation' of the workforce combined with a 'talent cloud'. Organisations are increasingly using external resources, a kind of virtual network of experts with the necessary advanced skills, and these talents (thanks to, among other things, the updating of their competences and skills) choose for themselves the projects in which they want to be involved (Sobotka, 2019). It is worth pointing out that this phenomenon has been signalled in the literature many times to a large extent as the temporariness of jobs and individual identification and responsibility for one's career, including further training (Drucker, 2000; Florida, 2010; Kosmala, 2009).

This means increased demand for high-quality educational services, i.e. the range of services traditionally offered by universities, primarily as postgraduate studies.

According to the Central Statistical Office (CSO), in the academic year 2021/22, there were 1218.2 thousand students of traditional studies in universities in Poland, and the number of participants in postgraduate studies was 166.2 thousand (GUS, 2022).

By contrast, in the 2020/21 academic year, the figures were as follows: 1218.0 thousand traditional students and 149.6 thousand postgraduate students (GUS, 2021).

It can therefore be seen that, while the overall number of students has hardly changed at all, the number of postgraduate students has increased by as much as 10%. This clearly indicates an increase in interest in this form of acquiring knowledge. Of course, this period was notable for the changes in the labour market resulting first from the Covid-19 pandemic and later from the war in Ukraine.

The question arises as to whether this apparent change in quantitative terms (increased interest in postgraduate study provision) due to changes in the labour market is linked to a qualitative change? Not necessarily. The literature on the subject points, for example, to the fact of a mismatch between the educational offer and the actual demand of the labour market (Sobotka, 2017), or the argument of "selling" idealised postgraduate studies (which are not a response to labour market demand) by universities in response to the perception of potential consumers operating in a culture of digital narcissism, offering the illusion of achieving fame and success (Słaboń).

Therefore, it seems worthwhile to consider extending the educational offer of universities to other, commonly available tools. While, within the framework of functioning legal regulations, postgraduate studies have the character of a partial qualification, there is nothing preventing this form of educational service from being combined with the possibility of acquiring market qualifications. All the more so, as the university can also become a certifying institution for market qualifications being the learning outcomes of postgraduate studies.

7. Summary

As the implementation of the Integrated Qualifications System (ZSK) proceeds, one might be tempted to conclude that the traditional distinction between formal education and learning is losing relevance. Learning is defined as an activity that is 'unscheduled', 'incidental' and 'part of everyday life' (Muszyński, 2014). Education, on the other hand, is understood as a learning process that is outcome-oriented and leads to the achievement of intended outcomes (Muszyński, 2014). Past research work has shown that education is not possible without learning, but learning can occur outside formal and institutional contexts (Anielska, 2017). It seems, however, that at the stage of current societal development, only by offering high-quality educational services that incorporate formal verification of learning outcomes (validation) and combine standard forms of formal education with the inherently more flexible educational structures inherent in non-formal education can synergies be achieved in implementing effective lifelong learning policies.

At the same time, the successful implementation of market qualifications as an exemplification of non-formal forms of competence acquisition requires mutual trust, continuous improvement, demonstration of initiative, willingness to bear risks and investments, as well as the willingness of all stakeholders in the ZSK system to cooperate. In order for the effects of implementation to be sustained and to have a real impact on social change in terms of the use of ZSK in adult learning, further cooperation between the organisations involved in the work on the system and even greater effort and effective mechanisms for disseminating knowledge, above all among employers and citizens, about the benefits of using ZSK in building personal and professional development are needed.

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CARING FOR THE QUALITY OF LIFE AND WELL-BEING IN THE PERSPECTIVE OF FORMS OF PERSONAL AND PROFESSIONAL DEVELOPMENT. PRACTICAL PHILOSOPHY OR PHILOSOPHY AS *ARS VITAE*

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Purpose: The leading purpose of the article is to highlight the importance and role of philosophy, including the humanities and social sciences, in the processes of building well-being and in the procedures of improving the quality of human life. I conduct the analysis by referring to contemporary forms of personal and professional development, including coaching, counseling, mentoring, training, therapy, including existential therapy, as well as consulting and teaching.
Design/methodology/approach: This publication employs a comparative-descriptive analysis method.
Findings: In the article, I prove that philosophy, even today, can have a real impact on the quality of relationships built both in private and professional life, in various types of organizations/ institutions. I describe the importance and relevance of organizational culture and the impact of the humanistic style of management on the quality of life and the building of human well-being in the 21st century. The analyses conducted in the article are related to the demands of Industry 5.0, which is characterized by an increase in the importance of the human factor.
Research limitations/implications: I limit my research to describing a few selected forms of personal and professional development that focus on the human being and his needs. The evoked forms of development echo the demands of the fifth industrial revolution (industry 5.0).
Practical implications: The subject of the article is the possibility of using the methods of philosophy in practice and defining philosophy as the art of living. In it, I show that the practical and therapeutic importance of philosophy, already present in antiquity, can be successfully used in the helping professions of the 21st century.
Social implications: In the publication, I argue that each of the listed forms of developmental assistance draws from the source of the humanities, invites in-depth humanistic and humanistic-social reflection serving humanity. The task of the performers of the helping professions described in the article is to support their charges, which consequently leads to an improvement in their quality of life in society and an increase in social well-being.
Originality/value: Representatives of the humanities have so far rarely commented on the possibility of using the humanities (philosophy, ethics, axiology and sociology) in the 21st century aid professions. In the article, I try to show the humanities, especially philosophy,

as a necessary basis when performing aid professions in the current economic and industrial conditions. Thus, I argue for the topicality of humanistic and philosophical reflection, which nowadays – unfortunately too often – is superseded, eliminated or not taken into account.

Keywords: Practical philosophy, business organization culture, helping professions, personal and professional development, caring for the quality of life and well-being.

Category of the paper: Research and conceptual paper.

"Don't try to become a successful man, but a man of value"
Albert Einstein

I dedicate this article to my Students

1. Introduction

The heritage of the tradition of philosophy unites representatives of various helping professions. The philosophical heritage of the past is common to all humanities and social sciences and is used to help both psychologists, psychotherapists, sociologists and, of course, philosophers and historians of philosophy, who successfully use philosophical knowledge when doing the work of a coach, mentor or counselor. How to draw on the achievements of the history of philosophy depends on the person drawing (Ostasz, 2011, p. 15).

In the article, using the comparative-descriptive method and taking into account the practical-therapeutic nature of philosophy, I analyze the possible influence of philosophy on the quality of life, especially on the construction of well-being of modern man. The purpose of the article is to indicate the possible place of philosophy, including the possibility of using academic philosophical knowledge in the processes of personal-professional development. Nowadays, the processes of personal-professional development, using the indispensable base of the humanities and social sciences, especially human-centered philosophy, are a methodical pillar of coaching, counseling or advising, mentoring, business training, psychotherapy, consulting and teaching. In this discussion, I argue that the highlighted contemporary helping professions, using dialogue as a basic working tool, focus holistically on the client and on topics concerning the quality of his or her life, including, in particular, coping with everyday difficulties and building well-being. The practical-healing significance of philosophy as a - dialogue-supported and character-forming - art of living (*ars vitae*) was already present in ancient philosophy (See Lasch-Quinn, 2013).

2. The Art of Living. Philosophy in practical terms

Epictetus, representing the ancient school of Stoicism, once uttered a significant sentence that read: „In fact, we are brilliant and proficient in lecturing, and if only some trivial question of conduct arises, we are capable of logically dabbling in the subject, but put us to a practical test, and we will find that we are nothing but miserable wrecks" (Salzgeber, 2021, p. 97; Kuzior, Marszałek-Kotzur, 2022). The cited words of Epictetus are an expression of an indirectly stated objection to philosophy conceived solely as theoretical reflection; at the same time, they are also an important demand, and a serious call to give philosophy its proper meaning. The proper meaning of philosophy is fulfilled when it is grasped in the form of a practical-therapeutic task.

Philosophy in its practical dimension steers the process of self-knowledge and fosters finding one's place in the world, and in this regard, as the Renaissance philosopher Michel de Montaigne wrote, „there is nothing as beautiful and worthy as to fulfill one's role as a human being well and properly" (Montaigne, 1985, p. 322.). Understood in this way, philosophy encourages critical pondering, the search for independent solutions to life-vocational dilemmas, and „consequently prepares for real self-determination, thus contributing to self-actualization and developmental stimulation of the quality of human life" (Woszczyk, 2013).

Philosophy in its practical, especially ancient, Platonic-Socratic and Stoic-Epicurean, as well as Renaissance, sense is an art of character formation, a science of life and a valuable skill for modeling it. Philosophy is also a way of in-depth, therapeutic study of one's own views, the views of another/another person, also analyzing life attitudes. Philosophy in practical terms becomes a human-centered skill of holistic education. This holistic philosophical education can also be used in the present era. This is confirmed by the words of Professor Tadeusz Gadacz, who believes that modern education should not, and in fact cannot, consist only „in the transfer of knowledge and the acquisition of relevant competencies, but should be combined with the full formation of man, including in the moral, axiological and aesthetic dimensions" (Gadacz, 2015, p. 26; Gierłach, Gadacz, 2022, p. 31).

The distinguished dimensions relate to a person striving for fulfillment and self-accomplishment, both in the aspect of private/personal and professional life. Each of the distinguished aspects requires the recognition and involvement of professed values and motivation systems. The values and motivation systems developed are peculiarly understood tools for the practice of situational coping with oneself when life becomes difficult for some reason (Salzgeber, 2021, pp. 157-200).

3. Experience of suffering in the face of the need to live a fulfilled life

Hardships in life not infrequently become the cause of experiencing suffering and pain. Difficult situations and life experiences often involve the need to struggle with intractable existential dilemmas, and consequently lead to a loss of faith in the meaning of life. However, it should not be forgotten that suffering and pain are inherent aspects of human life. Often, they are also accompanied by unfulfillment or lack of a sense of fulfillment, also helplessness in the face of inevitability; helplessness in the face of some of life's situations/circumstances; sometimes, it is also a life of worry and fear; it is tasks carried out in fear and anxiety paralyzing especially morally.

In the area of difficult life situations, we can include all kinds of inconveniences, from – more or less tolerable – our own awkwardness and inconveniences, for example, the inconveniences of illness that prevent us from pursuing our life goals, through the circumstances of a fellow struggling with the chronic illness of a loved one. A difficult and demanding life situation may involve the mental effort of taking care of a bedridden person, for example, in a terminal state of illness. Thus, the art of living is also the art of looking at the suffering of another, enduring suffering, as well as enduring oneself in a state of affliction/suffering (Kruszyńska, 2018, p. 200).

Difficult and demanding life circumstances can also include professional dilemmas, financial and economic difficulties and hardships, problems with overwork, professional burnout, professional dissatisfaction and disappointment, professional time pressure, feelings of dissatisfaction with professional activities. Devastating life circumstances can be combined with exhausting struggle with unhealthy forms of competition in the workplace; problems with self-acceptance, with loneliness, problems in relationships, in interpersonal contacts, problems with rejection, with the need to cope with the lack of acceptance and tolerance, with coping with the ostracism of the immediate environment or socio-cultural ostracism in general (Tylka, 2012, pp. 1-8).

As a result of a demanding, weary and unpleasant life experience – in the words of Pierre Teilhard de Chardin – „an onslaught of destructive forces" (Tylka, 2012, p. 8), there also arises a strong need for change, to make life bearable, different, better, meaningful, not devoid of meaning and joy, not deprived of value; change initiated also to make life a happy, fulfilling life, realized in a friendly, tolerant environment/circumstances, with the awareness that experiencing the burden of suffering and experiencing the relief of joy determines the inner energy, the dynamics of the person, the dynamics of the subjective self-might. This subjective and free self-might comes, according to French philosopher, phenomenologist Michel Henry, from the flourishing of „inner powers, enabling the growth of sensibility. The fundamental law of sensibility, in turn, is the most internal law of life – the law of the inversion of suffering into

joy" (Kruszyńska, 2018, p. 200). The inversion of suffering into joy supposes a change, while change requires a conscious decision, which often comes from our attitude.

Philosopher Bohdan Dziemidok recognizes that our life attitude has a significant impact on carrying out change. According to Dziemidok's postulation, a life mindset expresses „a relatively stable attitude towards the world, life and people, as well as a current attitude towards events that are or have been our lot" (Dziemidok, 2017, p. 11). A life attitude encompasses the keys we use to interpret the world, it includes our style of verifying reality, also the strategies of emotional and cognitive response to the world, including „the current, ad hoc attitude to current affairs and events" (Dziemidok, 2017, p. 11).

Consequently, this also raises the question of the essence of a fulfilled life. It is a hallmark of human beings to reflectively inquire about happiness (both in its subjective and objective sense), and about the path leading to happiness. Also in this reflective inquiry about happiness and the path to happiness, man seeks to understand himself and to understand the world around him, often by developing the ability to rationally-intuitively predict what will be. In other words, to develop in oneself the ability to learn to live in the world by experiencing, going through, and gaining distance from circumstances and the world; also by maturely, consciously recognizing that there are no unimportant matters in life, so it is the duty of man to strengthen resilience in himself, that is, the right attitude expressed in the ability to consciously take active actions that initiate change in the existing world (Syrek, 2019, p. 223).

At this point it is worth recalling the words of the historian of philosophy – a participant in the September campaign, an activist of the independence underground and anti-communist – Tadeusz Płużanski, who recognized that this dual power of experiencing suffering and the need for fulfillment „seeds restlessness and causes a scattering in the ascending march of life, which should develop calmly and cohesively" (Płużanski, 1963, pp. 44-45). In this situation, the question of the Enlightenment philosopher Immanuel Kant also becomes right: What can I put my hope in? Man, failing to see an end to his stifling fears and hopes, plunges into skepticism as pessimistic relativism and finds it difficult to answer the basic questions: what is happiness?, how to define one's happiness?, what is well-being?, what is fulfillment in the dimension of private and professional life, and how to understand and define well-being? (Płużanski, 1963, p. 45).

4. Well-being vs. mental health

According to the position of philosopher, educator and psychiatrist Kazimierz Dąbrowski, well-being is a state of mental equilibrium as homeostasis manifested in the ability to maintain productive and effective activities. Well-being is also the potential to develop the ability to coexist with the environment and the agility to transform it. Dąbrowski also recognizes that

mental health involves the ability to adapt easily and efficiently to changing circumstances and conditions of life; in other words, mental well-being means mental, psychological, as well as social balance (Dąbrowski, 1962; 1989, pp. 20-29; Syrek, 2019, p. 225).

On the other hand, according to educator Ewa Kasperek-Golimowska, psychological well-being is the result of cognitive-emotional evaluation of one's life. This evaluation is determined by a high level of fulfillment and life satisfaction (Kasperek-Golimowska, 2012, pp. 179-213). On the other hand, educator Ewa Syrek notes that the category of mental health is associated with physical, mental, social and spiritual well-being. Mental health is a state of well-being in which „an individual realizes his or her abilities, can cope with the normal stresses of life, can work and is able to act for the benefit of his or her community. Health is the basis for a good quality of life in every period of the life cycle" (Syrek, 2019, p. 224).

The sense of well-being has gained particular importance in connection with the fifth industrial revolution, and therefore with the currently prevailing form of industry 5.0. This industry is characterized by human-centric, sustainable development and resilience. This new form of industry sets itself not only technical, economic and environmental goals, as well as goals that make it immune to unpredictable, but occurring crisis situations, but also sets itself goals focused on finding solutions to improve the well-being of employees[1].

5. Personal and professional development

Therefore, the sense of well-being also, and perhaps above all, applies to the work situation of employees of various organizations, both public and non-public school and educational institutions, as well as the broader business sphere, including small companies and enterprises and large, often multinational corporations. Each of these organizations is made up of people, and with them their professional and private goals.

For this reason, „the approach of various organizations, companies and corporations to employees has been changing in recent years. Caring for their fitness, commitment and job satisfaction is no longer seen as a duty, but as an opportunity. These activities contribute to the productivity and effectiveness of the organization and have a positive impact on the company's image" (Kozioł, 2016, pp. 165-166). This positive corporate image is often associated with a humanistic style of thinking about employees and a humanistic style of managing them. Humanistic thinking and management styles draw from philosophy, especially the practical one focusing on human beings and the relationships they build, as well as humanistic psychology and positive psychology. These fields, emphasizing the importance of free will and autonomy, the sense of meaning in life, the realization of certain values, the need for self-realization,

[1] See www.mecalux.pl

the need for creative activities, refer to the sense of well-being and the conditions that cause this well-being (Strykowska, 2009, p. 187). Writing in the most general terms, well-being is most often related to the assessment of psychological state and is associated with – cited earlier – the feeling of happiness and a sense of fulfillment.

In professional situations, the conditions of well-being are the alignment of employees due to the possession of certain competencies and the required personality traits appropriate to the professional tasks assigned to these employees. According to the postulates, labor and organizational psychologist, professional and personnel consultant, Maria Strykowska, „only a job that corresponds to the qualities possessed by the employee is able to give them the opportunity for self-realization" (Strykowska, 2009, p. 189). Another condition of professional well-being is professional activities combined with the professional designation of these employees to perform specific tasks; these are activities that favor employees in setting their own goals, facilitating decision-making and problem-solving (Strykowska, 2009, p. 189).

The development of conditions of well-being in the area of professional and private life is served by certain forms of personal and professional development. Among the possible forms of personal and professional development, the following currently deserve special attention: coaching, counseling or guidance, mentoring, training of various profiles and topics (e.g., business training), also therapy, consulting and teaching (Żukowska, 2023, pp. 63-111).

6. Characteristics of selected forms of personal and professional development

Today, underlying many forms of personal and professional development, which are characterized by concern for the quality of life and well-being of the client, is a philosophy and humanistic form of education.

6.1. Coaching

Coaching uses a humanistic form of holistic education. There are many different definitions of coaching. These definitions refer to various aspects of a person's life, so it is difficult to point to a single, only valid definition (Żukowska, 2023, pp. 86-95). In other words, it is extremely difficult to unequivocally answer the simple question: what is coaching? Małgorzata Sidor-Rządkowska, in one of her books on coaching, writes the following: „Despite the fact that I have been involved in coaching for more than a dozen years, when I hear this simple question, I cannot hide the feeling of uncertainty. I would preferably answer (keeping all proportions) with the words of St. Augustine - one of the eminent philosophers, who to the question: what is time? he replied: I know, until you ask...?" (Sidor-Rządkowska, 2022, p. 15; St. Augustine, 2020, p. 351).

Today, however, such an answer to the question of the definition of coaching is not enough. For this reason, from the collection of possible professional definitions of coaching, it is worth choosing the most popular ones that resonate with us and the role of a professional coach. Following Sidor-Rządkowska, the below definitions of professional coaching can be recalled:

- „Coaching is a form of conversation that follows ironclad rules about what must be present: respect, openness, compassion, empathy, and a rigorously held commitment to truth-telling" (Kimsey-House, Kimsey-House, Sandahl, Withworth, 2019, p. 25; Sidor-Rządkowska, 2022, pp. 15-16);
- „Coaching is about developing the ability to change people, the organization in which they work, and the environment in which they live. By influencing their imagination and values, coaching helps to redefine - in line with the goals they are pursuing - their attitudes, thinking and behavior" (Hargrove, 2006, p. 23; Sidor-Rządkowska, 2022, pp. 1-16);
- Coaching is „a process that enables people to learn and grow, and thereby improve their performance [...], requiring knowledge and understanding of a multiplicity of styles, skills and techniques appropriate to the context in which the process takes place" (Parsloe, 1999, p. 8; Sidor-Rządkowska, 2022, pp. 15-16);
- Coaching is „helping a person strengthen and improve performance by reflecting on how he or she applies a particular skill or knowledge" (Thorpe, Clifford, 2004, p. 17; Sidor-Rządkowska, 2022, pp. 15-16);
- „Coaching is the use of silence, questions, and challenges to help the mentee achieve a specific goal" (McLeod, 2008, p. 27; Sidor-Rządkowska, 2022, pp. 15-16);
- Coaching is „a conversation or series of conversations between one person and another [...] that is intended to benefit progress. The coach, through skillful listening, questioning, and reflection, guides the conversation so that the mentee learns the right lessons for himself or herself" (Starr, 2005, p. 10; 2015, pp. 23-24);
- Coaching is „a process in which a coach, working with a client, uses listening and questioning skills in such a way as to enable the client to come up with solutions to his or her problems" (McAdam, 2011, p. 19; Sidor-Rządkowska, 2022, pp. 15-16);
- According to David Clutterbuck, „the core of coaching is conversation. [As Clutterbuck writes - AM] coaching is a dialogue that takes place between you and me, in the context of clearly defined goals. It is a conversation that allows you, at critical moments, to look at the problem from different perspectives and consider a variety of strategies for action" (Clutterbuck, 2009, pp. 17-18; Żukowska, 2023, p. 88; Sidor-Rządkowska, 2022, pp. 15-16);

The purpose of coaching is to support the client in various spheres of life, taking into account many different aspects and levels of activity. Coaching, without losing its effectiveness, can refer to both the personal-private and professional spheres of the mentee's life.

For this reason, several different types of coaching can be distinguished. The most commonly mentioned are life coaching, business coaching, including small business coaching, career coaching, executive coaching or executive-corporate coaching; group coaching or team coaching is also distinguished (Kiepas-Remesz, 2013, p. 143; Kimsey-House, Kimsey-House, Sandahl, Withworth, 2019, p. 25). For several years now, in connection with the need to face the difficult conditions of operation and performance of business organizations in the world of VUCA and the reality of BANI, agile coaching has also been frequently discussed. An agile coach is a knowledgeable person who plays a role analogous to that of a mentor. An agile coach shows teams ways to implement agile activities. These activities involve eliminating factors that delay project execution, while strengthening cooperation, trust and bonding between individual team members (Adkins, 2020, pp. 28-41).

6.2. Counseling called guidance

Counseling, as a helping activity close to the coaching form of work, is also defined in various ways. The Dictionary of the National Scientific Publishers PWN defines counseling as the provision of professional advice. This form of providing assistance is combined with consulting, as I write about later in the article. The scope of consulting includes diverse activities. These activities depend on the type of consulting service provided. The most commonly mentioned are business consulting, business and professional consulting, personal and professional counseling, management counseling, legal counseling, information technology counseling, or business counseling.

Each type of counseling listed above is a professional service provided for a fee. Like coaching, professional counselling requires a confidentiality clause and, as understood by the head of the Department of Human Capital Management at the Cracow University of Economics, Aleksei Pocztowski, involves „the provision of services by competent natural or legal persons in the field of research, diagnosis, design and implementation of solutions, various personnel issues, as well as conducting necessary accompanying activities of a training, executive and even regulatory nature" (Pocztowski, 2023, p. 522; Stańczak, 2013, p. 13).

The last few years have also seen an increase in the importance of life counselors, who help healthy, mentally undisturbed people get through the obstacles/dilemmas of personal, professional or personal/professional life. Related to the role of the life counselor is the role of the philosophical counselor, since the professional life counselor as a philosopher-practitioner draws on a reservoir of philosophy and historical-philosophical knowledge. In characterizing life counseling and philosophical counseling, it is worth taking into account the voice of Agnieszka Woszczyk, who says that although „the word counseling itself suggests a connection with giving advice, but, as in coaching, it should be emphasized that the philosopher-practitioner cannot take responsibility for the decisions made by the client. The counselor should also refrain from proposing ready-made solutions [...] so as not to suggest or limit the mentee's creativity" (Woszczyk, 2013, p. 130). Thus, during the philosophical-counseling

process, the answer to the fundamental existential questions of who am I?, where am I from?, where am I going?, is independently procured by the mentee of the counselor.

Professional life/personal or philosophical counselors should be characterized by deep humanistic knowledge, preferably philosophical. Philosophical advisors are people who put professional, academic philosophical knowledge into practice; it is not uncommon for these people to define philosophy in terms of the art of living as caring for the quality of life. Most often, they are also people whose - preparatory - philosophical studies have enabled them to acquire deep ethical sensitivity and axiological self-awareness; it is not uncommon for these people to also have relevant psychological or psychotherapeutic competencies acquired during several years of training.

According to Robert Kozłowski, an counselor and certified business trainer, practitioner, manager and coach, "in the case of counseling, we are dealing with working with a client who is dissatisfied with his professional or private life, in need of guidance, support, advice from a counselor. The counselor is an expert in the field in which he provides support" (Kozlowski, 2016, pp. 15-16). The counselor's support consists in the application of philosophical methods and tools that trigger in the client the process of self-discovery, self-awareness of resources and improvement of the methodology of working on one's own resources and deficiencies/ advantages.

6.3. Mentoring

Also mentoring, commensurate with coaching and counseling, is a form of assistance given to another person. A mentor can work with one person, but also with a team or group of people. As a form of assistance, mentoring involves the mentor giving advice (Taylor, Crabb, 2020, p. 29). A mentor is considered an expert - a person who is more experienced, even distinguished by experience in a particular field. His or her professional role is to share with the mentee (mentee) his or her experience, knowledge, skills and competencies possessed on a given topic (Zhukovskaya, 2023, pp. 81-86). Robert Kozłowski believes that „the behaviors presented by the mentor constitute a certain pattern. Mentoring supports the development of professional competence of their mentee. This method is very often used in companies to introduce employees to new positions" (Kozłowski, 2016, p. 15). For this reason, mentoring is not uncommonly considered "a form of effective employee training and adaptation" (KwF, 2019).

Mentoring as a form of personal-professional development positively influences inter-employee relations and the quality of work especially of a young or new employee. This form of personal and professional development teaches understanding by creating a safe and friendly team atmosphere. Mentoring is most often associated with systematic assistance provided to an employee by a mentor in the course of acquiring new professional competencies by an employee, especially a lower-level employee, or providing such an employee with specific guidance in the implementation of specific professional tasks.

Nowadays, in the era when many corporations with international capital are entering the Polish market, international mentoring is often mentioned. This form of mentoring requires taking into account new and different conditions, for example, intercultural differences, also different assumptions and prejudices adopted by the mentee, i.e. the client of the mentoring process. A mentor working in an international environment should be guided by a message close to the assumptions of Wilhelm Dilthey, who argues that „the difference between individuals is not qualitative, but consists in the different accentuation of individual elements", and in this a thread of understanding should be found. Ethnic differences should increase openness to different traditions, should allow to use „individual identity as a starting point, a prelude to the analysis of a given culture, should also create opportunities for people to better understand their own world and make use of the power of culture" (Gierłach, Gadacz, 2022, pp. 35-36).

It is worth adding that mentoring can take a formal or informal form. Currently, it is most often used in the processes of training managers, in the training of leaders and the development and improvement of leadership competencies. Increasingly, the mentor is actively involved not only in the design of professional life, but also in caring/care for the quality of his mentee's personal life (Żukowska, 2023, p. 84).

6.4. Therapy

Another contemporary form of social and professional development is therapy. The basis of the therapeutic process is all the past experiences of the therapy participant, called the client or, more commonly, the patient. For this reason, practicing, licensed therapists call psychotherapy a process centralized on the patient's past. „Therapy is most often directed at searching in the past for the causes of the current condition in order to make the desired changes. The therapists put themselves in the position of an expert, and assume some responsibility for the outcome of the therapy. [As mentioned earlier], the therapist works on past experiences and in this way differs from a coach" (Kozlowski, 2016, p. 16). The therapeutic process is most often undertaken to „develop positive thinking, including coping with everyday dilemmas, and treating mental health issues such as mental illness and trauma" (Zaburzenia emocjonalne, 2019)[2].

Today, the most common types of psychotherapy include:

1) client/mentee-centered therapy - this type of therapy focuses on the problem of the client, who retains a high degree of autonomy in the therapeutic relationship; this therapy aims to rebuild the client's self-esteem; in this type of therapy, the therapist's client, not the therapist, mainly decides on the course of the therapy session; this form of therapy is based on a humanistic approach focusing attention on what is good in a person;

[2] This excerpt can be found on the website *Zaburzenia emocjonalne. Czym jest terapia? Pełna definicja psychoterapii*, July 25, 2019, https://zaburzeniaemocjonalne.pl, 27.02.2023.

2) cognitive-behavioral psychotherapy [CBT], which involves the treatment of disorders (e.g., the treatment of depression) and related systematic work on change; the change is aimed at challenging negative thinking patterns about both the self and the world;
3) dialectical behavior therapy [DBT], which involves working on behavior change and self-acceptance associated with learning behavioral activities (for example, habitual learning of emotion regulation, mindfulness, stress resistance, stress tolerance, also learning interpersonal skills);

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6.5. Training as a form of development

A popular form of personal and professional development that promotes the development of new skills is training. Training most often refers to „a situation in which a group of adults learn together" (Kozak, Łaguna, 2015, p. 7). Thus, training most often takes the form of andragogy as adult education. The trained group is led by a trainer who uses various available methods and tools for training, i.e. acquiring specific skills. Among the distinguished methods, theoretical lectures, activating discussions, case studies, role-playing scenes, also games to stimulate individual group members occupy a privileged position. Professional training „is a difficult-to-describe experience at both the emotional and cognitive levels" (Łaguna, Fortuna, 2015, p. 11). It allows to make a real change and experience what is new.

Business training is particularly noteworthy among training courses. This type of training concerns professional situations and covers various fields of knowledge. Nowadays, training most often focuses on aspects of leadership and management, including human capital and financial management; also on marketing, sales processes and corporate governance[3]. In each

[3] Detailed information on business training can be found on the IBD website. Business School. https://ibd.pl/szkolenia-biznesowe-w-ibd/, 15.04.2023.

of the cases highlighted, professional training is a fully planned process aimed at acquiring new knowledge and competencies. Training also involves changing attitudes, learning new habits and developing desired outcomes related to the performance of professional tasks (Armstrong, 2001, p. 448; Łaguna, Fortuna, 2015, p. 13).

6.6. Consulting

Another form of supporting human development is consulting. The consulting process requires the presence of a consultant. A professional „consultant provides expertise and solves business problems or helps develop the business as a whole. A consultant does not work with individuals, but helps develop the business as a larger whole" (Kozłowski, 2016, p. 16).

Consulting not infrequently takes the form of strategic counseling (management consulting or strategy consulting) and, as such, is associated with the department of economic consulting that includes „the overall preparation for business operations" (Cognitis, 2017). According to specialists, consulting as strategic counseling involves the provision of advice, also skillful persuasion „in the formulation of principles of conduct of the company's management, constant at a given time, the application of which leads to the achievement of the company's goal" (Cognitis, 2017).

The need for professional consulting services in the form of strategic advice in the business area, was born with the emergence and development of management. Management in the business area is a response „to the need for increased efficiency and more efficient planning of enterprise strategies" (Cognitis, 2017). Certain forms of counseling are also associated with consulting, for example:

1) operational consulting, which involves activities that optimize the company's operations or improve the efficiency of the organization's work;
2) IT consulting, or information technology consulting – the purpose of this form of counseling is to support the IT department; also to improve communication among employees and stakeholders; also to ensure the quality and efficiency of information circulation;
3) tax consulting, which involves choosing the most favorable system for paying taxes under frequently changing circumstances;
4) financial consulting – not infrequently takes the form of intermediation between institutions, including the individual client and a specific institution, such as a bank/insurance company; financial consulting also involves financial planning, including planning how to manage capital;
5) personnel consulting (Human Resources) – is the efficient management of human capital involving a skillful assessment of the potential of employees, following which employees are offered participation in selected training courses. This type of assistance is most often offered when „layoffs are necessary; [when - AM] the potential of

employees needs to be assessed [or when - AM] the need to recruit specialists arises" (Cognitis, 2017);

6) Public Relations (PR) consulting, which involves taking care of an organization's or company's image and building contact between an individual client or organization and the public;
7) Marketing consulting – is, in turn, „the planning of a dedicated strategy aimed at developing a particular company" (Jarocka, 2022). This type of consulting usually involves finding ways to promote a company or organization, as well as building a brand, promoting a product or providing a service (Cognitis, 2017).

6.7. Teaching

Teaching presupposes a master-student relationship. Unlike coaching, this relationship is not a parallel relationship. Teaching is related to the planned work of the teacher/master with the student. Students, being the teacher's charges, form their own personality under the teacher's influence by acquiring substantive knowledge, i.e. specific theoretical knowledge and practical skills. In the process of teaching, students develop certain habits of behavior. Teaching is the process of forming a person through multi-level education, developing a certain humanistic consciousness, humanistic sensitivity, and therefore also education, at the core of which is the humanities: literature and philosophy as an expression of higher culture.

Teaching is a didactic process in which a qualified teacher plays a key role. As a form of personal and professional development, it applies to young, school-aged people, as well as the previously mentioned adult education (andragogy). Thus, the role of the teacher is not only to impart substantive knowledge to the younger generation/young people. The teacher is the one who knows. „The teacher knows something that the student does not know. The opposite happens in the case of coaching described earlier. In coaching, the client is the expert and it is the client who knows the answers, not the coach" (Kozłowski, 2016, p. 16).

7. Conclusion

Meetings between helping professionals and their charges (clients or patients) vary depending on the topic and the form of development used. The basis of each of the distinguished forms of development is dialogue, understood as a supportive, therapeutic conversation related to the cooperation with the client built during the meetings and based on the value of trust. Depending on the form of development used, this dialogue takes place using professional working methods and tools that are appropriate to the helping profession and tailored to the problem under consideration. It is impossible to define the mood of such a single meeting, impossible to reflect the nature of a single session, since each such therapeutic and healing

meeting is characterized by uniqueness, secrecy, secretiveness and an atmosphere of confidentiality. The atmosphere of the meeting is not infrequently determined by the topic of the session. Sometimes the client is only concerned with developing a certain external skill related to his or her profession, for example. More often, however, it is the case that the meeting is about a much deeper topic, requiring greater sensitivity, insight, understanding, acceptance, gentleness and discretion from the coach or therapist. It is then that the true and undeniable value of philosophy and the humanities is most often revealed, and they become an indispensable basis for the therapeutic relationship in the chosen form of personal and professional development. In order to act as a professional coach, mentor or therapist, to conduct sessions and processes in a professional and responsible manner, it is necessary to have the appropriate substantive and humanistic training. Therefore, an extremely important, even demanded element of functioning in the conditions of the currently dominant – oriented to the person and his or her needs – industry 5.0, is to acquire a professional, reliable humanistic-philosophical education, including social, which is the basis for authorization to practice the chosen profession of help.

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EFFECTS OF INFORMATION TECHNOLOGY ON ORGANIZATIONAL CULTURE AND MANAGEMENT, A STUDY OF FIRST CITY MONUMENT BANK, (FCMB), NIGERIA

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Purpose: The paper aims to present factors that contribute to successful IT integration into an organization's culture, and to explain how such integration impacts the business and its leadership. These effects, which can have either a positive or a negative impact, are examined using First City Monument Bank (FCMB), which is located in Nigeria**.**
Design/methodology/approach: The objective is achieved by investigating how the implementation of information technology effects organizational culture and management. The particular focus of the study is restricted to aspects and facets of organizational culture, such as: communication, training, working time and job delivery, business development, motivation of employees, sectorial and productivity development of the banking sector in Nigeria. The data were gathered in 2021-23.
Findings: The results of the research show that technological progress has had the positive and negative impact on FCMB's corporate culture and management.
Originality/value: Until now, little research has been done about the effect of IT on organizational culture and management in Nigerian banking sector.

Keywords: Information Technology, corporate culture, Nigerian Banking, management.

Category of the paper: research paper.

1. Introduction

The current climate of business calls for competitions that are frequently cutthroat and prone to surprise twists and turns. At this time, organizations and businesses of every size and scale are confronted with significant competitive challenges, maybe more so than at any other point in recent history. Business owners, executives, and managers are turning to information technology and other digitally powered tools in their respective organizations to help them stay afloat with current happenings, meet up with competitions, maximize profit, and ultimately

remain in business without losing the purpose and vision for starting the business in the first place and maintain organizational structuring, communication amongst and with staff. In order to cope with this phenomenon, business owners, executives, and managers are turning to information technology and other digitally powered tools in their respective organizations. The implementation of information technology has had an impact on the trajectory of today's organizations. The use of IT alters the way in which businesses function, as well as the way in which customers make purchases from those businesses and the way in which goods are distributed. The study's goals are to shed light on the factors that contribute to successful IT integration into an organization's culture, and to explain how such integration impacts the business and its leadership. These effects, which can have either a positive or a negative impact, are examined using First City Monument Bank (FCMB), which is located in Nigeria.

Analyzing the action of managers' activities aimed at eliminating the negative impact of information and communication technologies on the employee, it is also necessary to mention the active implementation of schemes to maintain the balance between work and professional life. Healthy lifestyle programs encourage employees to develop their own passions and interests, allow them to rest and maintain the much needed (especially nowadays) distance to virtual reality (Kochmańska, Kuzior, Marszałek-Kotzur, 2021).

1.1. Background to the study

Processing information has developed into one of the most important aspects of running a business in recent years. This is because information dictates how businesses keep customers, what customers buy, and how they consume goods and services. It is now required for people and businesses to acquire information technologies and to make regular use of them in both their professional and personal lives. New technologies lead to better quality and optimization of costs and thanks to innovation and new technologies, organizations can work better and more efficiently. Organizations noticed that quality and technology is important factor for developing services to encourage sustained achievement. (Nadziakiewicz, 2019) This is true for both the professional and personal spheres. As a consequence of this, in this age of information, where information is regarded as a potent tool, this circumstance has made it imperative for organizations to become increasingly information-based and to benefit from information technologies in a variety of processes and activities. As a result of this, in this age of information, where information is regarded as a powerful tool, this circumstance has made it imperative for organizations to become increasingly information-based. This is because the information age is currently underway. Because information technologies are used so extensively in so many different jobs, operations, functions, and processes, companies' general modes of operation have had to undergo some necessary shifts as a result (Drucker, 1999, pp. 79-94; Erdurmazl, 2020). This is as a result of the fact that, in contrast to traditional technologies, information technologies not only modify the technical sectors but also affect communication channels, decision-making functions and procedures, control, and other aspects

of society. This is due to the fact that information technologies are both more pervasive and more flexible than traditional technologies (Brooks, 2006). Each company has its own unique culture, and those cultures are easily distinguishable from one another. It is possible to define organizational culture as the sum total of an organization's ideals, virtues, accepted behaviors (both good and not so good), and political climate (Bliss, 1999; Ozigbo, 2013). There is a wide variety of corporate cultures, some of which have been defined as follows: customer-centered culture, inventive culture, honest culture, technology driven culture, laid back culture, risk taking culture, or family focused culture, just to name a few examples among many others (Ozigbo, 2013). Founders of a firm are typically the ones who are responsible for establishing the company's culture. Typically, the acts and behaviors of the organization's founders serve as the foundation for the organization's culture in the future, together with his goal and vision for the company. It is not to imply, however, that cultural norms do not shift throughout the course of time because they very certainly do. According to Eser Erdurmazl (Erdurmazl, 2020), an organization's culture undergoes a transformation as a result of the introduction of novel processes and procedures for getting things done within the company.

1.2. Significance of the study

The significance of the study is derived from the significance of electronic commerce in light of the fact that the globe as a whole is embracing e-commerce interfaces of all kinds in commercial establishments of all sizes brought about by globalization, not only are banks crucial in commercial activities, but they are also a top player in the development of new jobs in Nigeria, which is why they play such an important part in the nation's economy. Performance in an organization can be thought of as the sum total of the results that organizational activities produce. This research was carried out with the intention of making a contribution to the existing body of literature in the field of organizational behavior pertaining to the effect and impact of technology investment on work performance, output, and enhanced productivity, thereby constituting the empirical literature for future research in the subject areas. The study was carried out in order to fulfill this purpose. The study also benefits, managers and top CEOs of organizations on the importance of information technology. This results in simplifying organizational structure, centralizing decision making at executive level, and decentralizing it at operation level. Additionally, organizational intelligence is to be developed and maintained to develop and maintain a competitive advantage. It is anticipated that the findings of this study, helps to highlight the ways in which human resource can use IT for the benefit not only to the career development of employees, but also to the corporate performance of the organization. It is also anticipated that the study gives an insight into the negative effects of IT implementations and provide ways to mitigate against them. The existing body of literature and the theoretical framework of this study, makes significant contributions to the body of knowledge in general and in the subject field, in addition to other research being conducted in fields that are related to this study. These contributions shall be made across the entirety of

academia. In addition, the findings of this research offer a novel paradigm for a more in-depth comprehension of the effects that the implementation of information technology has on organizations located in developing nations. In conclusion, the research findings, provides researchers, research bodies, and academics who are interested in conducting future research in this area of study with the baseline information they need to do so. It also determines the gaps that currently exist in the research so that those interested can conduct research to fill those gaps and further broaden the body of knowledge in the field and subject area in particular. The recommendations might be important to consider for subsequent research.

1.3. Scope of the study

The adoption and application of information technology (IT) and other internet-enabled technologies are included in the scope of this study. These technologies are being used to enable and support organizational culture in FCMB. As a result, the purpose of the study is to investigate the influence that Information Technology has on the culture and management of organizations. When it comes to First City Monument Bank, we place a particular emphasis on the banks: Ajah, Lekki Jakande, Lekki Admiralty, and Surulere branches, all of which are located in the heart of the commercial metropolitan city of Lagos in Nigeria. Each location of the bank has its own quirks, and all of them are responsible for banking activities in Lagos. It is also a research that focuses on the banking industry in Nigeria, by extension, and the way that information technology is utilized within the organizational structure of the sector as its general scope. The particular focus of the study is restricted to aspects and facets of organizational culture, such as: communication, training, working time and job delivery, business development, motivation of employees, sectorial and productivity development of the branch, and so on.

1.4. Operational definition of terms

This section explains words and phrases that are used in this thesis. For this study, the definitions take into account the constant changes in ICT that are happening in global business. They also have to make sense in the context of the banking sector in Nigeria, with a focus on FCMB Plc.

1. **Change management:** means taking a methodical approach to changing an organization's objectives, methods, or tools. The goal of change management is to implement methods of bringing about change, keeping it under control, and assisting people in adjusting to the new circumstances.
2. **Information technology (IT**): means to create, process, store, secure, and exchange all forms of electronic data through the use of computers, storage, networking, and other physical devices, infrastructure, and processes.

3. **Management**: administration is defined as the management of an organization, whether it be a business, nonprofit, or government agency. It is the art and science of managing a company's resources.
4. **Organization**: is a group of people organized for a specific, often commercial, purpose, as in a company, institution, or association.
5. **Organizational change:** is the movement of an organization from one state of affairs to another. The nature of organizational shifts varies widely. It may involve a change in a company's structure, strategy, policies, procedures, technology, or culture.
6. **Organizational culture**: is the collection of values, expectations, and practices that guide and inform the actions of every team member in an organization. Similar to the collection of characteristics that define a company's identity.
7. **Organizational structure**: describes the means by which objectives are integrated into decision-making, task assignment, and management. Actions taken by an organization are influenced by its structure, which also serves as the basis for its routines and practices.

2. Impacts of technology on organizational culture and performance

Information technology use in an organization may not be able to establish or influence corporate culture on its own, but it can have a substantial impact on corporate culture nonetheless (Sarosa, Samiaji Zowghi, Didar, 2003). Yet, it is difficult to quantify influence. The effect of information and communication technologies (ICT) on the organization's aims; the organization's objectives are the endpoints attained by its actions. Strategic objectives are the organization's key long-term goals, the adoption of action plans, and the allocation of resources necessary to achieve them via ICT use (Zorni, Plojovi, Enis Ujkanovi, Ribi, 2011).

Adoption, implementation, and use of information technology in businesses have an effect on productivity and creativity, where creativity is defined as the ability and capacity to produce new ideas rapidly. According to Demail Zorni, Emsudin Plojovi, Enis Ujkani, and Lejla Ribi (2011), creativity is comprised of four interdependent and frequently overlapping stages: Unconscious search, Intuition, Acumen, and a logical formula. Among others, the impact on innovation, the impact on effective action for the promotion of the product and services, the impact on establishing closer ties with customers, the sharing of technology with other members of the organization, and the maintenance of the project's allocated time or financial support, the effect of managerial style (Bolton, 2001).

2.1. Positive Impacts

Information technology use in a company may not be capable of establishing or influencing corporate culture on its own, but it can nevertheless have a significant impact on corporate culture (Sarosa, Samiaji, Zowghi, Didar, 2003). Yet, influence is difficult to define. The impact of information and communication technology (ICT) on the organization's goals; the goals of an organization are the ends it seeks to achieve via its actions.

Strategic objectives are the organization's most important long-term goals, the adoption of action plans, and the allocation of the resources required to achieve them through the use of ICT (Zorni, Plojovi, Ujkanovi, Ribi, 2011) Adoption, implementation, and utilization of information technology in enterprises have an effect on productivity and creativity, where creativity is defined as the ability and capability to rapidly generate new ideas. According to Demail Zorni (Zorni, Plojovi, Ujkani, Ribi, 2011), creativity consists of four interdependent and usually overlapping stages: Unconscious search, intuition, intelligence, and a logical formula. Including, but not limited to, the impact on innovation, the impact on effective action for the promotion of the product and services, the impact on establishing closer ties with customers, the sharing of technology with other members of the organization, and the maintenance of the project's allocated time or funding. The influence of management style (Bolton, 2001).

- IT adoption and implementation increases efficiency: with automation, especially in the banking sector, software that monitors an organization’s building systems, a firm can conduct audits and tests of various systems and equipment seamlessly. Conflict resolution tool tracks changes made in the VBS (the Visual Block and Stack) that contains an organization’s live data), and reports back on changes that affect a chosen scenario.
- IT adoption, use and reach sustainability goals: Technology utilization in enterprises is continually improving, enabling offices to go paperless (or at least, paper-reduced). Tablets and digital whiteboards result in less printing, which requires less ink and toner and less storage space for paper documents. Using the internet in the workplace presents enormous prospects for greener and more effective operations. Smart lighting and HVAC systems save money by activating only in response to presence detection or environmental cues. This, according to Shemi (Shemi, 2017), reduces the organization's energy, building, and operational costs and improves its corporate social responsibility.
- IT use and adoption recognizes and rewards employees: installation of recognition and reward software can enable top management to deliver "shout outs" or honorary acknowledgment to worthy staff for outstanding performance. Software such as "Gamification" can be used to improve training and onboarding, as well as to advise employees who wish to advance their careers; it assists them in gaining a clear grasp of the skills to develop or the milestones to achieve before their next promotion. In turn, this increases staff engagement (Schwarz, 2002).

2.2. Negative impacts

The impact of technology on corporate culture is not always favorable. The capacity to work from and with a mobile device, according to Klein E.E. (Chi, Klibaner, 2000), can create an "always-on" workplace in which employers expect employees to reply to emails and fix issues spontaneously during non-working hours. Mobility enabled by information technology enables a flexible workplace; yet, being linked to work applications twenty hours a day can have a significant negative impact on an employee's work-life balance, increase stress and anxiety levels, and cut into personal and family time. In turn, this, destroys employee motivation to work and perform optimally, and the organization's turnover rate also increases. Organizational adoption and implementation of technology is sometimes a poor alternative for human diligence due to the fact that a device's correct course of action is dependent on algorithms that cannot compete with fundamental human intelligence (Mahmood, Mann, 2000). In light of this, Wiley argues that human resources departments should not rely solely on language processing software to look through resumes.

Some other negative impacts recorded by Y.A. Dauda (Dauda, Akingbade, 2011), are:

- Technology over dependence: this occurs across all businesses and industries. A study conducted on Starbucks by Marianne Chrisos (2019) revealed that the implementation of new technology in the early 2000s enabled organizations to work optimally; but, when there is a fault, it disrupts the entry process and the customer experience may suffer. Any organization whose communication procedures have been aided by technology risks having to revert to a previous technology or process in the event of a technological failure.
- Reduced interpersonal communication: a further detrimental effect of technology on business communication and organizational culture is that it frequently diminishes interpersonal interactions in the workplace. The absence of a collaborative environment might negatively affect team spirit. Y.A. Dauda & W.A. Akingbade (2011) explain that this may be because employees communicate primarily through chat and virtual programs like: skype, zoom, outlook, teams, etc. instead of walking to each other's desks or picking up the phone, or it may be because technology enables a more remote workforce and with fewer in-office meetings, it's more difficult to establish and maintain more in-depth professional relationships or comprehend the scope of issues to be resolved. When employees are overburdened, they have less time to focus on critical and innovative thinking to advance work initiatives. Work therefore becomes a matter of survival, and workers find it difficult to acquire the new skills their jobs require.
- Safety and security issues arise at large with ICT use: information on customers, workers, and businesses used to be kept in huge, on-premises file cabinets or vaults. Throughout the last century, technological advancements have substantially reduced the time, effort, and expense associated with storing, accessing, backing up,

and disseminating this information Y.A. Dauda & W.A. Akingbade (2011). Organizations using cloud-based storage, for example, need to pay extra attention to data security.

- Tech use addiction: resulting from the necessity to continually check one's phone or internet-enabled devices for messages and deadlines. In a study conducted by Atiloye (Atilove, 2021), it was discovered that employees with a high degree of gadget addiction have a high level of GABA (Gamma Amino butyric acid) secretion, a substance that suppresses brain signals. Eventually leading to vision problems, poor vehicle control, excessive blood pressure, and other cognitive dysfunctions.

Other issues include: the need to constantly spend time training and retraining as new gadgets or software are released, cost effectiveness, distractions, pressures, technically induced stress at the work place and frustrations.

3. Research results

The results of the research show that technological progress has had an impact on FCMB's corporate culture, in the following ways:

1. This study reveals how ICT has made it easier for the bank's customers to pay for goods and services and conduct other types of transactions by providing them with self-service facilities (automated customer service machines) where they can apply for a bank account and fill out all of the necessary paperwork online.
2. The majority of the respondents from the response frequency opted that the use of information technology has definitely increased the Employee productivity level as a result of better handling of technological developments.
3. From the respondent's feedback frequency, the majority agrees that Technological change and ICT tools has resulted in reduction in error rate across various bank branches. With respect to the overall findings, it is undisputed that the majority of the respondents has greatly highlighted on various positive and beneficial effects of information technology in terms of the fact the customers no longer wait in lines to be attended, and the service quality has been advanced.
4. According to the research, a bank's entire business plan includes spending money on IT and the Bank management must enhance spending on information and communication technology goods to boost service speed, convenience, and accuracy. They would boost Nigerian banks' productivity, income, and competitiveness, making them more resilient to the opportunities and threats of an ICT-driven globalized economy.

5. From the existing research issues, the literature has shown the significant role of organizational culture in their successful adoption of information technology (IT), which obviously affects the organizational performance. Nevertheless, not much attention has been given to this area, despite the potential influence organizational culture has in the banking sector. The debate surrounding the value of investing in IT persists, while organizations recognize the competitive advantage it offers for survival and growth, many IT implementation projects fail to meet managerial expectations, especially in developing societies like Nigeria, due to inadequate funding, poor budgeting, lack of technical expertise, and ineffective management of organizational culture.
6. The majority of the respondents vehemently agree that the influence of the various Information Technology, in organizational culture and performance at FCMB Bank branch office has improved from the use of IT in various banking operations.
7. Deriving from the research analysis, the majority of the respondents agrees that the effect of IT in the banking operations is evident, generally above 80% of the employees was in agreement of the positive impacts of IT in the bank, but to curtail and maintain an effective organizational culture and good management, the IT usage within the workplace should also be controlled and properly managed to avoid been abused.

4. Results and discussions of survey findings.

The research sampled a total of 150 respondents; 120 questionnaires were returned, representing a 92% response rate. Included among the respondents were the Branch Manager, Relationship officers, branch IT support staff, customer service managers, customer service representative officers and support, the Branch head of operations, In-branch operations control, marketers, and tellers. The analysis was therefore conducted using the completed questionnaires. The Statistical Package for the Social Sciences (SPSS) was used to analyze the valid study copies returned for analysis. Each branch has a distinct mode of operation based on the types of customers who live or work nearby and the size of the location. When discussing the analyzed data, the researcher also employed descriptive methods for better comprehension.

4.1. Questionnaire Distribution and response rates per branch

Table 1.
Copies of questionnaire distributed and retrieved (N = 120)

S/N	Branch location	Total staff Population sampled per branch	Number of Questionnaires distributed per branch	Number of Questionnaires retrieved par branch
1	Lekki Admiralty.	24	24	17
2	Ajah	36	36	27
3	Lekki, Jakande	45	45	37
4	Surulere.	45	45	39
	Total	**150**	**150**	**120**

Source: Field Survey (2023).

5. Conclusion

Many businesses, including financial institutions, acknowledge the value of a strong corporate culture, but not all are aware of the wide range of influences on that culture. Employers and workers alike may benefit from smart use of technology in the workplace, but only if that workplace prioritizes its people over its gadgets. While banks have mostly benefited from technological advancements, some have experienced the negative impact of technology. There is a positive relationship between net investment income and net financial asset (Joyce, 2019; Aberola et al., 2020; Hiattori et al., 2023). Every area of the banking sector, from IT and security to operations and team relations, has felt the corrosive effects of technology on corporate communication. Knowing what may go wrong with technology in the workplace can help the Bank, get ready for any problems that could disrupt or delay communications.

Technology development has had both positive and negative effects on society and the world at large. Here is a summary of these effects:

Positive Effects of Technology Development:

1. **Increased Efficiency**: Technology has significantly improved efficiency in various sectors, from manufacturing to healthcare. Automation and digital tools have streamlined processes, reducing the time and effort required to complete tasks.
2. **Improved Communication**: Technology has revolutionized communication, making it faster and more accessible. The internet, smartphones, and social media have connected people globally, facilitating information sharing and collaboration.
3. **Enhanced Productivity**: The use of technology tools and software has boosted productivity in businesses and individuals. From project management software to data analysis tools, technology aids in getting more work done in less time.

4. **Medical Advancements**: Technology has led to breakthroughs in healthcare, such as advanced medical imaging, telemedicine, and robotic surgery. These innovations have improved diagnosis, treatment, and patient care.
5. **Education Accessibility**: E-learning platforms and digital resources have made education more accessible. Students can access a wide range of educational materials online, breaking down geographical barriers.
6. **Environmental Benefits**: Technology has the potential to address environmental issues. Clean energy technologies, such as solar and wind power, have reduced reliance on fossil fuels, contributing to a greener planet.

Negative Effects of Technology Development:

1. **Job Displacement**: Automation and artificial intelligence have led to job displacement in certain industries. Workers in routine tasks are particularly vulnerable, leading to concerns about unemployment.
2. **Privacy Concerns**: The digital age has raised significant privacy concerns. Data breaches and surveillance have become more prevalent, jeopardizing individuals' personal information and freedoms.
3. **Social Isolation**: While technology connects people, it can also lead to social isolation. Excessive screen time and reliance on virtual interactions can weaken real-world social bonds.
4. **Health Issues**: Excessive screen time and sedentary behaviors associated with technology can contribute to health problems such as obesity, eyestrain, and mental health issues.
5. **Environmental Impact**: While technology can help address environmental issues, it also contributes to them. The production and disposal of electronic devices, as well as energy consumption from data centers, have environmental consequences.
6. **Digital Divide**: Not everyone has equal access to technology and the internet, creating a digital divide. This can exacerbate existing social and economic inequalities.

In conclusion, technology development has brought about numerous positive changes, improving efficiency, communication, and various aspects of our lives. However, it also poses challenges such as job displacement, privacy concerns, and health issues. Balancing the benefits and drawbacks of technology is an ongoing challenge for society.

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THE INFLATION SITUATION IN POLAND IN 2022/23

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Purpose: the author main objective was to analyze the inflation, the economics situation in Poland and European countries act and other publications on the subject, the merits, the stages the idea, as well as to present the results of study showing the condition of Polish finances and inflation.
Design/methodology/approach: the objectives are achieved by inflation and core inflation analysis, literature study presented in the paper have been taken from government reports, NBP analysis and legal act from 2021-2023.
Findings: the paper and its summary discuss the main findings from the and the results of the Government reports, NBP analysis and legal act and literature study conducted.
Research limitations/implications: the paper presents the latest data, government reports, bank and economical prognosis and analysis of the subject's literature.
Originality/value: it is addressed to inflation researchers, entrepreneurs and others interested in the economic situation in Poland.

Keywords: inflation, core inflation, interest rates, embargo.

Category of the paper: research paper.

1. Introduction

What is inflation - inflation is a process of permanent increase in the average price level in the economy. The result of this process is a decline in the purchasing power of domestic money. The opposite phenomenon to inflation is deflation (Belka, 2005). There are many types of inflation depending on the criteria adopted, for example, according to the criterion of rate: deflation - negative inflation, creeping inflation - does not exceed 5% per year, moderate otherwise known as rolling, oscillates between 5-10% per year, galloping means annual price growth at a rate of two or three digits, from 10% upwards, hyperinflation is a monthly price increase exceeding 150% (Owsiak, 2002). One of the causes of inflation is an excessive increase in the money supply through its issuance by the Central Bank or creation in commercial banks, an unexpected and sharp increase in production costs (e.g. energy raw materials), which leads

to a reduction in aggregate supply, an increase in aggregate demand in the economy, an unbalanced state budget (expenditures from the budget exceed receipts), overinvestment in the economy (overdevelopment of the investment process financed by the state), a defective structure of the economy, import inflation (as the price of items imported by a country increases, the cost of production increases, and thus prices rise). Inflation, above all, is itself a tax. Since money is non-interest-bearing, it represents a tax on cash holdings. Keynes argues that it is "the form of taxation that people find most difficult to avoid. this po-tax can be imposed even by the weakest state, which cannot enforce anything else" (Keynes, 1930). According to a study conducted by Easterly and Fischer (using a sample of nearly 32,000 households from 38 countries), the poor are more likely than the rich to list inflation among their most serious economic problems; rising inflation lowers the share of the poorest households in total income generated in the economy inflation hinders people's rise out of poverty, inflation lowers the real dynamics of the lowest wages (Easterly, Fischer, 2001).

2. Internal and external factors of inflation

What makes inflation possible is the existence of states of matter that have a high energy density which cannot be rapidly lowered. In the original version of the inflationary theory (Guth, 2018; Starobinsky, 1980), the proposed state was a scalar field in a local minimum of its potential energy function. A similar proposal was advanced by Starobinsky, in which the high energy density state was achieved by curved space corrections to the energy-momentum tensor of a scalar field. The scalar field state employed in the original version of inflation is called a false vacuum, since the state temporarily acts as if it were the state of lowest possible energy density. There are many types of inflation and theories. According to the theory of John M. Keynes (Keynes, 1930), which was based on insufficient consumer and investment demand, laid the foundation for understanding the causes of inflation and formulating two main types of this phenomenon (Nasilowski, 1998):

1. Demand-pull inflation - this type of inflation is often observed during periods of war, when state expenditures on arms production resulting in high-capacity utilization led to sharp increases in the prices of goods and services.
2. Cost-push inflation - According to Keynes' theory, cost-push inflation is caused by labor unions that force wage increases resulting in higher manufacturing costs or by monopolies that raise the price of their products unrestrictedly to realize higher profits. A special type of inflation pushed by costs can be an example of inflation caused by the spectacular increase in oil prices forced by OPEC in 1973-1974 (the so-called Price Shock).

In another case, the hidden inflation can be also a problem. Hidden inflation - is a phenomenon characteristic of countries with centrally planned economies. It is expressed in a permanently maintained surplus of consumer demand over the deliberately limited supply of goods and services.

According to Deputy Finance Minister Artur Soboń the high inflation in recent months in Poland was mainly due to external factors. He pointed to global energy and fuel prices, war, shortages in the food market, hostilities in Ukraine, sanctions against commodity giants Russia, and disruptions in the global supply chain (Polish Press Agency, 2022). Logistics are affected by the COVID-19 pandemic, tightening restrictions in China and other Asian countries, but also by minor crises. The most famous case in recent years is the blocking of the Suez Canal for nearly a week by the container ship Ever Given.

The causes of inflation in Poland are not only external but also internal factors. The rise in prices is also due to the excessive issuance of money by the NBP, extensive welfare and assistance programs, lack of discipline in budget spending, failure to adjust the structure of the economy to current economic realities, or distorted relations between domestic demand and supply (Government help for entrepreneurs 2021-22, and 500+ program).

3. Inflation in Europe

In Europe, inflation was highest in Moldova (27.1 percent) and the Baltics. In particular, Estonia, which was experiencing the highest inflation rate in the eurozone, saw its annual inflation rate rise from 6.4 percent in September 2021 to 24.2 percent. October 2022 was the first month when HICP inflation in the eurozone exceeded the 10 percent level. In several Euroland countries, price growth has been above 20% for some time. The Eurozone's Harmonized Index of Consumer Prices (HICP) was 10.7 percent higher in October. October 2022 was the first month when HICP inflation in the eurozone exceeded the 10% level. In several Euroland countries, price growth has been above 20% for some time. The Eurozone's Harmonized Index of Consumer Prices (HICP) was 10.7 percent higher in October. A surge in fuel and energy prices (up 43 percent year-on-year, compared to 43.9 percent in September and 35.6 percent in August) was largely responsible for the near-record high inflation in Germany, as in the rest of Europe. Food price growth also accelerated (to 20.3% vs. 18.7%). Services became more expensive at an even faster pace than in previous months (4.0% vs. 3.6%). In addition, upward pressure on prices was reduced by the re-education of the VAT rate on gas from 19% to 7%. It's also worth taking a correction for the fact that when comparing inflation readings between countries - their authorities interact to varying degrees with commodity prices and macroeconomic indicators, temporarily distorting their comparability. Such effect might further intensify in the spring months, when new administratively imposed energy prices for households came into effect.

4. How much was inflation in Poland?

The Central Statistical Office (CSO) reported that inflation in Poland in November 2022 was 17.4 percent. October's reading reached 17.9 percent, the highest since December. However, since March 2022, there has been a series during which the CSO has reported higher and higher readings month after month. According to the quick estimate, consumer prices rose 17.4 percent (price index 117.4) in November 2022 compared to November 2021, and rose 0.7 percent (price index 100.7) compared to October 2022. November inflation was considered lower than expected. This was the first decline in inflation since the middle of last year (not counting the introduction of the Shield in February). In November, inflation felt to 17.4%. Of note is the decline in energy prices. Core inflation remained on an upward trend (rising to around 11.3%)

In July, the National Bank of Poland (NBP) published the MPC's forecast that inflation in Poland for the whole of 2022 would be 14.2% - in November it updated it to 14.5%. By contrast, prices would be already raised by 13.1% in 2023 (NBP forecast, 11. 2022). Earlier analysis said inflation would be 12.3%. The peak of increases in the current crisis would come in the first quarter of this year, at 19.8-20%. This would result primarily from:

- the return of 23% VAT for gas,
- the expected increase in the prices of services and goods, which would be influenced, among other things, by a higher minimum wage,
- limiting so-called ‘anti-inflationary shields’.

The National Bank of Poland's most pessimistic scenario assumes about 23% for March 2023. For 2024, the NBP forecasts a CPI of 5.9%. As recently as July, it was 4.1%. NBP analysts predicted an acceleration of inflation in September, meanwhile, a significant increase in readings occurred as early as August 2022. Since November, the rate of price growth has been declining minimally. According to NBP forecasts, declines in inflation readings would begin in the second quarter of 2023. Some experts point out that price would increase for consumers were still much lower than for producers - the PPI for manufacturing goods in November was 20.8%. In previous months, readings hit as high as 24.6%. Slight declined in the rate of growth of producer prices were associated with the calming of the energy market.

In December, inflation felt to 16.6 percent year-on-year from 17.5 percent in November, the CSO said in its final reading. The peak in the rate of growth of consumer prices might come in February and reach around 20 percent. Average consumer inflation for the whole of 2022 was 14.4 percent, compared to 4.9 percent in 2021 (CSO, 12. 2022).

5. Inflation in Poland and interest rates

A gradual reduction in the central bank's reference rate would be feasible with a significant slowdown in inflation. The president of the NBP predicted that the Monetary Policy Council would raise interest rates once or twice by about 25 basis points in an ongoing cycle of increases starting in October 2021. The amount of inflation in the coming months also depends on many other factors. Increases and decreases in fuel prices have a direct impact on the prices of products and services (Kisiel, 2022). Price decreases in July and August were smaller than forecast. October brought further increases, and in November came small decreases. As of January 1, 2023, VAT on fuels was restored from 8% to 23%, which should theoretically translate into increases at stations - for some experts and politicians, the lack of change is evidence that for the last months of 2022 Orlen artificially inflated margins on wholesale fuel sales (Mirek, 2018). This is also to be indicated by lower prices at foreign stations owned by the company, e.g., the Czech Republic, where the government lowered excise taxes and VAT on fuels remained unchanged is also evidenced by data and data collected by the European Commission. The net wholesale price of diesel in December across the EU was highest in Sweden and Poland (WP, 2022).

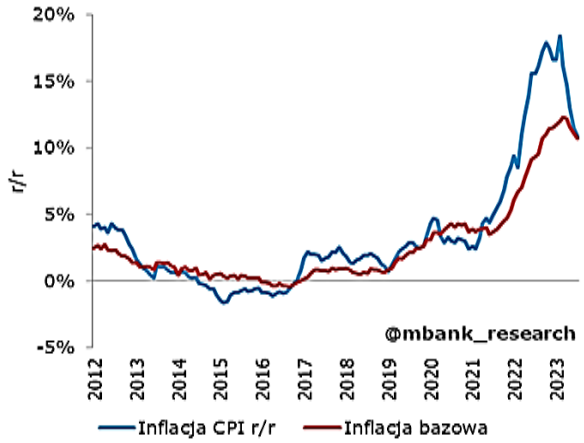
Inflation in July 2023 was 10.8 percent. - CSO reported. Month-on-month, prices fell by 0.2 percent, the first such situation since January 2022. Such a reading also marks the first time since the end of 2019 that prices have not risen three months in a row. According to the CSO (quick estimate), in July 2022 - July 2023, food became 15.6 percent more expensive, and energy carrier’s 16.7 percent more expensive. Fuels for private transportation vehicles became as much as 15.5 percent cheaper. In June 2023, inflation stood at 11.5 percent. The inflationary reading has been moving sharply downward since February, when the CSO recorded a 21st century record high of 18.4 percent. In turn, mBank analysts calculate that core inflation (excluding energy and food prices) fell from 11.1% y/y to around 10.7% y/y (MB analysis, 2023).

Tabela1.
Monthly inflation in Poland in 2022

January	CIP 9,4%, HICP 8,7%
February	CIP 8,5%, HICP 8,1%
March	CIP 11,0%, HICP 10,2%
April	CIP 12,4%, HICP 11,4%
May	CIP 12,4%, HICP 11,4%
Jun	CIP 15,5%, HICP 14,2%
July	CIP 15,6%, HICP 14,2%
August	CIP 16,1%, HICP 14,8%
September	CIP 17,2%, HICP 15,7%
October	CIP 17,9%, HICP 16,4%
November	CIP 17,9%, HICP 16,4%

Source: Own elaboration on the basis of CSO.

Table 2.
Inflation year by year



Source: mbank research 31of July 2023.

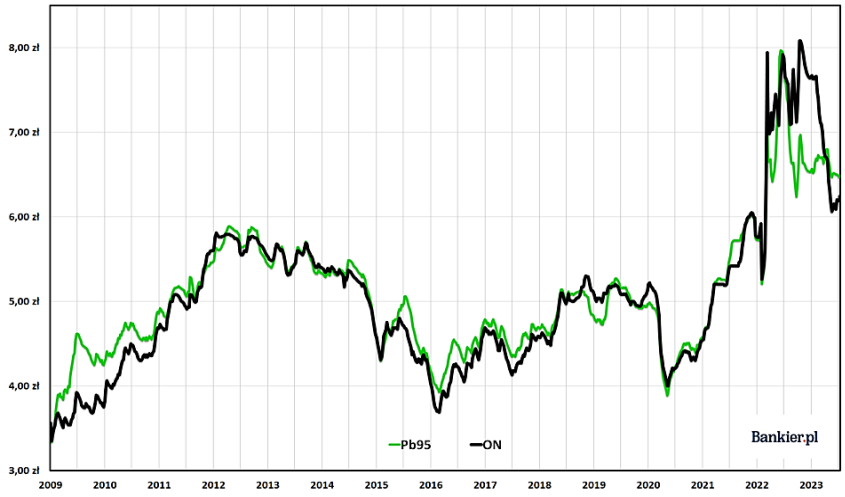
President Glapinski announced at a conference after the MPC's July meeting, "if inflation in September is in single digits, and forecasts indicate declines in inflation in the next quarters, a rate cut in September is possible". In turn, forecasts predict that the next cut will be in November (both by 25 basis points).

6. Energy and fuel commodity prices

The energy industry was seeing further price increases. Increases in energy raw materials were certain. 1 MWh on the POLPX has already costed more than PLN 2160 in annual contracts. Despite the declines on the exchange (last weeks about 1,100 PLN/MWh), suppliers' offers did not always take them into account, as local government officials, among others, have complained. A freeze CE energy of municipalities and counties was anticipated, for large entrepreneurs no longer. According to the Lewiatan Confederation, 81% of entrepreneurs were planning further price increases for the first months of 2023 due to rising business costs. Business electricity (consumption rate) in September became 50-300% more expensive, depending on the supplier. Gas and gas supply rates would also increase, including for residential customers. According to the ERO, fees for households would increase by 0.5-0.7%. The increases in early 2023 will be painfully felt by many companies. Some will liquidate, suspend or reduce operations, the rest will pass the costs on to customers, which will ultimately affect consumers. There has been a slow decline in the price of heating coal, which is of great importance for households. Inflation is forcing people to incur unnecessary expenses. On the one hand, entrepreneurs, often changing prices, have to convince customers to change prices; on the other hand, consumers, wanting to protect themselves from the inflation tax, have to swap their consumer habits and bear the costs of change.

From Jun 2023, Pb95 gasoline prices have remained largely unchanged. Also, average ON prices have remained relatively stable since May. All the while, LPG has been getting cheaper, costing the least since March 2022. The broader picture is that fuels are still expensive, but at the same time much cheaper than they were a year ago. As recently as June 2022, gasoline prices in Poland approached PLN 8/l for the first (and hopefully last!) time. Diesel fuel also paid almost PLN 8/l, and LPG was priced at more than PLN 3.50/l. Now Pb95 gasoline is on average PLN 1.09/l cheaper (or 14.4%) than a year ago. Diesel over the past 12 months has shrunk by 18.3% (by PLN 1.40/l), and autogas by 17.3% (59 gr/l) (Bankier.pl, 2023).

Table. 3
Average fuel prices in Poland



Source: Bankier.pl, 14 of July 2023.

Conclusion

Inflation has been observed throughout the European Union since July 2021. However, the price crisis is not affecting all member states to the same extent. Some EU countries have already surpassed the 20 percent year-on-year inflation threshold, while in others CPI rates have not yet hit 7 percent. This is influenced, among other things, by the different shape of economies, the energy mix, the tax system, the decisions of Central Banks, the currency, the extent of social welfare and many other factors (Zielinski, Sawulski, 2022). The outbreak of war in Ukraine, the embargo on energy resources imposed on Russia, causes the energy industry to record continuous increases in energy prices, which translates directly to businesses and consumers. This causes consumers to be encouraged to optimize their energy consumption and atmospheric emissions (Kuzior, Postrzednik, 2022) In several Euroland countries, price increases have exceeded 20% for some time now. The Harmonized Index of Consumer Prices

(HICP) in the Eurozone, in October, was 10.7 percent higher. A surge in fuel and energy prices Inflation has serious negative effects such as; reduction in purchasing power, rapid price increases cause people to have less money for purchases and investments. This means that their purchasing power decreases. Trade imbalance: rising prices make trade difficult, as producers and sellers must adhere to tight budgets, planning difficulties: increased prices make it difficult for companies to plan their operations. This is especially true for companies that must adjust to rapidly changing price levels. The last and very important effect is disorganization of the economy, because rising prices too quickly lead to economic chaos. This can cause the economy to collapse and destabilize the financial market.

Inflation in July 2023 was 10.8 percent. - CSO reported. Month-on-month, prices fell by 0.2 percent, the first such situation since January 2022. Such a reading also marks the first time since the end of 2019 that prices have not risen three months in a row.

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FUNDING PROGRAMS AS A TOOL FOR JUST TRANSITION IMPLEMENTATION. CASE STUDY POLAND

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Purpose: The article discusses focus research conducted in May 2023. The main goal of the paper is to analyse the current funding programs for Just Transition.
Design/methodology/approach: To begin, the review was performed using the standard method of critical literature review. The next step of the research was the focus research. The last part of the research was focused on the review of adequate funding programs for the energy transition.
Findings: During the research strong emphasis on the role of instruments supporting a just transformation was indicated, this base paper focuses on the supporting mechanisms of the energy transformation.
Originality/value: The paper brings new to the science, as its conclusions are based on the author's own study - focus research.

Keywords: Just Transition, Energy Poverty, Funding programs, Energy Transition in Poland.

Category of the paper: research paper.

1. Introduction

The concept of anthropopression, exemplified by the worsening state of the environment, including climate change, necessitates a fundamental shift from our current reliance on fossil fuels for energy towards a low or zero-carbon energy system (Heffron et al., 2020). Instead of a complete switch from one dominant energy source to another, this energy transition involves phasing out fossil fuels while simultaneously increasing the utilization of renewable energy sources like solar and wind power, which have previously played a minor role in our energy mix (Delina et al., 2018). Such a profound transformation demands substantial social, economic, and technological changes. Experts widely emphasize the importance of ensuring a fair transition that avoids perpetuating environmental and socio-economic disparities, which

currently exist within the energy systems in Poland and across Europe (Middlemiss, 2020). The energy transformation is a multifaceted process, offering various economic and environmental advantages, along with certain risks (García-García et al., 2020). Transitioning to a low-emission system directly contributes to the improvement of the natural environment and the overall well-being of society. However, it also entails addressing the pressing issue of energy poverty, which affects, or has the potential to affect, a significant portion of the population (Jenkins et al., 2016).

The development of renewable energy is recognized as a crucial tool for achieving Sustainable Development Goals, as it can replace the highly polluting and hazardous "grey economy" with an environmentally friendly, healthy, and green economy (Jenkins, 2018; Kuzior, Lobanova, 2020; Kuzior et al., 2022). To facilitate this transition, it is vital to implement environmental programs that allow both regions and local communities, particularly those vulnerable to energy poverty, to access the necessary resources and funding. The article discusses focus research conducted in May 2023 on a group of 18 people living in the Silesian Voivodeship. Respondents answered a number of questions on general aspects of the energy transition, just transition and, the risks resulting from it following the climate and energy trends of the European Union. Based on the answers provided, a review of available aid programs in Poland supporting a just transformation was carried out.

Energy poverty is a critical concept that has been solidified in the legislative package known as 'Clean Energy for All Europeans,' which is designed to facilitate an equitable transition in the energy sector. According to Regulation (EU) 2018/1999 of the European Parliament and the Council (referred to as 'the Governance Regulation') and the revised Electricity Directive, the Commission is mandated to offer indicative guidance on suitable indicators for assessing energy poverty and on the definition of a 'significant number of households in energy poverty.' There isn't a universally accepted definition of energy poverty, so Member States are tasked with developing their own criteria based on their unique national contexts. Nonetheless, the recently enacted legislative package does provide valuable general principles and insights into the potential causes and repercussions of energy poverty. It also emphasizes the significance of policies aimed at addressing this issue, particularly those related to national energy and climate plans (NECPs) and long-term renovation strategies (LTRSs). In 2018, within the European Union, 6.8% of individuals residing in private households (equivalent to 30.3 million people) faced challenges in meeting their utility bills, including energy expenses, and were thus at risk of having their energy supply disconnected. Simultaneously, 7.3% of the EU's population (equivalent to 37.4 million people) encountered uncomfortable indoor temperatures in their homes. Energy/fuel poverty is one of the biggest challenges of the 21st century. Despite the rapid scientific and technological development of the modern world, quality of life does not follow the same pace. More and more households have difficulty meeting their energy needs, a situation expressed either by the inability to pay energy bills or by limited access to energy and inadequate energy services. This trend mainly arises as a consequence of low incomes,

high cost of energy and energy inefficiency of residences. t has been assessed that energy poverty in Europe affects between 50 and 125 million people (EPEE, 2009b), while it has been noted that energy poverty rates vary significantly across different Member States (BPIE, 2014). Actually, Bouzarovski and Tirado Herrero (2017) reported that energy poverty incidence is considerably higher in Southern and Eastern EU Member States. Unfortunately, an accurate assessment of the extent of the problem at the European level is impeded by the absence of a common European definition (Thomson et al., 2016) and by the scarcity of suitable data across Europe (Thomson et al., 2017). European Commission in the report "Subsidies and Costs of EU Energy Final Report", stated that in 2012 the total value of public interventions in energy (excluding transport) in the EU-28 was 122 billion EUR. The literature suggests that enabling money transfers to individual consumer groups within national and EU legal regulations requires a proper legal framework to be established and a definite period of the subsidy duration to be defined. Furthermore, it is imperative to establish a robust monitoring system to assess the effectiveness of subsidies in achieving the program's objectives and to evaluate whether their continuation aligns with the principles of a free market and competition (Johnston et al., 2014). This consideration gains added significance when we take into account the well-documented adverse impact of subsidies to fossil fuels on economic growth, as highlighted by Mundaca in 2017. Mundaca's research suggests that "a nation that initially provides subsidies to its fossil fuels and subsequently eliminates or reduces these subsidies will experience increased economic GDP (gross domestic product) per capita growth, as well as elevated levels of employment and workforce participation, particularly among the younger population". These effects are most pronounced in countries where fuel subsidies are initially substantial. The effectiveness of energy taxes in ensuring energy security is also being examined (Kuzior et al., 2023).

2. Materials and Methods

For the transformation to be effective, it must be fair, transparent, territorially based, and acceptable to all. Most importantly, during implementation, the quadruple helix model should include importance as an influence on politics, business, academia, and society. Required for civic discourse, and also with stakeholders of transformation processes. These assumptions correlate with the SITRANS project (Life-2021-CET-Coal Regions, https://sitrans-project.eu/project/), which constitutes a meso-level solution is and being studied that addresses the application and management impacts, socio-economic impacts and elimination poverty to achieve decarbonization of the energy system .As part of the project, empirical research was carried out, the aim of which was to debate the stakeholders of the energy transformation in partner countries - Poland, Bulgaria, Greece, and Italy. The meetings were based on questions

prepared by the project leader. The questions were the same for all partner countries. The research was conducted in selected regions of the carbon anchor - in the case of Poland, Silesia. The empirical research focused on the following aspects; key elements that should characterize the Just Transition, actions that will help increase the participation of local civil society in the Just Transition process, challenges for the quadruple helix mode, and ways to include a place-based approach in the Just Transition management model. When designing the research process, it was decided that the best solution to obtain results from various social groups would be to use a Focus Group Interview. The method of focused group interviews is over 60 years old and widespread was made by Robert Merton and Paul Lazarsfeld and they were the first to use it against her called " focused interview" (Maison, 2001). Focus group interviews are a qualitative research method. In contrast to quantitative techniques (survey, such as a survey) to qualitative techniques it, is not about measuring the phenomenon but about its deeper analysis, i.e. answers to the questions: what is it like? and why is this so? Representativeness is not a requirement for qualitative research; Therefore, the obtained results cannot be generalized to the entire population. However, the authors decided to use such a method due to: understand deeper governing mechanisms given problem, for which statistical representativeness is not necessary.

3. Just Transition in Poland

In 2018, 5.1% of the Polish people reported that they were unable to keep their homes adequately warm - it showed a consistent drop compared to 34% in 2005. The share of households that spend a high share of their income on energy expenditure is 16.2%. Energy poverty was highest for the social housing sector in 2017, at 12% for inability to keep the house warm and 19.1% for arrears on utility bills. An essential dimension of energy poverty (EP) in Poland is related to the burning of solid fuels in the residential sector (Central Statistics Office in Poland, 2018). Due to their relatively low price, coal and wood are the main sources of energy for heating in energy-poor families. Combustion of solid fuel, in turn, results in the emission of dangerous air pollutants, including some carcinogenic substances (WHO, 2010). Smog is a major problem in many Polish agglomerations (Commission refers Poland…, 2015). According to the World Air Quality Report, Poland has some of the worst air quality in Europe, having 15 of the continent's 50 most polluted cities (IQAir AirVisual, 2018). Solid fuels were the main sources of domestic heat in 45% of Polish households in 2018. The reasons for the persistence of coal-based heating in Poland include its historical availability, low cost for domestic consumers, and the higher price and perceived supply risks of imported natural gas. Furthermore, most Polish households burn coal in low-efficiency stoves and rely on wood as a substitute during warmer periods. Yet, the refusal of daily usage of cheap energy sources can

push many families into economic hardship. Implementation of environmental policies at a reduced social cost requires knowledge of EP prevalence among others. Despite the gravity of EP in Poland, this issue is difficult to detect due to abnormally low energy expenditures in some households. Much of the debate on EP focuses on self-reported indicators or high energy expenditures. In 2017, 8.51% of Polish households declare problems with keeping home warm (EU-SILC), 4.68% frequently encounter utility bills difficulties (EU-SILC), and 18.6% experience high actual energy costs (Sokołowski et al., 2019a, Sokołowski et al., 2019b). Two key drivers of low household energy costs in Poland should be considered. First, the burning of cheap and dirty energy sources in single-family houses, major emitters of low-stack emissions. Second, self-restricted coping strategies are employed by low-income families. The usage of cheap and dirty energy, including unprocessed garbage, in detached houses as well as cutting on energy expenditures as a way to survive are considered the major expressions of HEP in Poland. Studies on EP in the CEE also confirm that the countries of this region experience high EP prevalence due to poor building quality and low income (Bouzarovski, 2014, Dubois, Meier, 2016). The energy transition in Poland is based on three pillars (Energy Policy of Poland until 2040):

- Pillar I – Just Transition is primarily about ensuring new development prospects for the regions and communities most affected by the implementation of the low-carbon energy transition. Emphasis will be placed on reducing energy poverty in coal regions and developing new industries such as renewable energy or nuclear power, which will create up to 300,000 additional jobs.
- Pillar II – Zero-Carbon Energy System is a long-term measure that will be possible after the launch of nuclear energy and offshore wind energy. In addition, distributed and civic energy growth will play an important role. Furthermore, the employment of industrial energy on a larger scale, together with ensuring energy security through the temporary use of gaseous fuels, will enable the reduction of emissions and bring Poland closer to a zero-emission energy system.
- Pillar III – Good Air Quality – in the debate on the energy transition of our country, the assumptions of Pillar III are the issue most frequently raised by the public. Air quality in Poland, especially in coal regions, is either poor or very poor. The public is aware that air quality has a significant impact on people's health, so the key objective of Pillar III is to ensure clean air for all Poles. This will not be possible without specific actions, and by specific actions, I do not mean just the ones taken by the government or local authorities, but also those taken directly by society.

4. Results of focus research

The Mineral and Energy Economy Research Institute of the Polish Academy of Sciences conducted a focus study on May 31, 2023, in the Lower Silesian Voivodeship. Representatives of science, entrepreneurs from sectors such as (mining, energy, and recycling), i.e. key industries for the energy transformation, and business environment entities were invited to the meeting. A total of 18 people took part in the consultations. The quadruple helix model was used as the research model. Innovation policy must face the pressure of ongoing changes. This approach, called "broad-scope innovation", includes, among others: taking into account non-technological innovations in the innovation system, as well as innovations responding to the broadly understood social needs of various social groups. The change in the approach to creating innovation systems and the shift of emphasis from the Triple Helix Model to the inclusion of civil society result from, among others, social changes and accompanying global phenomena, e.g. ageing of society, new types of consumption, large social migrations, new phenomena in trade (e.g. fair trade) and protection of the environment and natural resources requiring a different approach. The Quadruple Helix model takes into account society and the institutions representing it, such as non-governmental organizations, as well as the end users of innovation, i.e. citizens. The model promotes the inclusion of society in the innovation system, which leads to the emergence of new forms of innovation and a new way of organizing the network of connections between various stakeholders. The purpose of the meeting was to determine the position of the invited stakeholders on the activities, decisions made and also the significant barriers to the Fair Transformation process. The participants were asked four key questions in this area. It should be noted that all the questions aroused the interest of the participants, who spoke with great commitment to the issue presented to them. The first question was to identify the key elements that should characterize a Just Transition. Stakeholders identified several key elements that characterize a Just Transition. First of all, they believe that it is a new vision that requires a multidimensional, multi-stakeholder and integrated sectoral and territorial approach. It was recognized that the participation of stakeholder groups is necessary for radical but necessary changes. Opinions were expressed that social dialogue is crucial for the introduction of a new vision in the region. The mining sector was identified as one of the most important partners for talks with local authorities. Stakeholders stressed that a just transition means equal access to environmental resources (water, clean air, green spaces), but above all it should mean unshaken access to new labour market opportunities. Participants are concerned that if in coal regions, appropriate measures are not taken to mitigate the change and dynamize development, the energy transition to a green economy may result in negative effects on the labour market and accessibility to infrastructure, which will consequently widen disparities and development opportunities, and above all affect increasing levels of joblessness. Such a significant change, for obvious reasons, raises concerns and emotions of stakeholders in the process. The next important element that characterizes the Just Transition should be the implementation of a technological change related to RES.

The change in the widespread use of renewable energy sources, conservation of energy, water, raw materials and ecological transportation that is already taking place in Western European countries, according to meeting participants, is a key challenge for the entire region.

The second question stakeholders were asked to identify actions that can be taken to increase local civil society participation in the Fair Transition process. Participants in the meeting recognized that the involvement of local society is particularly important for this topic. Several actions were identified that can be taken to activate society. First, there should be a broad campaign to inform the public about the plans and activities related to Fair Transformation. Stakeholders, believe that there is a great deal of ignorance among local groups on the subject. The planned solutions in this regard should be widely informed and shown. Participants suggested increasing public participation by allowing them to participate in public consultations. The purpose of such public consultations is to inform the local community about the planned project, present a variant course of action and provide an opportunity to make any comments. It was also proposed that for the most important measures, i.e. investments, referendums should be held. This will strengthen the position of local society in the decision-making process. Representatives of NGOs unequivocally said that as an institution that supports society, it should be asked for its opinion on key aspects of the Just Transition. Participants turned their attention to defining local society, asking whether a society defined at the level of the region, county, municipality or still narrowed down to local districts of the region should participate in decision-making processes. The third question posed to stakeholders was to identify the biggest challenges to the quadruple helix model - understood as the cooperation of politics, business, and the environment. According to the participants, it is the rulers who are increasingly aware that in the modern world, if they can't meet public expectations they will lose their raison d'etre. According to the participants, non-governmental organizations play a particularly important role here, as citizens place more trust in them than in public sector organizations and give them support of their own choosing. Partnership with such organizations strengthens social ties and increases the level of trust in local authorities. The biggest challenge, according to the meeting's participants, is to determine the level of stakeholder involvement in the public decision-making process at such crucial stages as formulating goals, determining ways of implementation and implementing the adopted decisions. Authorities and public administration, and public organizations more broadly, have an obligation to take into account in the decision-making process the fact that stakeholders are stakeholders in the decision-making process itself, as well as in its results, while their interests can, as the consultations showed, differ significantly. According to participants, diverse and often divergent interests lead to equally diverse relationships (ranging from supremacy to partnership to competition), often causing conflict. In the last question, stakeholders were asked how a place-based approach could be included in the Fair Transformation governance model. Participants said that the very implementation of the Fair Transformation Mechanism brings many challenges and expectations. Taking into account the territorial dimension according to stakeholders offers potential development opportunities for individual territories. One of the main elements

characterizing this approach is the increased role of the regional level in activating development processes. It is recognized that the proper use of the potential of the territory and its competitive advantages, can only take place with the use of local knowledge, experience, skills, specialization and relationships occurring between different local actors. Decision-making processes should consider the region's territorial, social economic and natural conditions. What all respondents had in common was a strong emphasis on the role of instruments supporting a just transformation. The study participants clearly stated that the introduction of appropriate tools to support the transformation process is crucial to the fight against energy poverty.

5. Overview of programs

There have been different programmers to support energy efficiency – which is in line with environmental regulations. With regard to regulation, the Act on Energy Efficiency (Law Gazette, 2011) was enacted in 2011. Its aim was the development of mechanisms for stimulating improvements in energy efficiency. Primarily, the law introduced obligations for obtaining an appropriate amount of energy efficiency certificates, called white certificates, by energy sales companies selling electricity, heat or natural gas to end-users connected to the grid in the Republic of Poland territory. The Act from 2011 was replaced by a new Act from 20 May 2016 (Law Gazette, 2016) aimed at further improvements to the energy efficiency of the Polish economy and ensuring the achievement of national energy efficiency target of financing for pro-ecological investments in Poland, including in the construction sector.

In September 2018, the Polish government announced a nationwide ‘Clean Air’ programme aimed to improve air quality and combat energy poverty, for which 103 billion PLN [24 billion EUR] were allocated for 10 years. The ‘Clean Air’ programme provided a new rationale for environmental action, demonstrated political will, and leveraged additional resources for household energy transitions in Poland. It nevertheless remains a technocratic policy document primarily focused on air quality at the expense of citizen well-being – even if alleviating energy poverty was declared at one of its strategic priorities. In terms of policy implementation, initial evidence after one year showed slow progress of the ‘Clean Air’ programme because of complex administrative procedures and the insufficient capacity of regional environmental funds – the entities responsible for its implementation. So far, only PLN 3 billion has been spent from the budget set at PLN 103 billion. Looking at the number of soothers mentioned, only 5%t were realized. goal: approx. 151 thousand stoves from 3 million old stoves. Table 1 presents the most important programs of the Fund, in accordance with the 4th National Action Plan for energy efficiency.

Table 1.
Fund's programs, in accordance with 4th National Action Plan

Supplements to loans for the construction of energy-efficient houses	
Program goal	The aim of the program is to achieve energy savings and reduce or avoid CO_2 emissions by co-financing projects that improve the efficiency of energy use in newly built residential buildings.
Budget	Withdrawals of funds from the undertaken and planned commitments for non-returnable forms of co-financing of the program amount to PLN 300 million. Implementation period: the program is being implemented in 2013-2018. Forms of co-financing: subsidy for partial repayment of bank loan capital made via the bank on the basis of a cooperation agreement concluded with the National Fund for Environmental Protection and Water Management.
Beneficiaries	Natural persons who have valid building permits and have the right to dispose of the property on which they will build a residential building. By "disposing of" the property should be natural persons holding the right to transfer by the developer for their benefit: ownership of the property, together with a single-family house, which the developer will build on it or perpetual usufruct of land and ownership of a single-family house, which will be located on it and will constitute a separate property or property residential. The developer is also understood as a housing cooperative.
Rules	One of the conditions for obtaining support is to achieve the required demand for usable energy by meeting the conditions of the guidelines: minimum technical requirements, requirements for the construction project, requirements for the implemented project, quality assurance of construction works. The NF40 and NF15 standard for residential buildings set a series of requirements developed specifically for the needs of the financing program, which in many aspects outweigh and extend those resulting from the applicable laws and the definition of a building with low energy consumption.
Effects	Until 2017, contracts for co-financing the construction of 349 single-family buildings were concluded, in the amount of approximately PLN 12.4 million. The average area of energy efficient houses being built is 132.5 m2, while the demand for usable energy for heating and ventilation (EUco) is on average 26.4 kWh/(m2 □year). 17 positively verified housing estates of single-family and multi-family houses.
LEMUR − Energy-efficient public buildings	
Program goal	The aim of the program is to reduce energy consumption and, consequently, to reduce or avoid CO_2 emissions in connection with the design and construction of new energy-efficient public buildings and collective housing.
Budget	The budget for the implementation of the program is up to PLN 97.4 million, including nonreturnable forms of co-financing - PLN 1.4 million, and refundable forms of co-financing - PLN 96 million. Forms of financing: subsidy for project documentation 60%, 40%, 20% depending on the class of energy saving of the building (A, B or C); • loan for the construction of new energy-efficient buildings, up to PLN 1,200.00 per m2 for class A, for class B and C up to PLN 1,000.00 per m^2, with the possibility of redemption 60%, 40%, 20% depending on the energy efficiency class of the building (A, B or C).
Beneficiaries	Entities of the public finance sector, excluding state budgetary units; • local government legal entities, commercial law companies in which local government units (JST) hold 100% shares or stocks and which are appointed to implement JST own tasks. Non-governmental organizations, including foundations and associations, as well as churches and other religious organizations entered in the register of churches and other religious associations, and church legal entities that perform public tasks on the basis of separate regulations.
Rules	The program covers the design and construction of new buildings: • public utilities - intended for the needs of public administration, culture, education, higher education, science, upbringing, health, social or social care, tourism, sport; • a collective residence - intended for temporary stay of people (boarding houses, student houses) and for permanent residence of people (orphanages, pensioners' houses).
Effects	Buildings covered by the program are to comply with technical guidelines, defining detailed principles of shaping and the level of energy standard requirements, prepared for the needs of the program, which take into account the applicable technical and construction regulations and those concerning the calculation of energy performance of buildings.

Cont. table 1.

Prosumer - a co-financing line intended for the purchase and installation of microinstallations of renewable energy sources	
Program goal	The aim of the program "Supporting distributed, renewable energy sources Part 2) Prosumer - the co-financing line intended for the purchase and installation of renewable energy micro-installations" is to reduce or avoid CO2 emissions as a result of increasing energy production from renewable sources, through the purchase and installation of small installations or micro-installations renewable energy sources, for the production of electricity or heat and electricity for individuals and housing communities or cooperatives.
Budget	The budget of the program amounts to PLN 340,402 million, including: • for non-returnable forms of co-financing - PLN 122.968 million, for returnable forms of co-financing - PLN 217,434 million Implementation period: 2014-2022 with the possibility to conclude loan agreements by 30/06/2017. Forms of financing: Loans with subsidies total up to 100% of eligible costs, including: a subsidy of 20-40% of the co-financing (15 or 30% after 2015); loan with an annual interest rate - 1% (loan financing period up to 15 years).
Beneficiaries	Natural persons who have the right to dispose of a residential building; housing communities and cooperatives; local government units and their associations. Co-financing will be granted for installations for the production of electricity or heat and electricity using: biomass heat sources, heat pumps and solar collectors with installed thermal power up to 300 kW.
Rules	Photovoltaic systems, small wind farms, and micro-cogeneration systems (including microbiogas plants) with an installed electrical capacity of up to 40 kW, for the needs of single-family or multi-family residential buildings, including those under construction. High quality of installed devices is required, manufacturer's warranty of the main equipment for at least 5 years, contractor's warranty for at least 3 years, design and assembly by authorized persons.
Effects	The program promotes new technologies for renewable energy sources and prosumer attitudes (raising investor and environmental awareness), and also affects the development of the equipment and installer market, and the increase in the number of jobs in this sector.
BOCIAN - dispersed, renewable energy sources	
Program goal	The goal of the program is to reduce or avoid CO_2 emissions by increasing energy production from installations using renewable energy sources.
Budget	Planned commitments for returnable forms of co-financing amount to PLN 570 million from NFOŚiGW.
Beneficiaries	Beneficiaries are entrepreneurs within the meaning of art. 43 of the Civil Code, undertaking the implementation of projects in the field of renewable energy sources in the Republic of Poland.
Rules	The program includes the construction, extension or reconstruction of renewable energy source installations with capacities within certain ranges, wind farms up to 3 MW, solar systems from 200 kW to 1 MW, geothermal plants from 5 MW to 20 MW, small 5 MW hydroelectric plants.
Effects	Preferential financing of investments in smaller RES installations (not including micro-installations for which funds were previously reserved in the Prosument program), including: in wind farms with a capacity of up to 3 MWe, photovoltaic systems with a capacity of up to 1 MWe, geothermal installations with a capacity of 5 MWt to 20 MWt, small hydroelectric power plants with a capacity of 300 kWe to 5 MWe, biomass-fired heat sources with a capacity of 300 kWt to 20 MWt, large-format solar collectors with a heat accumulator, as well as agricultural biogas plants with a capacity of up to 2 MWe, electricity production in high-efficiency biomass cogeneration, as well as hybrid installations and energy storage systems accompanying renewable energy investments with a capacity not exceeding 10 times the power installed for each renewable energy source.
Improvement of air quality. Part 2 - Reduction of energy consumption in buildings	
Program goal	The aim of the program is to improve air quality by limiting or avoiding CO_2 emissions as a result of increasing energy production from renewable energy installations or by reducing energy consumption in buildings.
Budget	The budget of the program is up to PLN 500 million, including: • for non-returnable forms of co-financing - up to PLN 300 million, • for returnable forms of co-financing - PLN 200 million

Cont. table 1.

Beneficiaries	Implementation period: 2016-2022 Forms of co-financing: subsidy (up to 85% of eligible costs), loan (up to 100% of eligible costs). Beneficiaries are registered in the Republic of Poland: 1) entities carrying out medical activities in the field of stationary and round-the-clock health services, in particular hospitals, care and treatment centres, nursing and care facilities, hospices, entered into the register of entities performing medical activities, referred to in the Act of 15 April 2011 about therapeutic activity; 2) entities running museums entered into the State Museum Register; 3) entities running student hostels, in accordance with the Act of July 27, 2005. Law about higher education; 4) entities that own the building entered in the Register of Monuments in accordance with the Act of 23 July 2003 on the protection of monuments and the protection of monuments; 5) churches and religious associations entered in the Register of Churches and other religious associations, referred to in the Act of 17 May 1989 on guarantees of freedom of conscience and religion.
Rules	Thermomodernisation concerns the following buildings not supported by EU funds: museums, hospitals, care and treatment centres, nursing and care facilities, hospices, historic buildings, sacred buildings with accompanying facilities, student dormitories, in the scope of changing the equipment of facilities with devices with the highest, economically justified energy efficiency standards directly related to the implemented thermomodernisation of buildings, in particular: insulation of the facility, including: walls, floors on the ground, ceilings, roofs, roofs and other partitions, replacement of windows, replacement of external doors, reconstruction of heating systems (including replacement of heat source), replacement of ventilation and air-conditioning systems, application of energy management systems in buildings, use of renewable energy technologies, preparation of technical documentation, including energy audits and mycological expert opinions, liquidation of dampness and its effects on a thermomodernised building, replacement of indoor and outdoor lighting for energy-saving.
Effects	Reduction of energy consumption in buildings
Green investment system GIS. Part 1) - Energy management in public buildings	
Program goal	The aim of the program is to reduce or avoid carbon dioxide emissions by co-financing projects that improve the efficiency of energy use by public buildings.
Budget	Budget: PLN 501 million - non-returnable forms (subsidies), PLN 462 million - repayable forms (loans) / funds derived from the transaction of sale of AAU emission units or other NFEPWM funds.
Beneficiaries	Local government units and their associations; entities providing public services as part of the implementation of own tasks of local government units that are not entrepreneurs; Volunteer Fire Department; universities within the meaning of the Law on Higher Education and research institutes.
Rules	independent public health care centres and medical entities running an enterprise within the meaning of art. 55 of the Civil Code in the scope of providing health services; non-governmental organizations, churches and other religious organizations entered in the register of churches and other religious associations, and church legal persons.
Effects	Thanks to obtaining funding from this program, it is possible to reduce energy consumption in used buildings. Activities include thermo-modernization of public buildings, in particular insulation of the building, replacement of windows, replacement of external doors, reconstruction of heating systems, replacement of ventilation and air-conditioning systems, preparation of project documentation for the project, application of energy management systems in buildings, the use of renewable energy technologies, or the replacement of internal lighting with energy-efficient ones (an additional task carried out in parallel with thermomodernisation of buildings). Group projects can be implemented as part of the program.
Funds of the European Union. Operational Program Infrastructure and Environment Operational Program Infrastructure and Environment 2014-2020 Measure 1.3.1, 1.3.2 - Supporting energy efficiency in public utility buildings and in the housing sector	
Program goal	The aim of the program is to increase energy efficiency in multi-family housing and public buildings.
Budget	Budget: EUR 431.10 million (including public utility buildings - EUR 205.52 million and housing sector - EUR 225.58 million), from EU funds (Cohesion Fund).
Beneficiaries	As part of the investment priority, support is provided for public authorities, including state budgetary units and government administration as well as subordinate bodies and organizational units, housing cooperatives and housing associations, state legal persons, as well as entities that provide energy services within the meaning of Directive 2012/27/EU.

Cont. table 1.

Rules	It is planned to support deep, comprehensive energy modernization of public and residential buildings, together with the replacement of equipment for these facilities with energy-saving facilities in the area related to, e.g: insulation of the building, replacement of windows, external doors and lighting for energy efficient, reconstruction of heating systems (including replacement and connection of a heat source), ventilation and air-conditioning systems, related to the use of weather automation and building management systems, construction or modernization of internal reception installations and elimination of existing heat sources, installation of microgeneration or micro-generation for own needs, installation of renewable energy in energy-efficient buildings (if it results from energy audit), installation of cooling systems, including renewable energy sources. understood: a) ownership (including co-ownership), b) perpetual usufruct.
Effects	Increased energy efficiency in multi-family housing and public buildings.

Source: Own study based on available information about the programs.

Even though there are many different funds available the problem of poor air quality in Poland recurs annually during the period in which houses and buildings require heating. In Poland, households are still mostly heated by burning coal in ineffective furnaces. It is related to energy poverty, which can be seen as one of the factors which influences air quality. At the national level, this phenomenon was analysed by Rutkowski et al. (2018), who observed that this problem affects 12% of Poles - mainly in rural and town environments, which often do not have access to the heating network. The authors indicate reasons why individual instruments are currently not available to energy-poor families:

- Housing and energy allowances use the criterion of the maximum size per person, which excludes most residents of single-family houses.
- The energy lump sum is awarded to war veterans, so by definition, it applies only to a specific group of recipients.
- The targeted fuel allowance is granted to people who meet the restrictive income criterion of social welfare, so it excludes energy-poor households with slightly higher incomes.
- National Fund of Environmental Protection and Water Management energy advisory services are addressed mainly to local government units, so they do not constitute real support for individual farms.
- Revitalization is a mechanism with great potential in preventing energy poverty and in removing its causes through the thermal modernization of residential buildings. At the same time, revitalization activities work better in cities than in villages, where scattered development makes it difficult to identify problem areas and undertake revitalization.
- The thermo-modernization premium works as a preventive instrument that prevents the emergence of energy poverty by improving the housing structure, but the requirement of an expensive energy audit and investment financing makes this mechanism unattractive for poorer inhabitants of single-family houses. For this type of real estate, the costs of meeting formal requirements outweigh the benefits of obtaining a bonus.

Therefore they propose three new instruments: targeted allowance (1), consultancy and minor improvements of energy efficiency (2), and thermo-modernization (3). First, targeted fuel allowance, aimed at alleviating the symptoms of energy poverty. Second, advisory services and energy-saving improvements. Third, thermal retrofit coupled with professional energy counselling. The latter two instruments are meant to eliminate the causes of energy poverty. Thermal retrofit is the most expensive but the most effective tool. Developing a mechanism for the practical identification of energy-poor households is a major challenge. It is to be tackled by local governments, especially social assistance centres.

This increased focus on energy poverty is linked to efforts to reduce air pollution, which is partly caused by the use of less efficient, more polluting energy sources such as coal. The use of coal is determined by the following reasons:

Firstly, this fuel is the dominant source of energy for space heating in areas most affected by smog and its detrimental effects (Inventair, 2018). Secondly, although hard coal sold as a product is of various quality, its parameters are monitored and can be easily calculated into standard values, which serve as the basis for the valuation of this material. This fact enhances the analysis of the product's value, while the data and statistics kept by entities operating in the hard coal market provide a large sample for the input data used in the calculations. Thirdly, the prices of hard coal are monitored, and unlike e.g. the prices of firewood, depend not only on local factors and specific regional conditions but also on global trends and the current economic situation. It is worth noting that retail prices of coal for households show a smaller fluctuation than wholesale prices, which is primarily due to the higher costs of transporting the product to household.

Resistance to a shift away from coal exists mainly due to the deep incumbency of the coal industry and a supportive government. Vested interests of the coal regime are protected due to strong links between coal corporations and the government. Most coal corporations are majority state-owned owned and unions are highly involved in political decisions. This makes it more difficult for coal-opposing voices to weaken the political support for coal. The main arguments put forward against a coal phase-out are similar to other countries and include aspects of energy security, energy independence concerns, fears of rising energy prices, concerns about the reliability of renewables and the prospect of unemployment in regions mainly dependent on the coal industry. Other specifics for Poland - locking the country even deeper into its dependence on coal - are past negative restructuring experiences, strong concerns about relying on Russia's energy resources, little influence by environmental NGOs, and limited financial strengths to experiment with new investments.

Important positive and negative lessons can hereby be learned from other international examples, e.g. structural policy programs guiding the phase-out of coal mining in Germany since the 1960s (Oei et al., 2019; Stognief et al., 2019), long-lasting unemployment effects in former coal mining areas in the United Kingdom (Fothergill, 2017), and just transition approaches addressing interests from labour and affected regions in negotiated settlements in Spain (Rentier et al., 2019).

6. Conclusion

A just transition stands as a fundamental pillar in Poland's energy transformation strategy towards 2040. Achieving a low-emission energy system hinges on creating new development opportunities that prioritize support for the most vulnerable communities and regions. Without such assistance, many regions are at risk of being left behind, facing mounting economic challenges and soaring unemployment rates. Effectively addressing these challenges will have a profound impact on Poland's green economy in the coming decades.The findings from conducted focus groups and an analysis of aid programs designed to support a Just Transformation in Poland reveal a notable deficiency in dedicated assistance programs. Those programs that do exist tend to have stringent eligibility criteria, particularly concerning income thresholds that beneficiaries must not exceed to access funding. Given the current environment of high inflation and ongoing increases in the minimum wage, adhering to these income limits can be a daunting prospect. It is important to recognize that the energy transformation process represents a collective challenge for the entire European Union, necessitating the active participation of all Member States. Only through this collective effort can the shared objective of achieving climate neutrality be realized. Additionally, it is worth noting that, alongside Germany, Poland is poised to be one of the largest beneficiaries of the EU transition fund.

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EVALUATION OF IMPACT OF EXTERNAL COMMUNICATION FACTORS ON THE ADOPTION OF INNOVATIONS BY IT EMPLOYEES IN POLAND

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Purpose: The purpose of the study presented in this article is to assess the impact of selected external communication factors on the adoption of innovations by Polish IT employees at different stages. The study adopts a hypothesis: employees appreciate the importance of external contacts as a source of innovation.
Design/methodology/approach: The study used a proprietary questionnaire developed specifically for the purpose of this work. This tool explored the opinions on various external communication factors in the context of adoption of innovation. These factors were selected for the survey questionnaire based on literature research, desk research, opinions of panel participants (experts), and pilot studies conducted in IT companies.
Findings: In the group of factors related to external communication at each stage, the respondents saw the greatest influence on the adoption of the innovation in factors such as: good relations between company and/or service representatives and customers, and recognition of customers' requirements and needs in relation to products and services. The more advanced the innovation stage was, the lower the estimated impact in the adoption of this innovation of factors related to external communication, such as recognition of customers' requirements and needs toward products and services and analysis and interpretation of public opinion about the company and its products or services.
Research limitations/implications: The research presented in this article has some limitations. Firstly, it was carried out only in Poland, secondly only in the IT sector, and thirdly, only selected external communication factors were considered.
Practical implications: Demonstrate the importance of selected external communication factors in the innovation adoption process at its various stages.
Social implications: The results of the research should prompt companies to increase the development of diverse forms of external communication that build a lasting, positive relationship between the company and external stakeholders.
Originality/value: Assessment of the impact of selected external communication factors on the adoption of innovations by Polish IT employees at different stages.

Keywords: innovation, innovativeness, innovation adoption, innovation adaptation, external communication.

Category of the paper: Research paper.

1. Introduction

In today's highly dynamic environment, a factor that significantly affects the success of a company is its innovativeness. It can be defined as a company's collective openness to new ideas embedded in the corporate culture (Hurley, Hult, 1998). Another approach defines innovation as the willingness to challenge the status quo and provide support for new ideas in terms of technology, new product development, and also internal processes (Baker, Sinkula, 2009). Furthermore, the literature identifies it with an organisational climate that facilitates timely performance (Ruvio et al., 2013). Therefore, innovation has become a key nonfinancial objective of the firm and an important measure of organisational performance (Moos et al., 2010; Ober, Kochmanska, 2022). It is also worth noting that five dimensions of organisational innovation have been identified, namely creativity, openness, future orientation, risk taking, and proactivity (Ruvio et al., 2013).

Inherent in the concept of organisational innovation is the notion of innovation, since, as the subject experts point out, in many cases it has been operationalised as the number of innovations adopted by organisations (Ruvio et al., 2013).

Innovation can be defined as 'as the creation of new knowledge and ideas to facilitate new business outcomes, aiming to improve internal business processes and structures and to create products and services' (Plessis, 2007, p. 21). Innovation is also the implementation of a new or significantly changed product or process (Gault, 2018) and also the achievement of success through the application of something new (Granstrand, Holgersson, 2020). It can also be equated with progress (Weryński, Dolińska-Weryńska, 2021; Weryński, 2022). Innovation as an organisational phenomenon has been studied in many different fields (Quintane et al., 2011). Hence, among other things, their differentiated division results. Here, one can distinguish: process innovation, occurring, for example, in the form of the implementation of a streamed form of production (Wolniak, 2014), open innovation (perceived by organisations as highly relevant to future development strategy) (Kuzior et al., 2023), eco-innovation (Valdez-Juárez, Castillo-Vergara, 2021) or social innovation (Phillips et al., 2015).

In order to achieve the aforementioned success in adopting innovations, it is necessary to consider what factors can have a significant impact on this. One of the key elements belonging to this group is external communication, because as A. Potocki emphasises the integrative role of communication with the external environment determines the existence or demise of an organisation, as it functions in a specific environment (Potocki, 2009, p. 5). Therefore,

companies that not only actively focus on searching for external knowledge (especially technical knowledge), but acquire it, have an advantage over those organisations that decide to generate and implement innovations fully on their own (Zakrzewska-Bielawska, 2016).

Referring to the above considerations, the main objective of the study presented in this article is to assess the impact of selected external communication factors on the adoption of innovations by Polish IT employees at different stages. The study adopts a hypothesis: employees appreciate the importance of external contacts as a source of innovation.

The structure of the remainder of the article begins with a review of the literature on the adoption of innovations (with a view to, among other things, introducing the Technology Acceptance Model) and the factors relating to external communication are characterised within the company that potentially affect innovation adoption. This is followed by a description of the methodology used in this study and the results of the analysis and discussion. Finally, conclusions from a scientific perspective and suggestions for further research are presented.

2. Theoretical background

An interesting approach to innovation adoption can be found in the literature. M. Pichlak emphasises that "adopting an innovation essentially means that it is new to the adopting organisation. The adoption of an innovation can result from changing organisational conditions (adoption of a new strategy, structure, or employee remuneration system) or external conditions. Regardless of the internal or external source of change, innovation adaptation creates change in the organisation - it is a tool that determines the flexibility of its operation" (Pichlak, 2010, p. 378). According to A. Drews, in small domestic companies, middle- and lower-level employees are increasingly participating in the creation and adaptation of innovations (Drews, 2018).

At this point, it is worth taking a closer look at one of the main models that tries to explain the motives of human behaviour in the context of innovation adoption, namely the Technology Acceptance Model. This model is most commonly described in studies related to information systems and ICT in relation to innovation adoption (Otieno et al., 2016). Its creator was F.D. Davis. The model was developed in the 1980s. Until modern times, it has been one of the most important justifications for an individual's use of new technologies and provides a reference point for explaining the use of information technologies in different social contexts. F.D. Davis assumes that the determinant for the use of new information technologies is the intention to use. This in turn is explained by a certain attitude towards the use of a given technological solution and its perceived usefulness for the potential user. The next important factor in the model discussed above is the perceived ease of use of the technology in question, which determines the development of the user's attitude towards the new technology (Davis,

1989). This model also did not take into account extrinsic and demographic factors that influence the attitude to use.

Therefore, it is all the more justified to isolate external factors within a company that potentially influence the adoption of innovations. The research undertaken focusses on one of the key areas in this regard, namely external communication. Within this framework, five factors were identified. The first is the formation and maintenance of a good corporate image (referred to as employer branding). Employer branding can also be defined as "as the process of building identifiable and unique employer identity" (Backhaus, Tikoo, 2004, p. 502) which also has a significant impact on current and potential employees. Over the past two decades, academic interest in this concept has grown significantly (Theurer et al., 2018). As J. Ober points out, "an increasing number of companies are emerging in global markets to provide EB services, and consulting more broadly has long had this type of advice on offer" (Ober, 2016, p. 347). Another factor is the information about the company's mission and achievements presented to customers and suppliers. This can be achieved through a large-scale information campaign using a variety of media. In addition, highlighting the company's mission, most often contained in codes of ethics (i.e., documents that deal with general principles of conduct and are presented in the form of orders and prohibitions, intended to be strictly applied) (Kuzior, 2021) demonstrates the company's emphasis on meeting ethical standards. Identifying customers' requirements and needs for products and services is also an important element. This can be done by using social media platforms, which have to some extent already replaced customer service offices (Brzezińska-Waleszczyk, 2015). This is also alluded to by D. Buchnowska, who believes that social networks are a source of information about customers' expectations, behaviour, opinions, or plans (Buchnowska, 2017). When analysing external communication factors, it is also worth paying attention to the analysis and interpretation of public opinion about the company and its products/services. It is crucial because the company, by maximising customer satisfaction, should aim to maximise profit (Marcinkiewicz, 2011). All factors ultimately lead to the development of good relationships between company and/or service representatives and customers.

3. Materials and Methods

3.1. Research tool

A proprietary questionnaire developed specifically for the purposes of this work was used in the study. This tool made it possible to explore the opinions on various external communication factors in the context of adoption of innovation. These factors were selected for the survey questionnaire based on literature research, desk research, opinions of panel

participants (experts), and a pilot study conducted in IT companies, between the beginning of September and the end of December 2018 (Ober, 2022).

The core survey was conducted from January to June 2019. Respondents were asked to estimate, using a 5-point Likert scale, the impact of individual external communication factors on the adoption of innovations, combined with an additional degree stating the total absence of the above-mentioned impact. Importantly and innovatively in the field of management and quality sciences, the aforementioned impact was determined separately for the three stages of the innovation process:

- Innovation initiation stage,
- stage of the decision to adopt the innovation,
- Innovation implementation stage.

To determine the reliability of the questionnaire, Cronbach's alpha internal consistency coefficients were calculated for each factor. It turned out that all the factors at each stage had very good reliability (alpha = 0,78).

The above results authorise treating the developed groups of factors as subscales of the questionnaire and calculating the overall scores for them, while still being able to analyse individual factors separately.

3.2. Object of statistical analysis

The statistical analysis aimed to assess individual external communication factors and their groups in terms of their impact at different stages of the innovation process on the adoption of innovation.

The differences within each stage between the different groups of factors in terms of the average assessment of the shape of the impact on the adoption of innovation were also verified.

3.3. Methodology of statistical analysis

Before analysis, the database was checked for logicality and completeness of the responses in the database were checked prior to analysis. To select appropriate statistical tests to examine relationships, the fulfilment of all the necessary assumptions to use the individual statistical tests was verified (Stanisz, 2006), i.e:

- Normality of distribution using the Shapiro-Wilk test.
- Adequate sample size.
- Variables on an appropriate scale (quantitative or qualitative).
- Randomness of sampling (independence of study groups from each other).

3.4. Characteristics of the research sample

A total of 400 people participated in the survey, from 310 companies, including 72 women (M_{Age} = 32,02; SD_{Age} = 9,83) and 328 men (M_{Age} = 29,28; SD_{Age} = 9,86). The research questionnaire was distributed by email, in the form of separately separated links to complete the survey for each company, via the interankiety.pl programme.

In estimating the minimum sample size, the sample size formula for qualitative characteristics with a finite sample was applied (Mynarski, 2000). Thus, the minimum sample size was estimated to be 300 companies and 383 employees.

4. Results and Discussion

The first step of the analysis was to compare the different stages of the innovation process in terms of how the employees of the surveyed IT companies perceived the influence of external communication factors in the context of innovation adoption. For this purpose, a Mann-Whitney rank sum test analysis was performed. For the factors studied, there were no statistically significant differences between the different stages of the innovation in terms of perceived influence of the factors on innovation adoption. The majority of the respondents perceived the influence of each factor related to external communication on the adoption of innovation at each stage of innovation introduction. The percentages of those who perceived the influence of individual factors from the external communication group were very similar at each stage of innovation adoption (differences between stages in this respect ranged from 0,25% to 2,75%). The absence of statistically significant differences was confirmed by the Mann-Whitney U rank sum test. Detailed results are shown in Table 1.

Table 1.
Comparison of the stages of the innovation process in terms of respondents' perceptions of the impact of various external communication factors on its adoption

		Innovation initiation stage		Stage of decision to adopt innovations		Innovation implementation phase		Mann-Whitney U test	rg Glassa
		N	%	N	%	N	%		
Shaping and maintaining a good corporate image	Yes	298	74,50%	301	75,25%	306	76,50%	Z = -0,62; p = 0,536	-0,02
	Not	102	25,50%	99	24,75%	94	23,50%		
Information on the company's mission and achievements presented to customers and suppliers	Yes	303	75,75%	304	76,00%	304	76,00%	Z = -0,08; p = 0,938	0,00
	Not	97	24,25%	96	24,00%	96	24,00%		
Good relations between company and/or service representatives and customers	Yes	376	94,00%	377	94,25%	378	94,50%	Z = 0,29; p = 0,775	0,02
	Not	24	6,00%	23	5,75%	22	5,50%		

Cont. table 1.

Identifying customer requirements and needs with regard to products and services	Yes	393	98,25%	390	97,50%	384	96,00%	Z = -1,83; p < 0,067	-0,19
	Not	7	1,75%	10	2,50%	16	4,00%		
Analysis and interpretation of public opinion about the company and its products/services	Yes	377	94,25%	373	93,25%	366	91,50%	Z = -1,44; p = 0,151	-0,09
	Not	23	5,75%	27	6,75%	34	8,50%		

Source: own elaboration.

Then, the evaluations of the shape of the influence of factors related to external communication were compared in terms of adoption of innovation at different stages of the innovation process. For this purpose, Spearman's rank-order correlation analysis was used. Among the factors related to external communication, differences were observed between the stages of innovation adoption in terms of assessments of the shape of the influence of factors such as the identification of customer requirements and needs for products and services and the analysis and interpretation of public opinion about the company and its products or services. As shown by Spearman's rank-order correlation analysis, the more advanced the stage of innovation introduction was, the less significantly the respondents perceived the influence of the above-mentioned factors in the adoption of this innovation, and this relationship is statistically significant (respectively: $R = -0,07$; $t(N-2) = -2,24$; $p < 0,05$ and $R = -0,07$; $t(N-2) = -2,44$; $p < 0,05$). The other factors in the external communication group were not statistically significantly related to the degree of innovation process. Detailed information is presented in Table 2.

Table 2.

Comparison of the stages of the innovation process in terms of the respondents' assessment of the shape of the influence of the various factors related to external communication on the adoption of innovations

		Descriptive statistics						Spearman rank order correlation
		Mean ± Standard deviation	Median [Q25-Q75]	Min. - Max.	Confidence interval		Stand error	
					-95%	+95%		
Shaping and maintaining a good corporate image	Innovation initiation stage	3,86 ± 0,82	4 [3 - 4]	1 - 5	3,77	3,96	0,05	R = 0,03; t(N-2) = 0,87; p = 0,385
	Stage of decision to adopt innovations	3,87 ± 0,85	4 [3 - 5]	1 - 5	3,78	3,97	0,05	
	Innovation implementation phase	3,91 ± 0,86	4 [3 - 5]	1 - 5	3,81	4,01	0,05	
Information on the company's mission and achievements presented to customers and suppliers	Innovation initiation stage	3,84 ± 0,89	4 [3 - 5]	1 - 5	3,74	3,95	0,05	R = 0,01; t(N-2) = 0,22; p = 0,824
	Stage of decision to adopt innovations	3,83 ± 0,85	4 [3 - 4]	1 - 5	3,74	3,93	0,05	
	Innovation implementation phase	3,86 ± 0,89	4 [3 - 5]	1 - 5	3,76	3,96	0,05	

Cont. table 2.

Good relations between company and/or service representatives and customers	Innovation initiation stage	4,16 ± 0,9	4 [4 - 5]	1 - 5	4,07	4,25	0,05	R = 0,02; t(N-2) = 0,71; p = 0,481
	Stage of decision to adopt innovations	4,21 ± 0,84	4 [4 - 5]	1 - 5	4,13	4,30	0,04	
	Innovation implementation phase	4,22 ± 0,85	4 [4 - 5]	1 - 5	4,13	4,31	0,04	
Identifying customer requirements and needs with regard to products and services	Innovation initiation stage	4,32 ± 0,86	5 [4 - 5]	1 - 5	4,23	4,40	0,04	R = -0,07; t(N-2) = -2,24; p < 0,05
	Stage of decision to adopt innovations	4,25 ± 0,87	4 [4 - 5]	1 - 5	4,16	4,33	0,04	
	Innovation implementation phase	4,2 ± 0,86	4 [4 - 5]	1 - 5	4,11	4,28	0,04	
Analysis and interpretation of public opinion about the company and its products/ services	Innovation initiation stage	4,07 ± 0,91	4 [3 - 5]	1 - 5	3,98	4,16	0,05	R = -0,07; t(N-2) = -2,44; p < 0,05
	Stage of decision to adopt innovations	3,99 ± 0,92	4 [3 - 5]	1 - 5	3,90	4,08	0,05	
	Innovation implementation phase	3,9 ± 0,95	4 [3 - 5]	1 - 5	3,80	4,00	0,05	

Source: own elaboration.

A multivariate cluster analysis was used to identify external communication factors that were similarly assessed at the different stages and therefore that together could provide guidance for the proper implementation of the innovation process in companies. This analysis considered two methods. First, the agglomerative method was used to visually identify the number of groups of factors (clusters) similar to each other in terms of assessments of the shape of influence on the adoption of innovations (distances between clusters were obtained using the single bound method). Then, using a nonhierarchical factor clustering method, the so-called k-means clustering, clusters and their elements were extracted, guided by the number of clusters identified by the previous method. This method assumes that initially each object (factor) is a separate cluster; it then gradually combines the closest objects into new clusters until a single cluster is achieved. In addition, by analysing the identified clusters, the descriptive statistics of each cluster were verified to assess the differences between the clusters. These analyses were performed for each stage.

Factors related to external communication - according to the results of the multidimensional cluster analysis performed using the agglomeration method - in terms of assessing the impact on the adoption of innovation in its first stage of introduction, i.e. the initiation of innovation, formed three clusters. The first comprised factors such as: shaping and maintaining a good corporate image and information on the company's mission and achievements presented to customers and suppliers. The second cluster contained the factors: good relations between company representatives and/or service and customers, and recognition of customers' requirements and needs for products and services. The third cluster, on the other hand, was one

element and concerned the analysis and interpretation of public opinion about the company and its products or services. The following dendrogram shows a visualisation of the identified clusters (Figure 1).

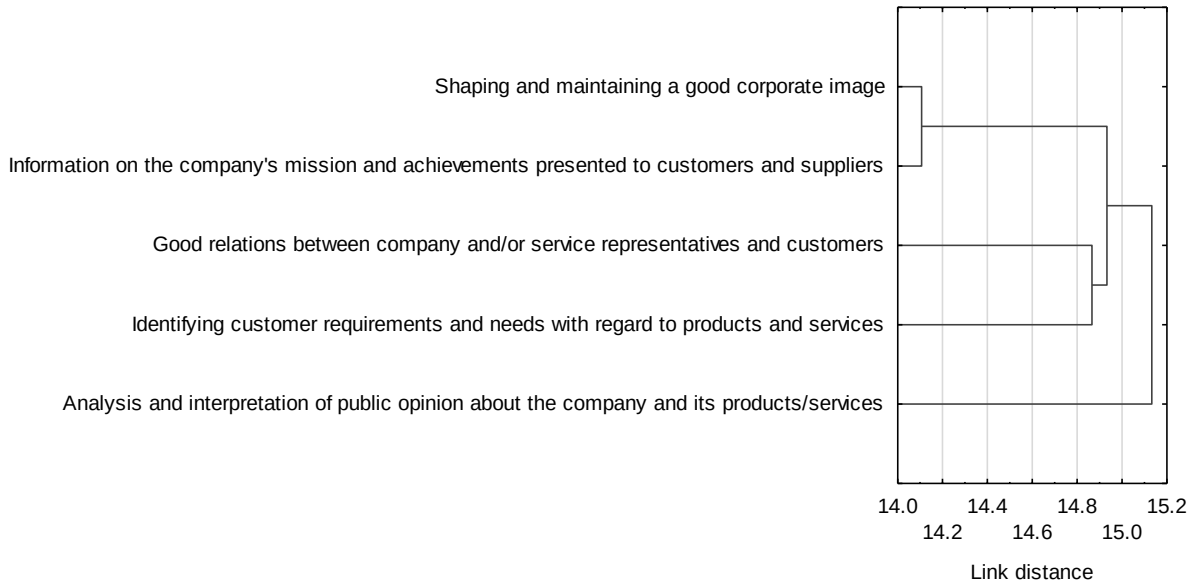

Figure 1. Dendrogram obtained for the factors related to external communication in terms of their influence on the adoption of innovation at the initiation stage (results of cluster analysis using agglomeration).

Source: own elaboration.

The results of the agglomerative cluster analysis method were also confirmed when clustering using the k-means method, which means that the recorded clusters overlapped. Descriptive statistics of the elements included in the individual clusters indicate that good relations between company and/or service representatives and customers and the identification of customer requirements and needs for products and services constituted the group of factors most important for influencing the adoption of innovation in the first stage of its introduction (mean scores: M = 4,2; SD = 0,88). Second was the analysis and interpretation of public opinion about the company and its products or services (M = 4,07; SD = 0,91). In contrast, the group of factors consisting of the formation and maintenance of a good corporate image and innovations about the company's mission and achievements presented to customers and suppliers had, according to the respondents, the least influence (M = 3,85; SD = 0,86) on the adoption of the innovation in its initiation stage. Table 3 shows the detailed results.

Table 3.
Cluster elements for the factors analysed related to external communication in terms of their influence on the adoption of innovations in the initiation stage (results of cluster analysis using k-means clustering)

Elements of individual clusters		Distance	Descriptive statistics to assess the shape of the influence of the factors included in each cluster					
			Mean ± Standard deviation	Median [Q25 - Q75]	Min. - Max.	Confidence interval		Stand error
						-95%	+95%	
Focus 1	Shaping and maintaining a good corporate image	0,4341	3,85 ± 0,86	4 [3 - 4,5]	1 - 5	3,78	3,92	0,03
	Information on the company's mission and achievements presented to customers and suppliers	0,4341						
Focus 2	Good relations between company and/or service representatives and customers	0,4575	4,24 ± 0,88	4 [4 - 5]	1 - 5	4,18	4,30	0,03
	Identifying customer requirements and needs with regard to products and services	0,4575						
Focus 3	Analysis and interpretation of public opinion about the company and its products/services	0,0000	4,07 ± 0,91	4 [3 - 5]	1 - 5	3,98	4,16	0,05

Source: own elaboration.

In the case of factors related to external communication, a multidimensional cluster analysis performed using the agglomerative method identified three clusters in terms of assessing the impact on the adoption of the innovation at the adoption decision stage. The first of the aforementioned clusters included factors such as the formation and maintenance of a good corporate image and information about the company's mission and achievements presented to customers and suppliers, the second cluster included, respectively, good relations between company representatives and/or service and customers and the identification of customers' requirements and needs for products and services, while the third cluster was single element and concerned the analysis and interpretation of public opinion about the company and its products or services. Importantly, these groups fully overlapped with the identified groups of factors for the innovation initiation stage. The dendrogram below visualises the identified clusters (Figure 2).

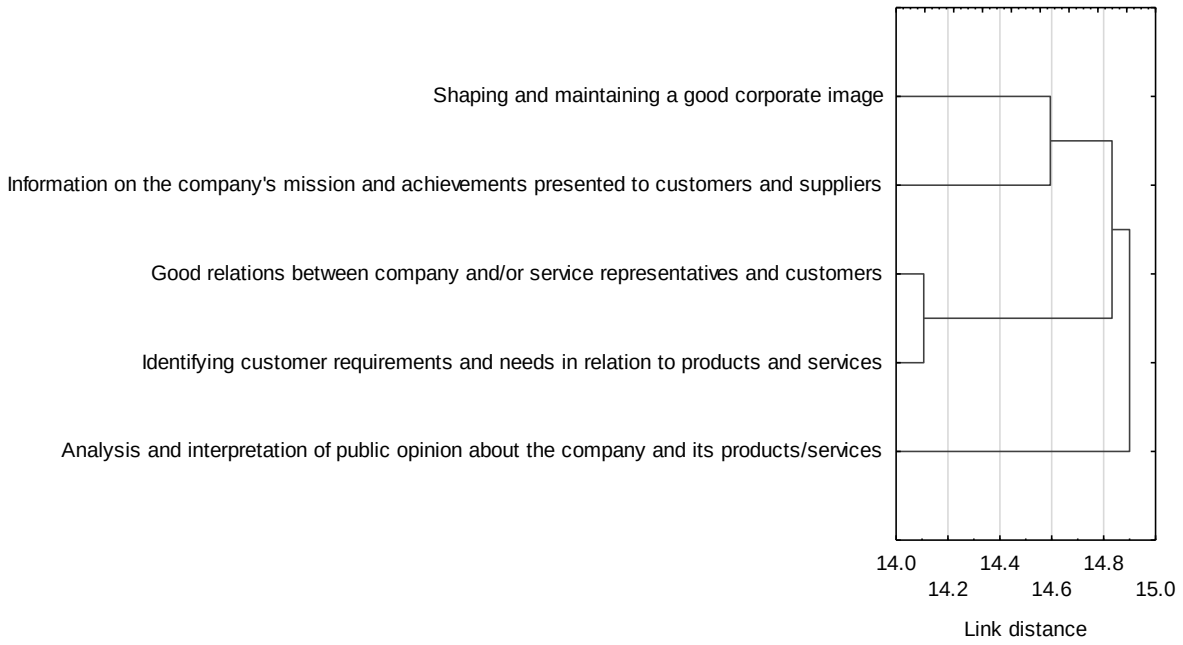

Figure 2. Dendrogram obtained for the factors related to external communication analysed in terms of their influence on the adoption of an innovation at the stage of the decision to adopt it (results of cluster analysis using agglomeration).

Source: own elaboration.

The results obtained using the clustering of k-means were in complete agreement with those obtained using the previous method. The analysis of descriptive statistics, on the other hand, showed that, as at the innovation initiation stage, good relations between company and/or service representatives and customers and the identification of customers' requirements and needs for products and services constituted the group of factors most important for influencing the adoption of the innovation at the first stage of its introduction (mean scores: M = 4,23; SD = 0,85). Furthermore, as in the previous introduction stage, the group of factors consisting of the formation and maintenance of a good corporate image and information on the mission and achievements presented to customers and suppliers had, according to the respondents, the least impact (M = 3,85; SD = 0,85) impact on the adoption of innovation at the decision-making stage of its adoption. The one-item group on the analysis and interpretation of public opinion about the company and its products or services was placed in the middle between the above-mentioned groups mentioned above in terms of its impact assessment on the adoption of innovation at the above-mentioned stage mentioned above (M = 3,99; SD = 0,92). Detailed results are presented in Table 4.

Table 4.
Group elements for the analyzed factors related to external communication in terms of their influence on the adoption of innovations at the adoption decision stage (results of cluster analysis using k-means clustering)

Elements of individual clusters		Distance	Descriptive statistics to assess the shape of the influence of the factors included in each cluster					
			Mean ± Standard deviation	Median [Q25 - Q75]	Min. - Max.	Confidence interval		Stand error
						-95%	+95%	
Focus 1	Good relations between company and/or service representatives and customers	0,4341	4,23 ± 0,85	4 [4 - 5]	1 - 5	4,17	4,29	0,03
	Identifying customer requirements and needs with regard to products and services	0,4341						
Focus 2	Shaping and maintaining a good corporate image	0,4491	3,85 ± 0,85	4 [3 - 4,5]	1 - 5	3,79	3,92	0,03
	Information on the company's mission and achievements presented to customers and suppliers	0,4491						
Focus 3	Analysis and interpretation of public opinion about the company and its products/services	0,0000	3,99 ± 0,92	4 [3 - 5]	1 - 5	3,90	4,08	0,05

Source: own elaboration.

For factors related to external communication in the innovation implementation stage, the situation has changed slightly compared to the first two stages. The factors relating to good relations between company and/or service representatives and customers and the identification of customer requirements and needs in relation to products and services remained in one group as the most similar in terms of influence ratings on innovation adoption. More distant from the above-mentioned factors (at the same time at this distance) were the formation and maintenance of a good corporate image and information on the company's mission and achievements presented to customers and suppliers. On the other hand, even further away in the ratings was the analysis and interpretation of the public's opinion of the company and its products or services, which was a separate one-element cluster. The below dendrogram illustrates the distances between the different groups and the factors included in them (Figure 3).

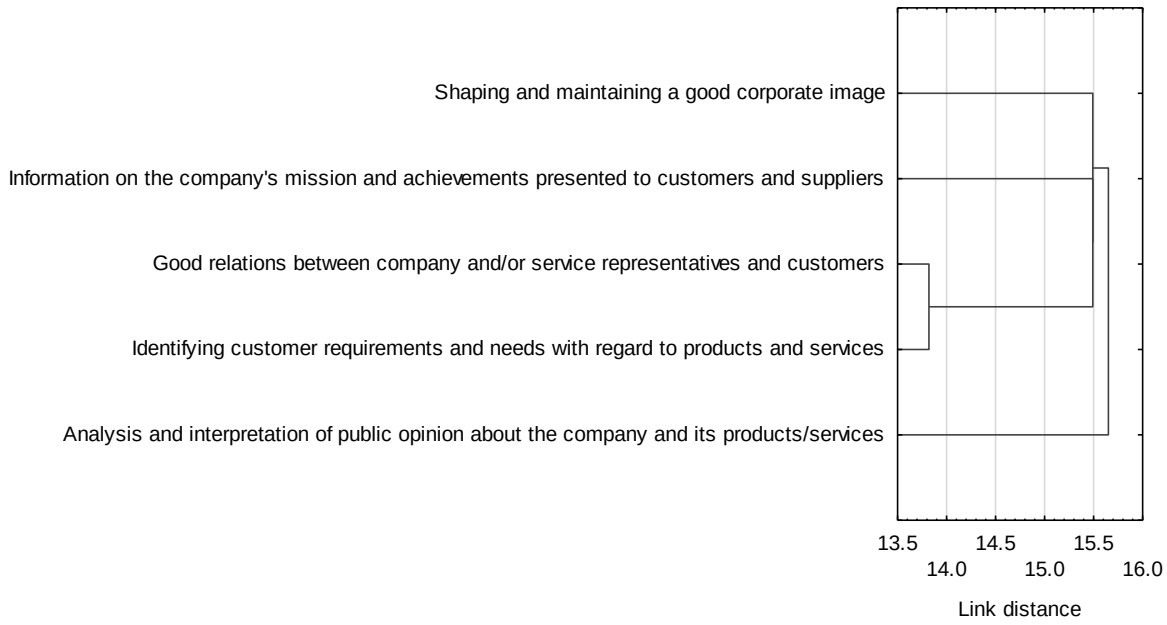

Figure 3. Dendrogram obtained for the factors related to external communication in terms of their influence on the adoption of innovation in the implementation phase (results of cluster analysis using agglomeration).

Source: own elaboration.

The clustering results obtained by the k-means method were not consistent with those obtained by the previous method. Only the clustering consisting of two factors, such as good relations between company and/or service representatives and customers and recognition of customers' requirements and needs for products and services, was repeated. At the same time, the results of the descriptive statistics indicate that this was the group of factors rated highest in this category in terms of influence on the adoption of innovations (mean score: M = 4,24; SD = 0,86). Second in terms of the aforementioned ratings was the focus (shaping and maintaining a good image; M = 3,91; SD = 0,86), while the lowest impact was attributed to information about the company's mission and achievements presented to customers and suppliers and to the analysis and interpretation of public opinion about the company and its products or services (mean score: M = 3,88; SD = 0,92). Table 5 shows the detailed results.

Table 5.
Cluster elements for the factors analysed related to external communication in terms of their influence on the adoption of innovations in the implementation phase (results of cluster analysis using k-means clustering).

Elements of individual clusters		Distance	Descriptive statistics to assess the shape of the influence of the factors included in each cluster					
			Mean ± Standard deviation	Median [Q25 - Q75]	Min. - Max.	Confidence interval		Stand error
						-95%	+95%	
Focus 1	Shaping and maintaining a good corporate image	0,0000	3,91 ± 0,86	4 [3 - 5]	1 - 5	3,81	4,01	0,05
Focus 2	Good relations between company and/or service representatives and customers	0,4277	4,24 ± 0,86	4 [4 - 5]	1 - 5	4,20	4,27	0,02
	Identifying customer requirements and needs with regard to products and services	0,4277						
Focus 3	Information on the company's mission and achievements presented to customers and suppliers	0,4864	3,88 ± 0,92	4 [3 - 5]	1 - 5	3,81	3,95	0,04
	Analysis and interpretation of public opinion about the company and its products/services	0,4864						

Source: own elaboration.

5. Conclusions

Summarising the results of the research, it can be concluded that differences were more often observed between the different stages of the innovation in terms of perceived influence of individual factors on the adoption of innovations than in terms of assessing the shape of this influence.

In the group of factors related to external communication at each stage, respondents saw the greatest impact on the adoption of innovations in factors such as good relations between company and/or service representatives and customers and the identification of customer requirements and needs in relation to products and services.

The more advanced the innovation stage was, the lower the estimated impact in the adoption of this innovation of factors related to external communication, such as the identification of customers' requirements and needs for products and services and the analysis and interpretation of public opinion about the company and its products or services.

The research presented in the article has some limitations. First, it was conducted only in Poland, second only in the IT sector, and thirdly, only selected external communication factors were taken into account. The authors intend to conduct them on a much larger scale in other

industries both at home and abroad, and to carry out a comparative analysis in the discussed scope.

Undoubtedly, however, the conclusions drawn from the analysis of the research should encourage companies to develop diverse external communication channels (using advanced technologies for this purpose), which not only enable the creation of lasting relationships with the environment, but also have a positive impact on the process of innovation adoption.

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HUMANISTIC SERVICES IN THE CONTEXT OF IMPLEMENTATION SOCIETY 5.0

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Purpose: The main purpose of the article is to describe humanistic service as a corrective tool to support the implementation of the Society 5.0 concept, making it possible to mitigate any side effects associated with the technicisation of the human living environment.
Design/methodology/approach: Society 5.0, is defined as a human-centred society that aims to balance economic development with solving social and environmental problems through the use of advanced information technology, IoT, robots, artificial intelligence, and augmented reality. A technical focus in the implementation of this concept may conflict with its general idea, i.e. a social project in which the human being stands at its centre. Therefore, in parallel to the development of the technological background, it is necessary to think about the implementation of services that allow people to "experience their humanity" in this technicised environment. This is to be achieved by developing the idea of humanistic services as an attempt to anticipate needs and possible ways of satisfying them in a world in which the concept of Society 5.0 has already been implemented. It is assumed in the deliberations that in order to create a society at a universal high level of perceived well-being, it is necessary to balance technological progress with the development of services that support humanistic values. Due to the anticipatory nature of the investigation, a conceptual analysis has been used in the study.
Findings: In this research, the concept of Society 5.0 and social services were defined; the negative effects that may accompany the technicisation of the human living environment, which may prevent the achievement of well-being, were identified; a service gap was pointed out; a new type of service - humanistic services - was defined; their areas of activity and functionality from the point of view of reaching a high quality of life were preliminarily identified.
Research limitations/implications: These considerations are merely a conceptual sketch and, as such, call for more in-depth theoretical analyses, which will then be subjected to empirical verification, for example, as a pilot of humanistic services.
Practical implications: The research carried out in this article has a very practical dimension, as the theoretical analysis undertaken was aimed at developing very concrete outcomes, i.e., services that can help counteract the negative effects of the technicisation of the human living environment.
Social implications: The article has a conceptual function; according to the applied research method, it allows developing the concept of Industry 5.0, paying attention to what aspects will have to be considered in its implementation, taking into account the human-centred perspective.

Originality/value: The most significant achievement of the present reflexions should be considered to be the recognition of the remedial potential in the service sector, which can help to overcome the negative effects associated with the intensification of the use of technology in many aspects of human life; the elaboration of gaps in currently existing services; the definition of humanistic services; the identification of areas where humanistic services can be applied.

Keywords: Society 5.0, humanistic service, human needs, well-being, human-centric society.

Category of the paper: Conceptual paper.

1. Introduction

Erik Brynjolfsson and Andrew McAfee in *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* pointed out that "computers and other digital advances are doing for mental power – the ability to use our brains to understand and shape our environments – what the steam engine and its descendants did for muscle power. They are allowing us to blow past previous limitations and taking us into new territory" (Brynjolfsson, Mcafee, 2014, p. 10). This 'new territory' designed with the next generation of digital technologies is the vision of a society referred to as Society 5.0. It assumes that a widespread improvement in the quality of human life can be achieved through the use of advanced IT technologies, which, as cyber-physical systems, will be an integral part of everyday life. And in this sense, it can be considered a strategy for building a human-centred society. By design, the concept of Society 5.0 is a form of remedy that balances economic development with solving social and environmental problems through the use of IT, IoT, robots, artificial intelligence, and augmented reality. Having such advanced technical facilities augurs well for the plans, but at the same time we must be aware that these processes will inevitably generate a new kind of environment for human life and that the technical orientation in the realisation of this concept may conflict with its general idea, i.e. a social project in which the human being is at the centre. We already know that there are social costs associated with the improvements brought about by technology (Krauss, 2015; Kleppman, 2017; Surma, 2017; Złotowski, 2017; Zysman, Kenney, 2018; Bridle, 2019; Osika, 2021a; 2022a), and in the case of such extensive interference as we are dealing with in the case of Society 5.0, we have to reckon with a wider range of negative consequences. Therefore, in parallel to the development of a technological base, it is necessary to think about the implementation of solutions enabling this technicised environment to be centred around the human being, as intended, allowing its members to maximise their well-being, the foundation of which for the human being is to experience their humanity. At the same time, we can predict, in line with the tendencies already identified in the 20th century to shift economic activity from manufacturing to the service sphere, i.e. the transition from an industrial society to a service society (Clark, 1940; Bell, 1973; Grewiński, 2021), that it is the service sector that will constitute a real counterbalance and area of activity

in which we, as a society, will relatively easily be able to adapt to the transformations taking place and flexibly respond to emerging needs through innovation. For a service society is a society in which services predominate over production, employment associated with the service sector is dominant and the primary source of economic value is knowledge and the innovations that go with it (Grewiński, 2021, p. 125). However, using the service sector as an instrument to implement Society 5.0 requires an earlier, reflective addressing of these issues, because while welfare thinking is already quite well recognised within the so-called social services, going beyond the areas of the material foundations of quality of life can be regarded as an emerging research gap and a potential new service niche – humanistic services (Lee Kai-Fu, 2019). In this sense, developing the idea of humanistic services is, in a sense, looking ahead; it is an attempt to anticipate needs and possible ways of meeting them in a world where the concept of Society 5.0 has already been put into practise. Consideration assumes that, in order to create a society at a universal high level of perceived well-being, it is necessary to balance technological progress with the development of realised humanistic values within a range of service activities. The approach under reflexion is about breaking the trend highlighted by Yuval Harrari, i.e., that humans have always been better at inventing tools than using them wisely (Harari, 2018, p. 7). What is important here is the idea of what will happen to humans when this expected level of technological development and its implementation into the way social life is organised come to fruition. This is what the main research question is about:
What forms of services can support the achievement of a high level of perceived well-being in a technologically developed living environment, necessary from the point of view of implementing the concept of Society 5.0?

Due to the anticipatory nature of the research, a conceptual analysis will be used to develop theoretical insights from existing knowledge, which can then be verified in the course of the empirical work. At this stage of the research, this method seems fully justified.

2. Methods

As indicated in the Introduction, the research will use conceptual analysis, as one of the oldest scientific methods (Furner, 2004; Gilson, Goldberg, 2015; Stuart, 2015; Dickson et al., 2018), allows, on the grounds of already existing knowledge, to 'develop a theory.' Based on the most classical research methods, such as deductive reasoning, initial assumptions well established within the scientific field are made and from these initial assumptions are derived, i.e. conclusions are formulated that provide novel insights into the problem at hand. This type of research is typical of so-called basic research because deductive reasoning carried out in this way allows concrete research hypotheses to be made in empirical studies. Conceptual analysis is used to combine theories, adopt theories to new solutions, categorise, establish

logical relationships between phenomena, and build theoretical models (Jakkolla, 2020). Given the theoretical sophistication of research in the described problem area, it appears to be an adequate research method. According to the stages of conceptual analysis, the following steps are assumed to be taken:

1. Defining basic concepts, describing initial theoretical assumptions - for this study - terms such as Society 5.0, social service will be defined.
2. Establishing relationships - for this research, the answer to the question - What service gaps can be generated by the technicized environment of Society 5.0?
3. Conclusions - for this research the answer to the question - What forms of services can support the achievement of a high level of perceived well-being in a technicized living environment, necessary from the point of view of implementing the Society 5.0 concept?

The questions formulated above detail the research issues addressed in these reflexions. As it seems, at the stage of anticipating possible changes in reality. It is necessary to initially theoretically develop knowledge that is already well-founded empirically, which in turn will make it possible to create assumptions that will then be subjected to further empirical verification or can be introduced as concrete social solutions.

3. Results

3.1. Theoretical Frameworks

3.1.1. Definition of Society 5.0

Japan's technology development and innovation strategy announced in 2016, entitled *Comprehensive Strategy on Science, Technology and Innovation for 2016,* pioneered the concept of Society 5.0 (Arsovsky, 2019; Gladen, 2019; Deguchi et al., 2020; Osika, 2021b). Its key premise was that "society 5.0 is that data are collected from the 'real world' and processed by computer, with the results being applied in the real world. […] Society 5.0 will feature an interactive cycle in which data are gathered, analysed, and then converted into meaningful information, which is then applied in the real world: moreover, this cycle operates at society-wide level" (Deguchi et al., 2020, pp. 2-3). This conception of society is often defined as 'a human-centred society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space' (Society 5.0, 2020, p. xii). The strong technological orientation and focus on the realisation of universal social well-being, expressed in the terms'supersmart society' and 'human-driven society' as terms that adequately characterise its assumptions, should be regarded as important distinctive features of the concept. If one wanted to define society 5.0, it would have to be considered as a society "advanced IT technologies, IoT, robots, an artificial intelligence, augmented reality (AR) are

actively used in people common life, in the industry, health care and other spheres of activity" (Skobelev, Borovik, 2017, p. 307), but not only for progress, but also for the benefit and well-being of each person. Matthew E. Gladden makes us aware that 'the human beings who are members of Society 5.0 will also find their bodies, minds, and daily life experience transformed through the application of futuristic technologies. New types of medical devices, […] robotics, AI, and the Internet of Things will have a great impact on not only people's lifestyle and on their way of being but also on the foundation of its existence" (Gladen, 2019, pp. 5-6). We can understand this type of society as a'system of systems' (Rojas, 2021), founded on a complex information infrastructure based on such digital technology solutions as Internet of Things (IoT), Big Data (BD), and artificial intelligence (AI). The logic behind this 'system of systems' is, broadly speaking, that the main source of information is a network of sensors connected to everything from which we want to extract data, which is collected in data silos, compiled according to demand, and then processed by artificial intelligence algorithms. These tools make it possible to diagnose in real time the current state of affairs, providing information and knowledge about it, but they also make it possible to anticipate and design specific changes related to social life, in virtually every area of it. The technologically established process of moving from the knowledge of 'what is' to 'how it happened that it is' and 'what can happen in the future' and finally 'how to precisely programmed the change' will become, according to the assumptions of the concept of Society 5.0, a basic form of social activity that allows, based on accumulated data, to develop optimal solutions from the point of view of possibilities of improving the quality of life. This principle applies both to the physical infrastructure but also to social activities; in this sense, the technological potential becomes the foundation of society's flexibility and the measure of its adaptability" (Osika, in press). This technically founded form of organisation applies to every type of human operating environment. Urban infrastructure with intelligent processes for energy, water and transport networks, through the organisation of production processes (Demir, 2019; Huang, 2019; Nahavandi, 2019; Breque et al., 2021; Xu, X. et al., 2021; Berg, 2022; Dixson-Decleve, 2022; Hjorth, Chrysostomou, 2022; Osika, 2022a), agriculture, to the organisation of leisure time and emergency response. This digital transformation is expected to transform many aspects of society, including private life, public administration, industrial structure and employment, through the use of cyberspace and their integration with physical spaces. The Society 5.0 model brings about a number of changes that open up the possibility of creating new systems and processes (Onday, 2019, pp. 1-6). These changes are not only technological but also economic, geopolitical, social, mental, and the focus on the human being as a central element of change allows us to combine technological development with economic growth while offering hope for a sustainable future. This new conception of society aims to bring a human-centred perspective in order to balance the deployment of BD, IoT and AI technologies with solving society's main problems, such as competitiveness, productivity, connectivity and well-being (Osika, in press). Embedded in the concept of Society 5.0 is making the most of the ongoing technological transformation associated with digitalisation by and for people.

3.1.2. Definition of social service

The concept of social services is directly linked to the socio-economic transformations recognised by researchers in the 20th century, originating in technical development and productivity growth (Grewiński, 2021). As early as 1940, Colin Clark in *The Condition of Economic Progress* drew attention to the emergence of the service sector as a new economic area. This trend was also confirmed by later observations like Jean Fourastie (1954), Daniel Bell (1973), and Alan Gartner and Frank Rissman (1978), who explicitly wrote about the emergence of the so-called service society. Describing these transformations, the authors draw attention to a few of the most significant characteristics of this postindustrial society. Firstly, the shift of a large part of employment to the service sphere; secondly, the widespread growth of consumption, including households, i.e. the increase in the demand for delegation of activities that used to be performed independently, but also new forms of activities emerge that respond to emerging needs. To put it with a certain sophistication, to reveal the basis of these transformations, the mechanisation of production makes it possible to raise the material status of workers; they can spend part of their earnings on subcontracting the mundane activities of life, thus gaining time which they can devote to leisure time. In each of these situations, we are talking about some kind of service. Third, this type of society is associated with the realisation of the need for self-determination and also supports processes of democratisation (Gartner, Rissman, 1978). The widespread fact of using other people's labour develops the possibilities to go beyond one's own skills, individuals can start to project themselves using the services of others. Self-determination, in turn, makes it possible to become aware of one's needs and the right to realise them, reaching, as it were, out of necessity, to the democratic instruments of social order-building. Fourth, the use of services is associated with the expansion of social relations and the creation of social capital based on trust (Sztompka, 2007, p. 47). Access to diverse services is only possible in large concentrations of people, that is, the domain of this type of society is cities, is another fifth characteristic (Grewiński, 2021). The ability to cede activity to the service provider is based on specialisation and meritocracy - I delegate the performance of a given activity to you because I know you know it - in this way, the development of specialised services is possible: finance, insurance, health care, education, cultural sector, etc., this is another sixth feature of the service society. In the paradigm described, "all activities of a service nature for the benefit of other natural or legal persons, contributing to the satisfaction of individual or collective needs [...] these activities do not directly involve the production of products" (Popularna Encyklopedia Powszechna, after Grewiński, 2021, p. 55) should be considered economically crucial.

The literature points to four phases of service development, the primary phase being related to the dominance of services that do not require high skills. The second phase, growth, is related to services requiring skills but fully exhausting the scope of the service, e.g. tailoring. The third phase, industrial service and consumption growth, as the name suggests, supports the development of industrial activities, i.e. accounting, administrative, logistic, etc. The fourth

phase refers to services based on information technology (Flejterski et al., 2005). Currently, we can speak of another, fifth phase related to the development of digital, foundational technologies, which include the invention of the computer, the Interent and the smartphone, as well as intensifying technologies such as cloud solutions, the Internet of Things, artificial intelligence, cyber-physical systems and blockchains (Śledziewska, Włoch, 2021, pp. 21-54). Based on these technological solutions, social media and so-called online services have developed (Marzano et al., 2020). The evolution of services, according to some researchers, can also be analysed from the perspective of civilisational and cultural changes. At successive stages of urbanisation, industrialisation, technologisation and the associated social and cultural transformations, the need emerged for services of a social nature, i.e. those serving to improve the quality of life of society in the spirit of welfare (Golinowska after Grewiński, 2021, p. 58). We can define social services as an interpersonal form of assistance "which is targeted at social problems and the particular situation of individuals, provided by public and private institutions and individuals, aimed at restoring or improving physical and mental living and survival skills as well as social competences (Hartman, 2013, p. 75). And according to the definition, social services provide, in the individual dimension, opportunities to meet needs that ensure a high level of quality of life and, in the social dimension, welfare and prosperity.

3.1.3. Service gaps

The very general definition of social services introduced above may not be fully satisfactory, but it does bring out key emphases for further conceptualisation. The essence of such services is the provision of social functions with the ultimate goal of providing members of society with a high quality of life. In the final report produced for the EU, 2022, entitled ' *Study on Social Service with Particular Focus on Personal Targeted Social Service for People in Vulnerable Situation'*, having analysed the social policies of the Member States, it is pointed out that "UE Member States have a system of social security where services play an important role, there is no ready-made definition and categorisation of social services, and there is a variety of terms and definitions in use, none of them generally accepted" (VVA, Penteia, Oxford Research, Erudio, IKEI, 2022, p. 63). This may mean that we are now in the process of redefining this area of social life, due to its perceived importance from the perspective of the wider public good. For, as the report reads: "The concept and provision of social services is linked to the protection of universal human and social rights, democratic principles, religious and/or cultural values, socio-economic ambitions, but also to fulfilling political objectives. Social services can be linked to the objective of protecting the fundamental human and social rights of each individual, guaranteeing a person's dignity and their capacity to participate in a democratic society. […] The function of social services in a society is intrinsically related to how one conceptualises their rationale or purpose. Therefore, the function of social services includes ensuring the minimum welfare conditions necessary for a life in dignity and the necessary conditions for participation in a democratic life; activating individuals to ensure greater labour market participation to enhance their job readiness and the resilience of the

individual as well as the society and the economy at large; or enhancing the physical and mental wellbeing of individuals" (VVA, Penteia, Oxford Research, Erudio, IKEI, 2022, p. 16). In the approach presented here, the scope of social services is understood very broadly, encompassing both those needs that are commonly defined as existential (so-called social assistance services), but also applies to some extent to public services (Zimna-Parjaszewska, Skrzypek, 2022, p. 50). A clear form of illustrating the relationship between the different types of services is proposed by Joanna Lizut, see the figure below.

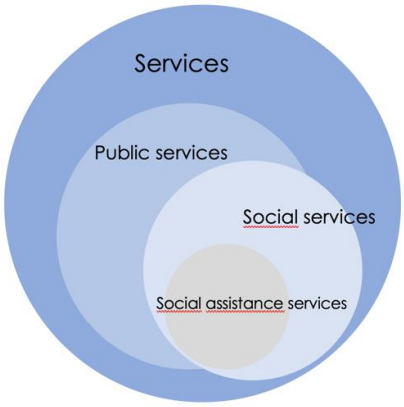

Figure 1. Correlations in the System of Services.

Source: Lizut, 2015; Grewiński, 2021, p. 67.

As can be seen, social services, as those whose task is to take care of the well-being of individuals and society, include social assistance services, but at the same time cannot be completely identified with them, as, according to previous findings, in addition to satisfying needs at the basic level, we need those that are in the spirit of the times, allowing us to adapt to civilisational and cultural changes (Golinowska for Grewiński, 2021, p. 58). The demand for a specific type of them is a result of needs arising in response to the shaping of the new environment of human life. At present, the most significant change factor is technology. The social transformation analysed in these reflections is supposed to concern the unprecedented technicisation of the human world environment. At present, this most significant agent of change is technology. The social transformation analysed in these reflections is supposed to concern the unprecedented technicisation of the human world environment. We should try to anticipate the possible 'side-effects' of this fact and, in this context, the need to restore the balance between what is human and what is technical seems obvious. This is particularly important from the point of view of the assumptions of the human-centric concept of society 5.0. Anticipating how this environment will affect us, it is worthwhile, while losing none or very little of the potential brought about by the development of technology, to reflect on how we can be at the service of the human being and his or her needs in the broadest sense of the term, and take care of his or her well-being. That is, we should try to answer the questions of what our humanity may lack and what services we can use to satisfy this deficit. It is proposed that these new services be called humanistic services.

3.2. Humanistic Service for Human-Centred Society

Identifying the areas that could encompass these new forms of services requires an initial identification of the conditions necessary to achieve a high level of quality of life, i.e., what guarantees the experience of well-being. Then we analyse the potential deficits that may emerge in the face of the ongoing transformation of the way of human life associated with intensive technological intervention, typical for Society 5.0. And finally, formulate proposals for actions that can help to bridge these deficits in the form of humanistic services.

From an analytical point of view, the category of well-being and the related concept of quality of life are problematic, in the sense that there are no clear definitions or indicators (Osika, 2018). Therefore, it is worth considering the issue in broad contexts and recognising it as a component of physical, mental well-being combined with the awareness of the realisation of needs and values that are important for the individual (Osika, 2017, p. 88). Indeed, an integral component of well-being in addition to a high level of satisfaction with basic needs is experiencing satisfaction with one's existence (Wojewoda, 2018, p. 98). This article is not intended to be a review, so the approaches presented will be limited to those with the greatest analytical potential associated with the proposed approach. *The International Management Institute* proposes to take into account seven areas of well-being: economic regarding the state of the economy and its impact on the lives of individuals, environmental relating to the state of the environment, physical referring to health, psychological indicating mood, employment talking about the state of the job market, social examining the perception of security, social trust a sense of equality, and political as a measure of the level of democracy (Kotler, 2015, pp. 254-255).

However, from the perspective of the present considerations, Erik Allardt's concept will be more useful, who grouped measures of well-being into three basic categories: *having, loving, and being*. *Having* includes material needs for survival, and measures include possessions, income, housing, employment conditions, health, access to education, and level of education. *Loving* mainly refers to the needs for human relationships and social identity; Allardt counts the degree of connection to relatives, family, friends, the local community, participation in associations and organisations, and working relationships as measures at this level. In contrast, to *being* he includes the needs of living in harmony with the social and natural environment, i.e., a sense of personal growth, and as indicators he takes into account decision-making autonomy, a sense of influence over one's own life, political involvement, opportunities to realise oneself in one's leisure time, i.e., enjoying contact with nature, and being able to do work that is considered meaningful (Allardt, 1993, pp. 89-92; Salmi, Lammi-Tashula, 2011, p. 124).

In summary, experiencing well-being, that is, a high assessment of quality of life, in addition to the satisfaction of basic needs, depends on "being able to enjoy the respect of one's peers, maximising freedom, making individual choices, entering into relationships with others, engaging in activities that are considered meaningful, doing work that gives satisfaction and a guarantee that we are needed by someone" (Bińczyk, 2015, p. 9).

The next question to be answered concerns the deficits that the intensive technologyisation of the living environment spoken of in the concept of Society 5.0 may bring. It is difficult to foresee all of them, so only those of which some symptoms are currently discernible will be considered. The first is related to the widespread perception of alienation, or even loneliness, which has become a common human experience (Hertz, 2021). For this experience, a significant role is played by the technological remodelling of the way we interact with each other, the way we communicate. Researchers have for many years highlighted the negative consequences of the dominance of mediatised communication (Turkle, 2012; Stephens-Davidowitz, 2017; Vaidhyanathan, 2018; Hertz, 2021). It is clear from the research that all forms of telepresence support us task-wise, but at the same time relationally fail to meet our social needs, including the need for intimacy, central to a sense of well-being. The period of isolation associated with COVID-19 has highlighted and allowed us to fully realise the extent to which these problems exist. On the other hand, remote modes have proven to be very efficient economically but also ecologically, so we should not assume that we will give up this form of communication, rather this trend will increase causing an even greater wave of loneliness, rather we need to develop ways to cope with loneliness. The issues we will also have to deal with are related to our work activities, as this is where the impact of technology will be most significant. Already, there are several issues that require reflexion. First, the rise of so-called 'lights out' production (Rifkin, 2015) and the associated changes in employment. The emergence of temporary unemployment or "joblessness" (Skinner, 2018) as a widespread social phenomenon (Grabowicz, 2017), which can consequently give rise to social pathologies. The spread of so-called 'cobotization', that is, work done in collaboration with cyber-physical systems in the broadest sense (Webb, 2019; Przegalińska, Jemielniak, 2020; Przegalińska, Oksanowicz, 2020; Osika, 2022b). The replacement of 'live work' to 'dead work', i.e. work that is performed due to previous human effort, but will be delegated to widely understood machines. The resulting job instability that affects all occupational groups can lead to a loss of security and control for workers. "Splitting human work with digital and physical systems – this brings the possibility of dehumanization of work environment, lack of possibility to meet affiliation needs and associated low motivation to work, of course in case of humans. The problem may also be the negative effect of «upward comparison». It is already known that automation improves the work efficiency and these comparisons are unfavorable for humans […], and this, in turn, violates the identity foundations –«who am I if I can be replaced with a machine». In such a case, the performed work ceases to be meaningful. The «machine» criteria with which humans will be assessing themselves, treating their humanity only as efficiency of work performance, can also be treated as «dehumanizing»" (Osika, 2019, p. 293). The described negative changes in the working environment seem to violate important human values, i.e. undertaking activities that are considered meaningful and doing work that gives satisfaction and a guarantee that we are needed by someone, and from this perspective it is difficult to speak of well-being. However, as in the case of loneliness, it is rather difficult to stop technological

developments; rather, it is necessary to think about how to support people in their new life situation.

In line with the idea of these considerations, a new type of social service, the so-called humanistic service, which compensates for the deficits created on our humanity, may become a solution. Referring to previous findings, we can define it as a form of interpersonal assistance aimed at satisfying the needs determining well-being, i.e., the sense of intimacy, the sense of belonging, the sense of meaning, the sense of usefulness, etc. It can be provided by public and private institutions as well as individuals and is designed to address the deficits created by the technicisation of the human living environment that affect the well-being experienced. If one wanted to use Joanna Lizut's typology again, the completed figure would look as follows, see Figure 2.

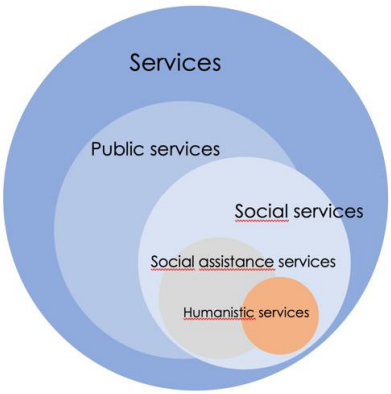

Figure 2. Correlations in the System of Services with Humanistic Service.

Source: Lizut, 2015; Grewiński, 2021, p. 67.

We can make the service proposal presented above more concrete by relating it to the groups of well-being measures identified by Allardt and exploring which areas generate the greatest deficits. Essentially, having in the case of human services will be of secondary importance in contrast to loving and being. As an example of the emerging demand for humanistic services, Rent-a-Friend with platonic friends for hire services can be cited; this type of company is emerging in many cities (Hertz, 2021). Similar grassroots movements can be seen in volunteering activities, which can become a source of identity experiences in the future, can help develop social networks, give a sense of belonging, being needed, etc. (Güntert et al., 2022). In order for volunteering to fulfil its function in this sense, it may be necessary to have a service to match one's potential with service providers of volunteer-based activities as is currently the case with dating services. There is already an beginning to talk of social workers for networking and social reintegration (Osika, 2020; Golinowska for Grewiński, 2021, p. 59). Of course, this is already only an anticipation but a necessary one from the point of view of the reflexion carried out here.

4. Discussion

The digital technology we have today allows us to develop ambitious visions of the future in which it is an important part of society. Such concepts include the strategy generally referred to as Society 5.0. As indicated in the Introduction, this concept aims to help combine economic development with solving social and environmental problems through the use of information technology, IoT, robots, artificial intelligence, and augmented reality. At the same time, it is not technology, but the human being and his or her well-being that is the main focus of the measures taken, which is why the humanocentric nature of these solutions is emphasised (Arsovski, 2019; Demir et al., 2019; Gladden, 2019; Deguchi et al., 2020; Breque et al., 2021; Rojas, 2021; Berg, 2022; Dixson-Decleve et al., 2022). It is intended that the main social, including economic, processes will be supported by technology (Demir, 2019; Huang, 2019; Nahavandi, 2019; Breque et al., 2021; Xu, X. et al., 2021; Berg, 2022; Dixson-Decleve, 2022; Hjorth, Chrysostomou, 2022; Osika, 2022a) as a result, an unprecedented technicisation of the human living environment seems inevitable. Consequently, we must also consider the negative consequences for the quality of life. Therefore, the discussion assumes that, in parallel to the development of a technological base, it is necessary to think about the implementation of solutions enabling this technicised environment to be centred around people. One such proposal could be the so-called humanistic services, which fit into general economic trends recognised by researchers since the beginning of the 20th century (Clark, 1940; Fourastie, 1954; Bell, 1973; Gartner, Rissman, 1978; Grewiński, 2021). It has been assumed that it is the social service sector (Golimowska after Grewiński, 2021; Study of Social service..., 2022; Zimna-Parjaszewska, Skrzypek, 2022) expanded to include this new niche, that will constitute a viable counterbalance and area of activity in which we as a society will be able to adapt relatively easily to the transformations taking place and respond flexibly to emerging needs through innovation, and humanistic services should be considered a form of such innovation. Several deficits have been identified that are currently diagnosed as negative impacts of technology that threaten our well-being (Turkle, 2012; Stephens-Davidowitz, 2017; Vaidhyanathan, 2018; Webb, 2019; Hertz, 2021), in overcoming which services can be a valuable tool for social action. At the same time, it is important to be aware that this is merely a sketch of a certain concept for future action, which should be extended by further theoretical work to concretise the idea into a specific strategy that may have implementation potential. Of course, theoretical analyses must be verified by empirical research, for example in the form of pilot studies to test the solutions developed.

5. Summary

Encouraged by the potential of digital technologies at our disposal today, we are creating visions of a society that maximises the wellbeing of its members. This is also the spirit in which the concept of Society 5.0 should be approached. As indicated in the deliberations, through the use of information technology, IoT, robots, artificial intelligence, and augmented reality, we plan to combine economic development with solving social and environmental problems. At the same time, all activities undertaken as part of Society 5.0 are intended to improve quality of life. From the findings so far, we also know that this unprecedented technicisation of the human living environment too has side effects, contributing to the deterioration of well-being. Therefore, in parallel to technical innovation, it is necessary to reflect on possible ways to mitigate these negative effects. This paper proposes humanistic services as an example of a countermeasure, defined as a form of interpersonal assistance aimed at satisfying well-being needs, i.e. a sense of closeness, a sense of belonging, a sense of meaning, a sense of usefulness, etc. This proposal is in line with the general concept of human services. This proposal fits in with general economic trends recognised since the beginning of the 20th century. Conceptual analysis was applied in the research. The following research steps were performed:

- Basic concepts were defined and described, such as: the concept of Sciety 5.0, social service – this allowed us to understand the potential risks associated with the unprecedented technicisation of the human living environment and the potential hidden in service activities as a remedy to the diagnosed risks, affecting the level of perceived well-being.
- Establishing relationships – the extent of potential gaps in social services that may be generated by the technicised environment of Society 5.0 was identified. Potential shortcomings in the social services currently offered were identified by comparing the conditions necessary to achieve a high quality of life (Allardt classification) with existing ways of life that are currently being transformed by intensive technological intervention. A number of existing risks were identified, such as mass loneliness, job instability and the associated loss of meaning, lack of a sense of belonging, etc., among others.
- Final conclusions are formulated – it was determined what forms of services can support the achievement of a high level of perceived well-being in a technicised living environment, necessary from the point of view of implementing the concept of Society 5.0? A working definition of humanistic services was initially proposed and possible areas for their introduction were identified, using Allardt's classification.

This article should be seen as a preliminary phase, helping to conceptualise possible difficulties arising in the process of implementing the concept of society 5.0 and a working proposal of measures we can try to take in order to mitigate the appearance of possible side effects.

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COGNITIVE TECHNOLOGIES IN SMART CITY

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Purpose: The main purpose of the article is to draw attention to the subject of cognitive technologies application, with particular emphasis in smart city. An analysis of this guess is particularly important at the moment we have it right now, namely right more and more to do with artificial intelligence and its use for intelligent city management.
Design/methodology/approach: This article uses the method of analyzing the results of research on the cognitive technologies in smart city available in the subject literature and in Internet sources.
Findings: In the realities of today's economy, many cities and metropolises want to be places that are increasingly friendly to their residents, those who work in them, visitors, tourists, etc., in a sometimes difficult because volatile macroeconomic environment. In this reality, however, there are cities that have succeeded in terms of accessibility and friendliness for people using the services of a city or metropolis. They are distinguished by high development dynamics and high quality of services. They occupy a significant place in the national and even international market. In the consciousness of modern citizens (especially the younger generation), the need for constant innovation in agglomerations has become noticeable, so that living/functioning in them is simply easier through access to more modern services.
Research limitations/implications: The article refers to the results of research on the cognitive technologies in smart city, both in Europe and in the world, with emphasis on the place of Poland against their background. Research is conducted on a continuous basis, because the factors that directly affect the quality of life in a smart city can constantly change - evaluate.
Social implications: The research results shown are important from the point of view of society. They are also a hint and a hint for future situations that may happen that it is worth being prepared for any changes, which is of great importance from the point of view of quality of life in a smart city and city management.
Originality/value: The innovative article is based on an in-depth analysis of the factors contributing to the increase in the quality of life in a smart city and the improvement of city management. The obtained results of the analysis and the formulated conclusions may allow their implementation to improve the quality of life in a smart city in the future using modern cognitive technologies.

Keywords: smart city, cognitive technologies, management, quality of life.

Category of the paper: research paper.

1. Introduction

Awareness of innovating in agglomerations in order to make life in them easier through access to modern services with the help of the use of cognitive technologies often does not directly translate into practical and favorable solutions for all people, especially those for whom, until recently, pro-innovation activities were particularly difficult. This primarily refers to the elderly or those with various types of disabilities.

Therefore, it is extremely important to determine the level of knowledge of residents about the concept of Smart City itself, digital technologies, areas where innovations related to Smart City development can be implemented, elements that make up living conditions, tasks of smart city management, financing opportunities for individual Smart City projects (i.e. basic concepts). The information obtained can provide a compendium of knowledge and set directions in the discussion to be undertaken with the residents of a given city.

2. Smart city vs. digital/cognitive technologies

It is worth defining at the outset what the terms smart city and digital technologies are. Well, in the simplest terms, a smart city is a developed urban area that uses human and technological potential for sustainable and balanced economic development and high quality of life through improvement in a number of key areas (Bourgeais, 2015; Effenberger, 2011; Knecht, 2010; Kolman, 2004, 2007; Mennad, 2008; Mercer, 2022; Niesior, 2020; Skrzypek 2001; Wawak, 2007; Wal, 2003).

Digital technologies, on the other hand, are technologies that use digital technology and information systems. It is an activity of a technical, economic and organizational nature aimed at introducing digital devices and digital systems into various areas of the economy. For example: digitization of libraries is a technological process that uses digital technology to archive library resources. The effects of the introduction of digital technology also include, but are not limited to: digital signature, digital cinema, digital printing, electronic mail, digital television, digital photography. Areas where innovations related to smart city development can be implemented are:

- economy,
- governance,
- society,
- security,
- infrastructure and transportation,
- environment.

The amount of data that institutions/companies need to process is constantly growing. This drives the development of digital technologies. Their implementation often provides a competitive advantage. Therefore, many entrepreneurs, managers see their opportunities in the implementation of cognitive technologies, artificial intelligence and robotics. According to data from the consulting firm Deloitte, the rate of growth of companies' spending on the implementation of cognitive technologies will increase all the time. According to Deloitte experts, several factors are driving the development of cognitive technologies and robotics. These are first and foremost the growing volumes of data that companies need to process. On top of that, the growth of the Internet and cloud computing capabilities are making companies more and more present in the digital sphere. In addition, emerging machine learning algorithms allow robots to be used in new roles. Cognitive technologies offer a variety of solutions beyond traditional applications, such as process automation and cost reduction. Artificial intelligence can replace some human tasks and significantly support decision-making. Competitive advantage will be achieved by enhancing human capabilities, not just replacing or replicating them (Deloitte, 2018).

According to researchers from the Department of Organization and Management at the Silesian University of Technology, cognitive technologies are therefore an interdisciplinary field of science that deals with the development and application of algorithms, tools and systems based on theories from psychology, neuroscience, computer science and artificial intelligence. They can be used to model, interpret, and automate complex cognitive behaviors such as reasoning, language comprehension, image and sound recognition, decision making, and learning. Cognitive technologies, combined with specialized human knowledge, enable the development of tools and methods that provide the ability to automate processes and their use in various fields such as management, information technology, marketing, financial services, digital security, or effective training. Examples of cognitive technologies currently include various implementations of artificial intelligence (AI), including machine learning using neural networks, speech and image recognition, natural language processing, data analysis tools such as chatbots, risk assessment and recommendation systems. Cognitive technologies are currently the basis for solving a wide range of business and scientific problems and, importantly, have the potential to significantly impact our daily lives and work (Technologie kognitywne…).

3. Smart City Management

Cities face a number of challenges that will only intensify in the coming years due to demographic and economic changes. The UN predicts that the world's urban population will nearly double by 2050. As a result, natural resources will have to be used more rationally than before, and cities will be forced to compete on a global scale. As the city grows, so too will the

problems of pollution, logistics, energy management, disparities in the standard of living of its inhabitants and, as a result, crime. Maintaining a positive economic balance (the 700 largest cities, home to about 20% of the world's population, generate more than half of the world's GDP) poses greater challenges for city services and authorities to manage them efficiently, not only in the face of crisis, but also in day-to-day operations. In order to meet these challenges and to systematize the knowledge on efficient city management, institutions and research centers around the world are trying to formulate a definition of a "smart city" that identifies the core areas whose proper functioning affects the overall well-being of the city and its inhabitants. One such working definition (working because the concept is relatively new) is that a smart city is a city that seeks to solve public problems through the application of ICT (information and communication technology) based solutions as a result of partnership cooperation between stakeholders, service providers, at the city management level. The answer to these problems can be the effective use of ICT (including the Internet, mobile phones) to rationalize resources. This allows development based on innovation, cooperation and information, which is part of the idea of a smart city and, increasingly, a sustainable city. The use of ICT in the process of city management will greatly facilitate the lives of residents, allow them to make sustainable decisions, involve residents in the process of co-determination and co-management of the city, and thus contribute to raising living standards. In light of smart and innovative solutions for cities, the problem of proper management of their resources, both human and natural, is becoming increasingly important. Thanks to the ICT revolution, the ubiquity of the Internet, personal computers or smartphones, cities are gaining new tools to solve their problems. They provide opportunities for cooperation between different interest groups and better access to information.

Figure 1. *Determinants of Smart City Management.*

Source: Own study.

In addition, it should be noted that the determinants of funding opportunities for individual smart city projects are diverse. In the most general terms, they can be divided into factors belonging to the environment, and therefore independent, and internal factors, subject to the management process, forming the internal resources of a given city.

External factors (macro-environmental factors) include, first of all:

- trends in technological development at the global level and the possibility of adapting modern technologies in the country,
- the progress of regional (European) integration,
- the general level of economic development of the country,
- the degree of openness of the economy and investment opportunities,
- conditions of the social, economic and legal system,
- the principles and practice of economic policy, including, in particular, innovation policy,
- the situation on the market of industrial and consumer goods and services.

External environmental factors have a huge impact on the formation of innovation in cities, but the most important are internal factors (microenvironmental factors), which depend on the way individual cities are managed, on the ability to use the creative abilities of resources and the proper management of material resources and infrastructure using the favorable environment.

1. Factors conducive to smart city management related to managers:
    - Creativity.
    - Openness to innovation.
    - Willingness to be different.
    - Organizational skills.
    - Education in a specific field.
    - Knowledge of foreign languages.
    - Acquired professional skills.
    - Course of professional work.
    - Experience in managing a company.
    - Ability to organize work with people.
    - Material motivation, need for economic success.
2. Factors conducive to smart city management related to employees:
    - Ambitious, educated staff,
    - Sense of community of interest, identification with the city,
    - Positive evaluation of the leader,
    - An appropriate organization that motivates innovative activities,
    - General working and salary conditions.

3. Factors related to the immediate market environment:
    - Residents' expectations of innovation.
    - Cooperation with residents.
    - Innovation of neighboring cities.
    - Lack of market access restrictions.
    - Labor market situation.
4. Location factors:
    - Environmental constraints.
    - The need to interact with local authorities.
    - The possibility of contact with a university or R&D institutions.
    - The nature of the infrastructure.
5. Legal and financial conditions:
    - Tax law.
    - Conditions for obtaining and repaying loans.
    - Legal protection of intellectual property rights.
    - Others.
6. Other conditions.

4. Smart City and Social Issues

It is well known that the constant popularization of attitudes of conscious participation in the life of cities by their inhabitants, and all the efforts to carry out tasks in this regard, are associated with an increased demand for utilities (energy, water, gas), transport services and housing, as well as serious constraints on public space. As a result, cities seeking to promote smart development need highly efficient solutions that generate sustainable economic growth and social well-being, reflected in improved quality of life for their residents. What's more, as global climate warming and economic instability continue, cities must become places where the problems of the modern world are solved (Czupich, Ignasiak-Szulc, Kola-Bezka, 2016; Lehrer, 2010; Glaeser, 2011; Katz, Bradley, 2013).

The application of modern solutions, cognitive technologies, while addressing social issues such as welfare, cultural offerings or quality of life, among others, therefore requires the adoption of a holistic model of city management in all aspects, reconciling a bottom-up governance approach with a top-down one, allowing the involvement of a wide range of stakeholders (city users, such as residents, among others) in the process (Kuzior, A., Kuzior, P., 2020; Kuzior et al., 2023). Thus, the very idea of a smart city should be to create and exploit relationships and linkages between human and social capital and information and

communication technologies (ICT), and even cutting-edge solutions from the world of cognitive technologies, in order to generate sustainable economic growth of cities and improve the quality of life of their inhabitants (Kuzior, Sobotka, 2019).

As is well known, a smart city in social terms is a city that is characterized by, among other things, a competitive economy (smart economy), i.e. an economy that is highly efficient and technologically advanced through the use of modern ICT technologies; that develops new products and services for society and new business models; that promotes the establishment of local and global links and the international exchange of high-quality goods, services and knowledge; and well-managed social capital (smart people), which is possible under conditions of social diversity, tolerance, creativity and participation. Thus, values such as social differentiation, tolerance, creativity, social engagement, as well as openness to innovation and flexibility, understood as the ability to adapt quickly to external and internal conditions, should accompany the development of smart cities. In addition, smart cities usually base their strategies on the application of information and communication technologies (ICT) in order to improve the standard of living of their inhabitants and to increase their participation in important decisions.

In addition, a high quality of life (smart living) should mean safe and healthy living in a city that also offers rich cultural and residential opportunities, while providing ample access to ICT infrastructure to shape lifestyles, behaviors and consumption.

At the same time, it is worth mentioning the threats to smart city development that may arise in the social sphere. These include the phenomenon of exclusion of certain social groups from the possibility of using the services offered by the smart city - e.g. low-income people, the elderly, those excluded from society due to disability, addiction, etc. In this context, for example, the authors of the article "Factors and Barriers to the Implementation of the Smart City Concept in Poland" (Czynniki i bariery…) refer to the valid observation of A. Glasmeier A. and S. Christopherson, that "these groups use cell phones much less frequently than the rest of the city's community. Consequently, when the signal sent by these devices is recorded and processed, and certain public services are provided on this basis, they may not be in line with the city's community structure". Therefore, in line with the common vision of European cities of the future, the presence of all stakeholders must be taken into account, leading all residents to be active in an integrated manner in all dimensions of sustainable development (Postrzednik-Lotko, 2020). It is therefore important to use digitalization to improve the quality of public services in a way that allows all city residents to participate in society (Kuzior, Sobotka, 2021.

Thus, the realization of the objectives of the Smart City development in the social field, including the support of the specializations necessary for the development of local potentials to improve public participation, requires specific actions to organize the public space in a way that allows its optimal use. This implies the emergence of new needs, including the need to provide public spaces with Internet infrastructure. For example, the progressive informatization of social life (more and more people of different age groups are using new information

technologies that facilitate communication, but also allow online payments, etc.), or the search for all kinds of information on the Internet by increasingly broad social groups, indicate the need for further informatization of public services. The traditional model of administration, based on serving stakeholders through personal contact, should also be made possible through the use of ICT tools.

In addition, in the Smart City, measures should be taken to raise consumer awareness in the rational use of utilities, based on the principle of building the attitudes of a conscious consumer who uses energy, gas, water at times that guarantee lower bills and no threat of overloading the network. As is known, modern cognitive tools allow to collect data on the current state of the city's resources and problems and make them available in real time. The ability to continuously analyze data is important in the context of constantly shrinking resources and increasing costs of their acquisition. Up-to-date knowledge on this issue allows to change production and consumption, and consequently - to reduce the consumption of natural resources without worsening the standard of living of the inhabitants.

In addition, the Smart City should support activities aimed at encouraging the desired behavior of residents in the following areas: safety, development of civic activity in the broadest sense, increasing the quality of education of residents, creating a variety of cultural forms and activities of residents, activating sports and recreational activities of residents, and strengthening active social policy activities. This can be achieved by:

- Implementing preventive educational projects for residents with an ICT component.
- Developing civic activity and active civic attitudes (initiating and implementing civic education in the field of self-government with the use of modern technologies).
- Initiation of projects on digitalization of offers for active use of free time.
- Improvement of the quality of education of the population and improvement of the range of educational and extracurricular activities with special attention to the current needs of the labor market, special educational needs and development of the interests of particularly gifted students, planning of the educational path of children and youth and career counseling with the use of distance communication technologies.
- Taking initiatives related to education in the formula of distance and hybrid education, aimed at developing digital competence.
- Creation of various forms and cultural and artistic activities of residents with the use of modern technologies (enrichment of the cultural offer and strengthening of existing cultural events, as well as retrofitting of facilities for cultural activities with modern technologies).
- Activation of sports and recreational activities of residents (digitalization of sports and recreational offer and digital retrofitting of local sports and recreational facilities).
- Minimizing social problems by implementing projects to improve accessibility (including digital accessibility) of public facilities for people with disabilities.

- Minimizing the social exclusion of seniors by developing all activities that improve the quality of life of seniors (initiating and implementing educational activities on the use of ICT for seniors).
- Supporting the implementation of projects to improve the quality of medical services through digitalization improvements.

5. Conclusions for the future

In today's economic reality, many cities and metropolitan areas want to be an increasingly friendly place for their residents, workers, visitors, tourists, etc., in a sometimes difficult, because changing, macroeconomic environment. Cities that are successful in terms of accessibility and friendliness to the people who use their services must nevertheless function efficiently in this sometimes very complex reality. They must be characterized by high growth dynamics and high service quality. They occupy an important place in the national and even international market. In the consciousness of modern citizens (especially the younger generation), the need for constant innovation in agglomerations has become noticeable, so that living/working in them is simply easier through more modern access to all kinds of services. This awareness should be directly translated into practical or advantageous solutions, especially for those people for whom, for example, pro-innovation activities have been particularly difficult until recently. To sum up, any activity in the field of society should therefore be related to the challenges of counteracting stratification or social exclusion, any acts of vandalism, including those related to unemployment, challenges of supporting the rational use of water, promoting social inclusion and healthy lifestyles. In turn, the ability to clearly formulate these challenges in terms of their optimal solution is the starting point for realizing the idea of a so-called "smart city".

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LONGTERMISM AND ETHICS

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Purpose: Longtermism, though merely a few years ago was developed, has become a subject of numerous academic and journalistic discussions. There is no doubt that is raises important and interesting issues, if in a very controversial way. Longtermism is a conception that weaves ideas from many various fields: from cosmology to ethics. The purpose of the paper is to indicate and analyze the ethical ideas that are an essential part of this conception.
Design/methodology/approach: This text contains considerations that belong to broadly understood ethics. The presented analyses are based on (rather elementary) logic, moral intuition as well as on sociological and historical observations.
Findings: The complexity of ethical issues fundamental for longtermism has been indicated. It has been suggested that some general ethical conceptions – in particular: that of responsibility – should be supplemented and modified if the ethical basis of longtermism is to be developed. And conversely: the tries to develop ethical fundamentals of longtermism can inspire some new ideas in (general) ethics.
Research limitations/implications: The text contains some results of ethical analyses of rather introductory character. These analyses should be continued – both "in depth" and "in breadth".
Practical implications: Precising, clarifying (formulating in possibly simple way) and systematizing ethical ideas is a necessary (though – not sufficient) condition for ethics to influence politics, governance and management.
Social implications: Better politics, governance and management – these are (some) preconditions of better (environmentally safe, socially just etc.) society.
Originality/value: The paper does not attempt to publicize or to criticize longtermism. It tries to demonstrate that analytical approach to this conception, whatever the results of the analyses would be, may contribute to developing ideas important for better development of humanity.

Keywords: longtermism, globalization, responsibility, collective decisions.

Category of the paper: Conceptual paper, viewpoint.

1. Introduction

The story of which a small part is to be told and discussed here started about three centuries ago – in the Age of Enlightenment: Just at that time (modern) ideologies begun to develop, among them the still important: liberalism(s), conservatism(s) and socialism(s) (The letter "s" is added to underscore that these three names denote rather "families" of ideologies than "individual" ones). At this text will be presented a discussion of (some aspects of) a very recent ideology that took the name – longtermism.

Before formulating some introductory remarks on this very ideology, some general comments about the notion of ideology should be, I think, made. I will commence them with two short notes concerning the meaning of this concept:

Firstly, it should be noted that this notion has a certain number of meanings – different but overlapping.

Secondly, this concept happens to be used in neutral, positive and pejorative ways (Czajkowski, 2013).

It is, therefore, impossible to offer here even brief discussion of the variety of the conceptions of ideology. For this reason, I have to limit myself to a presentation of some elements of the interpretation of the term "ideology" I accept and am going to avail of in the present text.

It may be convenient to start this presentation from a few words about a concept that can be regarded as one of central (if not just the central) concept of the Enlightenment thought: about the notion of progress. This notion has been a subject of many debates (Krasnodębski, 1991) that cannot be even summarized here. The interpretation of this notion I assume at this place can be reduced to the following basic theses: (1) The social world of tomorrow can be better than this of today and that of yesterday. (2) This transformation ("betterment") of our world depends on human activity (formulating this point one could note that the idea of progress has some connections with the Renaissance humanism).

So understood idea of progress entails two questions. First – axiological: what are the criteria of "betterment"? And second – praxiological (sociological...): in which ways the "betterment" (of the given – relative to the assumed criteria – sort) can and should be achieved? At the first sight at least: simple questions. But not: simple answers. Just these answers (in fact: complex sets of them) can just be regarded as – ("progressive") ideologies.

Liberalism(s), conservatism(s) and socialism(s) have been ideologies that have influenced the rise and development of political parties and have also evolved under the impacts of necessities and challenges of political *praxis* (Note that there have existed for decades such international organizations as Socialist International, Liberal International or International Democrat Union – the last one groups some conservative parties).

The relations between ideologies and politics, as they have been evolving for the last ca. two hundred years, would deserve a systematic and detailed analysis. At this moment, I will confine my attention to the post-1945 period.

First. The political and ideological climate after the 2nd World Ware was determined by the tragedy of Hiroshima and Nagasaki (it is obvious that also other factors exerted significant impact). Probably for the first time in human history, the possibility of mankind's self-destruction was regarded as real (Jaspers, 1961). Various political, diplomatic, social activities resulted in a reduction of international tensions and dangers. But even today, after decades that have passed since the Test Ban Treaty was signed (5.08.1963) experts speak about the real threat of nuclear war (Cirincione, 2008).

The post-war military rivalry, though due to the development of nuclear weapon has had some new (in comparison to the earlier epochs) aspects, is in fact a continuation of the millenia-long sad tradition of mankind. But just in the 1960's appeared new very serious problems with which mankind has to cope: the problems of natural environment (McNeill, 2000).

Second. The profound changes in the "nature" of politics have taken place; in particular – the dramatic enlargement of the domain of political activities: from R&D to sport policies, from health to environmental… – In short: virtually all domains (much more numerous than in the previous centuries) of social life have become "politicized".

Third. At least twice "the end of ideology" (Czajkowski, 2013) was announced. For the first time (in the 1950s) – by the French philosopher Raymond Aron (1905-1983) and by the American sociologist Daniel Bell (1919-2011). For the second time – by the American political scientist Francis Fukuyama (1952-); his phrase "the end of history" should be, in my opinion: more correctly than often is, read as "the end of the history of ideology". Incidentally, Fukuyama's conception can be regarded as a theoretical/philosophical elaboration of the slogan formulated in 1979 (ten years before Fukuyama's paper was published) by Margaret Thacher (then the Prime Minister of the UK). This slogan, best known in its abbreviated form TINA (There Is No Alternative – to free market and democracy; in other words: to liberal capitalism), has been popular for decades and even today (perhaps in somewhat modified version) is a part of the mainstream social and political thought. – Should we be happy about the alleged end of ideology? Some arguments supporting a negative answer were formulated for instance not by a philosopher or sociologist but by an economist (Thurow, 1996); interestingly, the author of the invoked book claims that there are no alternatives to capitalism.

Fourth. A separate discussion should be devoted to postmodernism (Lyotard 1979) and its relations with the conception of the end of ideology. If the Lyotardian concept of "great narratives" regard as close to that of ideology (in one of the various meanings of the term), and remember that Lyotard prophesied the end of great narratives, one could rather easily note the analogies between his thesis and these of Arron and Bell. On the other hand, one can also maintain that postmodern criticism of positivism, scientism etc. (criticism most extremely expressed by Paul Feyerabend in his slogan – and the title of one of his books – "anything

goes") re-opened the road to "production" of ideologies – to be "sold" on the "free market" of ideas in general, and of ideologies – in particular.

Fifth. The years 1989-1991 seemed to be the years of (almost absolute?) victory of Thacher-Fukuyama's ideology. But the in next years the situation started to change again. Let's mention the ideology (or rather ideologies) of anti- and alter-globalist movements, the great variety of "green" ideologies, the new waves of feminism, the ideology of "political correctness", or, very recently – in the context of the COVID-19 pandemic – the "anti-vaccinationism". Mentioning the last ideology, we should stress that the post-1945 period has been characterized by growing number and differentiation of social and political movements.

Ending these remarks on ideologies and politics, I would like to emphasize the role played by the conviction that extinction of humanity is basically possible – however small would be its probability (Ayres, 2021; Hanson, 2008; Hughes, 2008).

And even if extinction is of very small probability then other numerous dangers are very real: starting from ecological threats (Bińczyk, 2018), through those resulting from development of various technologies (Bostrom, 2014; Zittrain, 2008) – even nanotechnology including (Phoenix, Treder, 2008), to the plagues and pandemic well known from the past (Kilbourne, 2008) and still many others (Bostrom, Cirkovic, 2008).

Still, before I will go to the chapters on longtermism, I'd like to say also a few words on some aspects of its scientific context. These aspects can be grouped and indicated with one (but very fundamental, both philosophically and scientifically) word: time.

For centuries had dominated the religious view that the Universe and the Earth were created a few thousand years before the birth of Jesus Christ. The view started to change in the 18th century. Cosmological, geological and biological empirical and theoretical studies have resulted in the generally accepted today view on the age of the Universe (ca.14 000 000 000 years) and the Earth (ca 5 000 000 000 years). – These scientific ideas have undoubtedly changed the perspective (of course of those who know and accept this view) in which the history of humanity (ca 250 000 years – so little even in the perspective of the history of mammals – ca. 300 000 000 years, and so much in the perspective of the history of philosophy or mathematics – ca 2500 years, not even mentioning the ca.100 years of individual) is perceived today.

With this scientific view on the past we should connect a new scientific perspective on the future. As regards some issues, physicists are convinced that our knowledge is very well confirmed. For instance, it is rather certain that in about 5 000 000 000 years the Sun will destroy our planet. It has not to mean the end of human civilization (if it "on time" overcomes difficulties and avoids serious catastrophes): moving to another part of the Universe (after millions years of scientific and technological development) seems rather likely. But what about the whole Universe? – There are some (based on physics/cosmology!) reasons to suppose that it will transform in such a way that no form of (even very simple) life will be able to exist (Mack, 2020).

In the perspective of 5 000 000 000, 500 or even 5000 years appear to be very short periods. Of course, only a small minority of humans look at the future in this perspective. And even these people assume this perspective rather seldom. But just they create new ideologies, such as longtermism.

One might say that we live in the age of paradoxes (at the first sight, at least): The long future, the very optimistic visions of "Society 5." (Hitachi-UTokyo, 2020), science making daily life much better (Kaku 2012) – on one hand, and the extinction of humanity – on the other. Perhaps it is a seeming paradox – reflecting the situation of mankind at the turn of millenia: on the historical crossroads. Longtermism may be a reaction and an answer to this situation.

2. Longtermism

As noted at the outset of this text, longtermism is a very young ideology. To be more precise, this word was for the first time used (in a written text) around 2017. Scottish philosopher (associate professor at the Oxford University) William MacAskill (1987-) is credited with coining this term. A systematic presentation of the ideas grouped under this label is given in his book "What We Owe the Future" (MacAskill, 2022). Another main figure in this movement is Australian-British philosopher (senior researcher at the Oxford University) Ted Ord (1979-), the author of another – important for longtermism – book "The Precipice: Existential Risk and the Future of Humanity" (Ord, 2022).

A significant role in developing these ideas play two institutions (both connected with the Oxford University): First – Future of Humanity Institute, established in 2005, headed by Nick Bostrom (Ord works in it); except for some foundations supporting scientific researches, it receives also financial support from Elon Musk and MS Amlin Ltd – an insurer company. And second – Global Priorities Institute, established in 2018; its Board of Advisors is chaired by MacAskill, and the ethicist Peter Singer is perhaps its most widely-known member.

Except for these two academic institutions some organizations should be mentioned. Among them – Giving What We Can (established in 2009, ca 8000 members at the end of 2022); the members of this organization declare to give at least 10% of their income to charities. Still more intriguing name has an organization established in 2011:80,000 Hours. MacAskill is one of its founders. The goal of the organization is to advice those people who would like to realize the ideals of effective altruism to choose such a professional career (80,000 – average number of hours at which we are performing professional work) that will be optimal for achieving so defined aim. – This organization is also connected with the Oxford University.

To the information given above, I would like to add a few words on Nick Bostrom (1973-), a Swedish-British philosopher. He works, among other issues, on the questions of global existential risks. In particular, he regards the development of Artificial Intelligence as a potential danger for humans (Bostrom, 2014). On the other hand, he can by no means be regarded as technophobe: he created in 1998 (together with David Pearce [1959-]) World Transhumanist Association, in 2008 renamed as Humanity+.

Ending the introductory information, I would like to note that an analogous (in construction though opposite in meaning) word was used (introduced?) by authors of one of the reports to the Club of Rome: "Come On! Capitalism, Short-termism, Population and the Destruction of the Planet" (Weizsacker, Wijkman, 2018). Some similar ideas are presented also in (Krznaric, 2020). Having mentioned the concept of short-termism, I would like to say about some ideas contained in (Brand 1999). The book is titled, a bit enigmatically, "The Clock of the Long Now: Time and Responsibility". The book talks about an authentic (though still not realized) project of construction of a clock that is to run for 10 000 years without delays.

Now let us move on to the presentation of the main ideas of longtermism (Let me stress that this presentation is a result of my analysis of these ideas. I think that they can be summarized as below. But, of course, the responsibility for the presentation is mine). These ideas can be divided into two groups: this of descriptive theses and that of normative opinions.

The following theorems can be included into the first (descriptive) group:

1. *The Homo sapiens* species has existed for about 200 000 years;
2. The average species of mammals exists about 1 000 000 years. Therefore:
3. The future history of mankind can be much longer (about 800 000 years) than the past one;
4. The development of science and technology can result in making still better the temporal perspectives for mankind. But, on the other hand;
5. The development of science and technology may have some very negative consequences for mankind, self-annihilation including;
6. We may live in the epoch (how defined?: the turn of the 20^{th} and 21^{st} centuries?, the 21^{st} century? ...) in which our actions will decide which direction – optimistic or pessimistic – will take the history of our species.

To the second (normative) groups can be included the following opinions:

e1. The life of any human that will live in a more-or-less distant future is morally so important as the life of any currently living human.

e2. The very existence of humanity has a (positive) moral value. Therefore:

e3. We should undertake ("today") actions that minimize (?, reduce to zero?) the risk of worsening the quality of life of future generations, and of the extinction of our species.

3. Longtermism – some ethical issues

Longtermism seems to be a rather controversial ideology. But, on the other hand, it does not seem to be a "dangerous" one (as other ideologies have been): it is very unlikely that it will find a mass support, not to say – a support that would result in some violent activities. What is then the value of this ideology?

I think that a few complementary answers can be given.

The first one connects longtermism with the fundamental problems of historiosophy (philosophy of History). The proponents of this ideology seem to disregard these issues. Notwithstanding, in my opinion, whatever they think about historiosophy, they have to assume some historiosophical theses that justify their theses about the future of humanity and about our possibilities of influencing the course of our history. Let us add that longtermism needs a historiosophy that would be based on (connected with) the biological theory of evolution (Lem, 2021; Wills, 2008) – historiosophy of a sort that has for decades been rejected by numerous anti-naturalist (anti-positivist) philosophers, methodologists and historians. – I can but signalize here these issues. A more systematic discussion would demand a separate text.

The second answer could be regarded as a reformulation of the previous one: Longtermism can be viewed as an attempt to counteract the tendency (its origins are interesting topic for sociology and history) that has dominated at least for the last few decades: the tendency to shorten the temporal perspectives: in politics, in economy, in science…

The third answer can be formulated as follows: Longtermism (just due to its radical, one might even say – very radical, character) invites us to discuss, analyze, and consider some fundamental ethical issues.

Viewed from the perspective of ethics longtermism can be interpreted *inter alia* as a (very radical) position concerning collective responsibility for the future. At this moment one should at least mention the "The Imperative of Responsibility" (Jonas, 1984) – a book that undertook issues discussed today in the longtermist framework (to a detailed analysis of similarities and differences between Jonas' ideas and those of longtermism also a separate text should be dedicated).

Below, I am going to discuss some questions that are, at least in my opinion, of fundamental importance for analyzing the ethical issues raised by longtermism.

Let me commence from the notion of responsibility. The work of Roman Ingarden "On Responsibility and its Ontic Foundations" (Ingarden 1972) remains still – after a few decades – the best analysis of this concept in the Polish ethical literature. And, perhaps, not only in Polish (Smiley, 2023; Vardy, Grosch, 1997).

According to Ingarden, we can speak about bearing (being) and taking (assuming) – responsibility, and about being held – responsible. Additionally, we can speak that someone is acting in a responsible manner. These analyses can be, I think, generally accepted.

But, on the other hand, I am not quite satisfied with them. Thus, to put it in a somewhat different way, his analysis should not be corrected but rather – supplemented.

In my opinion, his (and not only his) analysis passes by one important fact: morality concerns various relations – between man and his action, between action and is consequences etc. But morality concerns also (some) relations between men. Notably, the term "responsibility" can be interpreted as referred also to some interpersonal relations: Paul is responsible to Peter (e.g. for his health, for support him, being to him loyal, etc.). These two formulations "responsible to" (a person) and "responsible for" (his/her health etc.) seem to be "two sides of one coin" (though are not identical). But if we accept that a guardian is responsible for a child's safety (also) to its parents, we note that these two phrases have somewhat different meaning.

I am not going to continue these considerations, but simply assume that it makes sense to accept the phrase "responsibility to" as denoting a social relation.

Let me stress that the "actor" (who is responsible to the "recipient") as well as the "recipient" (to whom "actor" is responsible) can be both an individual and a group (be small, be very large) of individuals. Also this issue would deserve an elaborate analysis that cannot be undertake here; I will limit myself to four examples: husband (wife) responsible to his (her) wife (husband); the owner of a factory responsible to his/her workers; parents responsible to their only child; a nation responsible to another nation. As regards the last example we should note that the well-known idea (and practice?) of Corporate Social Responsibility characterizes this type of responsibility.

The problem of collective "recipients" though important will not be discussed in this paper whereas that of collective "actors" will be further shortly mentioned.

And now a few remarks on the relationship between "responsibility to" and the other types of relations between "actor" and "recipient". Some relevant moral intuitions seem to be clear and evident: the responsibility of parent to his/her child seems to be "greater" (what does it mean? – this question needs a separate analysis but by no means can be ignored) than to an unknown person, the responsibility of a person to his neighbor (whose house is burning) – "greater" than to another person in a similar situation (let us stress that the situation should be "sufficiently similar").

Having assumed that this thesis is accepted, a step further can be made. The responsibility ("greater" or "smaller") to living humans is evident. But what about the already dead and those not-yet-born? Appealing again to some relevant moral intuitions, we can say that certainly we happen to be responsible to (some) our ancestors and to (some) our descendants. For instance, we care for "good name" of our forefathers. Or, we try to secure financially our expected though still not born grandchildren (We feel responsible for undertaking these activities).

Between these two groups of humans (these already-dead those yet-not-borne a there are both similarities and differences. As regards similarities, the "actual (empirical) non-existence" (as different from other types of existence; what types? – this is a difficult metaphysical issue

that need not be discussed here; it is here sufficient to assume that these who passed away and those who are to come "somehow exist") of the members of these two groups is common to them. This fundamental (ontological, metaphysical) fact has various consequences: we cannot communicate with them, ask questions, demand approval or forgiveness etc. But the differences are no less, and probably – even more, profound: On one hand, there is certainly a difference between the group of the dead and the living, and – the group of those yet-not-born. The first group consists of "specific" people – people who (have) had lives composed of well-defined, specific events, people who (have) had specific traits of personality and character… The second group, on the contrary, consists of potential (in a sense: "abstract" – lacking specificity) humans – humans whose actual existence is only probable (Maybe I will have a great-great-grandson, maybe – not…). It seems rather obvious that our (emotional, moral…) attitudes toward the "abstract" humans are different than those to the "specific" ones. On the other hand, the living humans and those to-be-born have one important common trait that distinguishes them from the dead: the "actors" can influence many (virtually all) aspects of the living "now" and the living "in the future"; the influence on the "posthumous life" is very limited.

These issues seem to be of great importance for longtermism: It seems that there are two fundamental arguments concerning our responsibility to future generations (Birnbacher, 1999). The first is based on the convictions that "possible" men are – in some fundamental sense – men. But are we responsible to all "possible" men? Also, to those who will live (let's assume, leaving aside all cosmological problems, they will) in a million years? In a billion? – Logically, such an ethical stance cannot be excluded (Hartmann, 2004). Practically, it is too abstract. But, on the other part, we can start from "now": we are, for sure, responsible to our children. To our grandchildren, and – almost for sure – to their grandchildren. Where to stop? – It seems to me that no "purely" moral/ethical non-arbitrary answer can be formulated. Perhaps, taking into considerations the moral/ethical rule prohibiting waste of valuable resources – among them: of time, effort etc. – we could say that that the limit to our responsibility to the future generations is defined – among others – by the limits to our predictive possibilities (In other words: we are responsible to those generations on which we influence in a – at least minimally – predictable way).

Speaking about the future generations we are inevitably approaching the problem of human nature (in other words: the scope of denotation of the term "man"). If we accept that some our biological ancestors, sufficiently distant in time from us (say, one million years), were not men, then we are not responsible to them though we are responsible to these our ancestors who lived, say, one thousand years ago.

As some claim, a biotechnological revolution is coming or even is already ongoing (Fukuyama, 2002). Some suggest that we will (and even in the coming decades) transcend biology (Kurzweil, 2005; Tegmark, 2017). Let us assume that the changes will be continued and turn out to be very profound. Perhaps some our descendants living thousands of years after us will be so different from us that they will not be humans – in the sense in which we use this

term today. Should we regard this as justification of waiving responsibility to them? To a degree – perhaps yes. But, on the other hand, taking into account, that we are not narrowing but rather expanding the scope of our responsibility: to (all? some?) animals and to self-conscious Artificial Intelligence, we should avoid – (at least definite) "no" to this question.

Ending these considerations on responsibility, a short remark on the connections between our responsibility to our ancestors and to our descendants: It can be said that we are responsible to our ancestors for accepting and bearing the responsibility to our (but also – to their) descendants. This thesis is based on (rather strong) moral intuition drawn from familial relations. – Whether and how generalize this intuition it has to be discussed in another place.

Having ended discussion of the problem of responsibility, I want to move on to the question that is important for discussing ethical aspects of longtermism but can also be regarded as one of the central issues of the contemporary philosophy: to the problem of risk (Michalski, 2006; Czajkowski, 2011). I would like in passing to add here that one of the most popular characteristics of the contemporary society is the concept of "risk society", introduced by (Beck, 1986). But, on the other hand, as demonstrated in detail in (Bernstein, 1996), the necessity to cope with risk has been a constant element of the mankind's history.

Before starting the discussion of the ethics of risk (Hansson, 2012), a few words on the types of risk. Probably, quite a few typologies of risk might be presented. At this moment I want to mention only one typology – simple but, I think, important. According to this typology, we can speak two kinds of risk: ontic and epistemic.

The ontic risk is a consequence of objective stochastic (indeterministic, chaotic…) character of virtually all processes ongoing in the material world – the world of which humanity and its civilization is a part. Thus, in vast majority of cases, human action can have various (differentiated to a greater or smaller degree) results; some of them can be, from the human point of view, desirable and some others – undesirable.

The epistemic risk is a consequence of the fundamentally limited human cognitive possibilities: Human knowledge (perhaps with some rare exceptions) is probable – more or less, both in its universal part (e.g. scientific laws) and in the detailed (e.g. individual observations).

It should be stressed that both types of risk are interconnected: On one hand, the more complex the eco-techno-socio-system, the more chaotic is the system and thus – the more it is (ontically) risky. On the other hand, the more complex is this system, the greater epistemic risk of incorrect (if not just false) diagnoses of its current state and of its dynamics, and – in result – the greater risk of incorrect practical decisions.

The basic question concerning risk – a question of fundamental importance for ethics – is the following: can be the existential risks eliminated? Some believe that any risk is not completely eliminable. But alternative opinions have been formulated, though rather in reference to very specific areas such as road safety (Hansson, 2023). Let us assume a moderate stance: "local" risks (connected with traffic, construction etc.) are eliminable but not "global" ones – those of existential nature.

Having accepted this point of view, we could say that constant minimalization of the "global" (existential) risk should be one of the most important (if not just the most important) goals to be achieved by human civilization. To avoid ideological (in the pejorative sense of the word) unproductive quarrels, better and better indices of the existential risk should be constructed (As far as I know, at the current moment, we do not have any index of this sort).

With the last remark, we have come close to the ethics of science (it is one of the tasks of science to construct indices I have just mentioned.) But before some words on this subject will be said, I would like to formulate some notes on the division of practical (or applied) ethics into sub-disciplines – not for the sake of academic pedantry but to suggest a sociological interpretation of this division.

The characteristic for modern times (though to be found also in the earlier epochs) is the phenomenon of multitude of social roles played by individuals. This phenomenon is, from the assumed here (sociological) point of view, one of the important sources of the variety of the sub-disciplines of ethics.

In moderns societies, we spend a lot of time performing our professional duties; thus, professional ethics have been developing and seem to play more and more important role, at least in some professions such as that of physicians (the oldest professional ethics but today much more sophisticated than in the time of Hippocrates), of lawyers, of engineers, of scientists… (Galewicz, 2010). – Two complementary remarks can be made here. Firstly, the differentiation of certain types of human activities results also in moral complexities; e.g. the moral problems faced by historians (especially those studying contemporary times) and geneticists are mostly different. But, secondly, rather minority (but: how small?) of professions needs specialized ethics, for majority (but: how large?) – the general ethics seems to suffice.

One should add that professional ethics cannot be regarded as simple applications of the general ethics to specific problems of various professions. For instance, it is rather obvious that the ethics of prosecutor is – in many respects – different from this of advocate; the ethics of priest – from that of policeman, etc. And the respective differences are not these of different ethical questions, but of different answers to similar (or even identical) questions.

Among professional ethics, of special (and increasing) significance is today ethics of science and of technology (of scientists and of engineers). Perhaps the most important factor determining the special part played by this sub-branch of ethics is the transformation (ongoing in various domains of science with variegated velocity) of (traditional) sciences into technoscience (Bińczyk, 2012; Abney, 2022). In consequence, science contributes more and more to the increasing complexity of the eco-techno-socio-system, and thus (as already mentioned above) to the increase of risks connected with its functioning. – Looking from this perspective at the ethics of science and of technology (of techno-science), one could say that today not "internal" issues (however important) of science and technology but the "external" ones – connected with the impact of technoscience on eco-techno-socio-system – are of central importance. It is rather obvious that the way in which this impact is analyzed and evaluated

depends, among other things, on the temporal perspective. Noting this simple observation, we can draw attention to the relevance of the longtermist ideas for the ethics of science/technology.

To support this opinion, let me refer to an otherwise very interesting book on innovations. You cannot find there any analysis of possible negative side-effects of innovations (Fagerberg, 2011). At this moment, I am not able to present any other instances of such attitude; nonetheless I risk the hypothesis that these instances might be found – and even quite numerous.

And the final remark: creating institutional, cultural/customary, and organizational mechanism conducive to the development of "externally" oriented ethics of science and technology should be today regarded as one of the most fundamental elements of the "internal" ethics of these domains (this domain).

However signficant is our professional activity, other social roles and activities are no less important. Among them – the roles of members of various – smaller and larger – polities; in particular, we are citizens of (nation-)states. It would be rather impossible to find systematic presentations of citizens ethics, but studying so different texts as some legal acts, literary works, books on history etc., etc. – one could reconstruct ethics of this kind: civic ethics. – This part of ethics which is strongly connected with (or even can be regarded as a part of) political philosophy.

I would like to begin this part of my considerations with a few remarks on politics. First of all I am going to say that, in my opinion, politics has been, is and – what is here the most important – will continue to be one the most important sub-systems of the eco-techno-socio-system. It might be even said that the more complex the whole system is the more important role of politics – its regulatory subsystem. (Lem, 1996) Its effectiveness, the side-effects (unintended consequences) of its functioning, its relations to moral values in general, and – particularly – to human rights, etc. etc. – the quality of this system can be very different (as of any other system). – It entails by no means meaningfulness of any idea of "de-politization" of social life. But, of course, we can and should ask questions about better (both morally and praxiologically) politics. – For a serious discussion of the problem of "better politics" (desired virtually in all countries) not a paper but a book would be necessary. Here, only a comment on one element of such vision: free and "smart" discussion. Free: based on the rejection of various forms of "political correctness" (and of other instruments of limiting the area of "admissible" views). "Smart": observing the formal (logical and methodological) rules of formulating theses and of their justification (Note that drawing clear and acceptable line between content and form of claims is a difficult but a necessary task of philosophers, logicians, linguists…). In short: some intellectual virtues are one of the important preconditions of collective responsibility (Smiley, 2023).

These remarks seem to be of fundamental importance just while debating (ethical aspects of) longtermism: If its ideas are to be realized – even not completely (almost never possible) but to a considerable degree – significant changes (on the global scale) in the structure of

investments would be necessary. Such changes would imply some far-reaching transformations of the economic system (Hughes, 2021; Jackson, 2009; Klein, 2007; Moore, 2015; Raworth, 2017; Zsolnai, 2013). Transformations – let us repeat – on global scale. Here, we touch upon the problem of national sovereignty on side, and of world governance (though rather not in the form of a "world government") on the other (Singer, 2002). Put aside the problem of acceptance for such changes (otherwise of fundamental importance, but too difficult to be discussed here) and limit ourselves to the ethical aspects.

The situation can be described as a special case of hard choices (Levi, 1986): choices between decisions oriented at realization of alternative yet equally important values. To put it briefly: on one hand, we can assume (at least hypothetically) that longtermism expresses some important ethical values. But on the other hand, we can also assume that avoiding a global social catastrophe (resulting from very far-reaching structural, economic and political, changes) is also a very important value.

Ethics would suggest deferring this hard choice and, in the meantime, trying to make it "less hard". This strategy seems reasonable. Some hints might be drawn from texts suggesting compromise ("balanced") strategies of coping with climatic crisis (Lomborg, 2010; Nordhaus, 2023, 2008).

As the third type of ethics, I would like to mention universal ethics – ethics addressed to men as members of the mankind (human community). Some religions (e.g. Christianity) contain ethics of this sort. And since the 1970s some non-religious attempts to develop universal ethics have been undertaken (Singer, 2004).

It seems that in our times intellectual virtues, though always of some moral significance, are becoming more and more important as a part of general ethics (Rudy-Hiller, 2023). And thus, a rather special sub-field of ethics – ethics of belief – is gaining on importance. Without discussing this ethical conception in depth, let us define its perhaps most fundamental ideas: humans are responsible for their beliefs (convictions etc.), and in particular – for the quality of their justification (Chignell, 2023).

As intellectual virtue we could also count (somewhat similarly to the solving hard choices problem – mentioned above) willingness, while deciding whether accept or reject a thesis, to consider as many "pros" and "cons" as possible (Yudkovsky, 2008). Note that the last phrase ("as possible") does also matter.

Of great significance (especially in the recent times) is the readiness and ability to reduce the influence of (some) emotions – particularly these of optimism and pessimism – on one's beliefs (Napiórkowski, 2022).

And, last but not least, note: a philosophical attitude defined by the great biologist as the striving for consilience (Willson, 1998) can also be regarded as one of the intellectual virtues constitutive for universal ethics.

Ending this part of my considerations I would like to risk a hypothesis: Ethics of collective actions determines today, much more strongly that ever, ethics of individual behavior.

I'd like to start the last part of this chapter from quoting a proverb present in a certain number of European languages: The road to hell is paved with good intentions. It expresses an important moral intuition on which I am going to make some comments now. But first a remark on the history of morality and ethics: The ancient morality was consequentialist: it did not distinguish actions with intended negative consequences from those with unintended ones; for this reason, the discovery (ascribed to stoics) of the moral significance of intention was of great importance. But today it is rather obvious that intentions (also motives), however important, are but one factor determining the moral evaluation of an act (Tatarkiewicz, 1971).

A systematic discussion of this problem would demand references to a theory of action what is impossible here. But at least a remark on this issue is rather necessary: I think that the concept of prudence (one of the so-called cardinal virtues, defined already in the Antiquity and discussed further in the Medieval Ages) can be very convenient for formulating these remarks. Prudence is a virtue of mind. It can be characterized as readiness to analyze, while going to undertake an action, the possible consequences of this action – unintended, and especially those of negative character. The ability to objective self-analysis (in particular: self-evaluation of one's abilities and skills – necessary to achieve the intended goal) should be regarded as an important aspect of prudence.

You could say that the more complex is a goal the more prudence should be recommended or even demanded when one is going to undertake actions oriented on achieving such a goal.

As we have for the last decades experienced, it is not an easy task to convince people to support "pro-climatic" policies. And these policies are oriented at avoiding serious catastrophes not at a very (almost unimaginably) distant future, but in the coming decades – during our lives, or the lives of our children and grandchildren. – If so, if you accept the (fundamental) ideas of longtermism, you should consider very carefully in which ways (if at all – the hypothesis that "now" is too early cannot be excluded) longtermist ideas could influence a considerable number of people.

Let us add that history has been teaching us that virtually all ideas, including most morally noble, can be used as instruments for achieving various goals, including the most morally not noble. – There is no reason to be sure that longtermism will with full success avoid the fate of other ideologies. Hope that it will be the case is not, on the other side, excluded. It might come true if lessons from history will be learned…

4. Final remarks

I would like to close my considerations with the following three opinions and one remark. First: we have lived for decades (at least; perhaps even for centuries – it is a sociological/ historical issue very important for social theory but of little importance at the present context)

in the epoch of globalization – the epoch of the emergence of the global/world society/community. For various reasons, according to the view I do share, it is desirable that the process of globalization (having an objective – technological, ecological, economic etc. – character) will also be reflected on the level of social consciousness. In other words, we should welcome and support the rise and development of global consciousness. Let us add and underline that ethics should be one of its central parts (Ciążela, 2008; Kuzior, 2014).

Second: One could also suppose that the issues of the (distant) future of mankind can be one of the key elements of the global consciousness. If so, both longtermism itself and the discussions and polemics it has already sparked and will still spark – they will contribute to the making of the social consciousness of the global community.

Third: The rise and development of global governance is another important part of the process of globalization. If we assume additionally that it should/will have democratic character, we can also assume that the development of global governance presupposes the development of global consciousness. Thus, longtermism seems to be important from this point of view also. Especially, if we think about global governance of technology development. – At this moment, longtermism comes close to the problems analyzed by the Technology Assessment. But it is a subject for a next paper.

And, last but not least, the final remark: the discussion of ethical aspects of longtermism has been based on some moral intuitions and philosophical/ethical considerations as accepted by some of us – living in the first decades of the 21st century, or by some of our ancestors. No changes of ethical paradigms (or even complete disappearance of morality/ethics) in next centuries (not to say about next millennia, still more – tens of millennia or the next 800,000 years mentioned by some longtermists) can be excluded. But longtermism is an ethical proposal for us, for the people of this – perhaps (who knows?) the decisive – century in the history of *Homo sapiens*.

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THE SOUNDSCAPE OF CITY PARKS IN PUBLIC PERCEPTION ON THE EXAMPLE OF GLIWICE'S GRUNWALD PARK

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Purpose: This article addresses the problem of perception and evaluation of the soundscape by users of urban parks in an industrial region. According to the International Organisation for Standardization (ISO), the subjective perception of sound comfort complements the measurement of sound pressure levels (SPL) and is an essential component of the analysis of the sound environment.
Design/methodology/approach: Park Grunwaldzki in Gliwice was studied. A functional and spatial analysis of the park space was carried out along with an analysis of the acoustic map of the area. Other methods used were: observations, acoustic walks, sound recordings, 15 structured interviews with park users. The main discriminator was the category of pleasure-unpleasantness, which is considered to be the most unambiguous and context-independent. The theoretical basis is provided by R.M. Schafer's concept of soundscape.
Findings: The analysis confirms that the park is not free of mechanical sounds, which are perceived by users as unpleasant. In contrast, the evaluation of social sounds varies and depends on the context. Natural sounds are the most desirable sounds in this space. The soundscape of the park has a variable rhythm throughout the day.
Research limitations/implications: The present study has limitations due to the small number of participants surveyed and the timing of the observations, which took place in May and June. Further research should take into account the variability of the audiosphere according to the seasons.
Practical implications: The results may facilitate the planning or revitalisation of urban parks, as well as the management of the city's recreational resources.
Social implications: Research conducted in the urban environment can have an impact on improving the quality of life in cities. This is important because of the need to support public health measures and the increasing need to organise leisure time for residents of densely populated agglomerations.
Originality/value: The article demonstrates the practical needs of urban park users, knowledge of which will facilitate the work of planners and architects.

Keywords: sound scape, urban parks, noise, acoustic comfort.

Category of the paper: case study.

1. Introduction

The term soundscape was introduced by M. Southworth (1969), but was most popularised by Canadian musicologist and composer R. M. Schafer. According to him, it is: "Technically speaking, any part of the sound environment considered as a field of study. The term can refer to actual environments or to abstract constructs such as musical compositions and tape montages, especially when considered as an environment" (Schafer, 1977, pp. 274-275). The soundscape is an important element that complements other sensory experiences that are perceived by users of a space (Miller, 2013). It refers to the subjective sonic sensations of the users of a given space and is determined by a number of factors (Aletta, 2016). The discussion of the urban living environment therefore takes into account a variety of sensory experiences, not only related to visual and olfactory effects.

The study of the systematic relationship between people and the sound environment is also addressed by soundscape ecology (Pijanowski et al., 2011). The ecological perspective draws attention to the influence of the acoustic environment and soundscape on the physical responses or behavioural characteristics of the people living in it (Losiak, 2014).

According to the International Organisation for Standardisation (ISO), the soundscape is something different from the acoustic environment (ISO, 2014). The acoustic environment is related to the physical aspect of sound in a space as measured by the available sound pressure level (SPL) equipment, which directly relates to noise pollution research. Noise levels are regulated by a 2002 European Parliament Directive (Directive, 2002). In Poland, protection against excessive noise is furthermore based on the Environmental Protection Law Act (2001). As noted by researchers of this subject, the interpretation of these documents results mainly in the construction of acoustic screens along traffic arteries. However, this is not a sufficient method to improve the acoustic landscape (Lipowczan, 2013; Kwiecień et al., 2013).

In modern cities, nuisance sounds generated by industry and motor vehicles still dominate, as previously pointed out by R.M. Schafer (1977). Researchers report numerous health problems arising from exposure to permanent or temporary exposure to noisy environments (Aletta et al., 2018). Among the most annoying these days are car and air traffic noises. This is often linked to poor urban design, failing to take into account the needs and opinions of local residents, and being guided in location decisions solely by the interests of the developer (Leus, 2011).

Urban parks, as enclaves with a more diverse audiosphere, should provide a counterbalance to adverse acoustic phenomena. The natural sounds found in parks have the property of alleviating stress in humans and can therefore contribute to public health (Cao, 2021). Recreational spaces, however, are increasingly polluted by noise, which is beginning to dominate sounds that have a beneficial effect (Irvine et al., 2009).

Acoustic sphere studies use noise measurement devices. The values obtained do not present data to determine the actual human perception of the sounds heard. Some of them with similar noise levels are perceived as particularly bothersome, while others are treated as less problematic or even pleasant. More information can be obtained by combining different research perspectives from psychology, ecology and acoustics, incorporating sound-related categorisations concerning: physical properties (acoustics) or how they are perceived (psychoacoustics), function and meaning (semiotics and semantics), emotional or affective properties (aesthetics) (Schafer, 1977, p. 133).

Investigating the subjectively experienced soundscape is therefore more complicated than measuring sound pressure levels. The assessment of the soundscape of parks is often made unconsciously by the users of a space. It takes many different factors into account. Researchers have presented how the individual components interfere and result in altered assessments of acoustic comfort (Preis et al., 2015; Ren et al., 2018; Bogdanov et al., 2022).

This article explores the topic of the soundscape of urban parks and is based on a case study of Grunwald Park in Gliwice. The main research questions are: Does the soundscape of the park change during the day? How are sounds in the park rated in the pleasant-unpleasant category and does the type of activity relate to this rating? The presentation of the different factors influencing the perception and evaluation of the sounds present in the park is based on a functional-spatial analysis of the park together with an analysis of the acoustic map of the area. In the study, it was important to investigate the so-called 'phonemic awareness' (Losiak, 2014), i.e. the ability to hear and name sounds, as well as the subjective assignment of sounds to the pleasant-unpleasant category.

2. The soundscape of urban parks in research

The assessment of urban noise largely takes into account not only the negative side of the saturation of urban space with sounds, but also the richness of the audiosphere that exists there (Fong, 2016; Fang et al., 2021). The sound effects experienced by residents include a whole range of diverse elements that make up the soundscape. R.M. Schafer introduced useful categorisations to differentiate the main sources of sound into, among others: natural, human, social, mechanical (Schafer, 1977, pp. 139-144). By knowing the components of the soundscape, one can consciously influence its shape. Some sounds are experienced negatively, such as traffic, and others positively, although this depends on individual characteristics and circumstances.

Researchers have argued that mechanical sounds are the most difficult to accept (Porteous et al., 1985; Irvine et al., 2009). These include traffic and the sounds of operating equipment and machinery. Slightly less annoying are the sounds created by human interaction and

communication (Jo, 2020), and most desirable - unsurprisingly - are the sounds of nature (Tse, 2012; Guo, 2019). Acoustic ecologists point out that the quality of urban acoustic experiences has declined, creating ‘lo-fi’ urban soundscapes characterised by the dominance of monotonous background sounds such as traffic and construction noises. The opposite of the above is a 'hi-fi' environment, where sounds can be heard clearly, self-separated and with a favourable signal-to-noise ratio (Schafer, 1977). Adams and his team (2006) showed that it is not just noise levels that are important to people in an urban area. Context, source, distance, temporality and noise control all play a role in people's assessment and stated desire to eliminate a particular sound from their soundscape (Adams et al., 2006).

Other aspects of the complexity of sound assessment are indicated by the research of scientists who considered both objective and subjective measurement values in their research project (Porteous et al., 1985). Preis and his team (2015) indicate that there are certain regularities in the subjective perception of sounds in a given space. Some elements of a space interact with each other, such as the visual and soundscape. Positive visual stimuli influence a higher evaluation of soundscapes (Preis et al., 2015). On the other hand, dominant natural sounds enhance the comfort of the space and increase positive perceptions of the visual landscape (Ren et al., 2018; Bogdanov et al., 2022).

The latest research takes many variables into account. X. Fang and a team of researchers (2021), based on a field study conducted in six different urban forest parks in Xi'an, China, showed that the evaluation of urban recreational areas depends on several factors, such as age, familiarity with the park, education and status, type of use, companionship, gender and length of time spent in the park. The researchers identified the following relationships on this topic: (1) participants' familiarity with the park and age increase tolerance to sounds that other people find annoying; (2) as education and higher socio-economic status increase, tolerance to sounds decreases; (3) perception of artificial sounds (e.g. sounds of various vehicles), increases with a certain type of recreational use and is considered more annoying; (4) there are differences in the perception of sounds by women, who showed more sensitivity and lower tolerance than men; and (5) longer use of the park was associated with a positive evaluation of the soundscape. The conclusion is that the better the soundscape, the more willing and longer respondents want to stay in the park (Fang et al., 2021).

Downtown parks are also studied in terms of the dominance of specific sounds and their evaluation by users. In Iran, some historic parks operating in a semi-natural environment retain their natural soundscape qualities, which is appreciated by respondents (Negar et al., 2023). However, many European parks are polluted by mechanical sounds from surrounding traffic routes (Zannin, 2006; Irvine et al., 2009; Sztubecka et al., 2020; Juszczak et al., 2021).

Soundscapes of parks can be designed using knowledge of how plants affect the acoustic environment. Classical Chinese gardens used aspects of traditional philosophy and art to create unique sound spaces. This included methods such as sound masking, sound borrowing, sound amplification, sound contrasting and sound anticipation, in which vegetation played a large role.

Researchers have demonstrated the influence of different types of plants on soundscape satisfaction (Song et al., 2018).

An attempt to enrich the sensory world of local residents is to create enclaves in recreational areas intentionally fitted with acoustic elements for education, relaxation and play. These are the so-called sensory gardens, which are becoming increasingly common in Polish and international cities. As K. Pawłowska (2008) writes: "The fashion observed worldwide for the creation of sensory gardens signifies a general focus of the creators on effects addressed to senses other than sight. In addition to the natural sounds of wind, water and birds, designs incorporate sound-producing devices as well as surfaces that become the source of a variety of noises as people pass through them. Currently, more or less successful realisations of such gardens can be found in many places in Poland.

3. Materials and methods

The main objective of the case study of Grunwald Park was to characterise the park's audiosphere, and to demonstrate its variability throughout the day due to different human activities and the rhythms of nature. It was also important to identify the categories of sounds assessed positively and negatively by users in the park space. The basic assumptions on which the research was based were as follows:

- Knowledge of the characteristics of the soundscape is an essential element in the design process, as well as in the revitalisation of green and recreational areas.
- The acoustic environment of parks designed 100 or more years ago is now more exposed to mechanical sounds due to the development of transport routes around the parks.
- The acoustic environment of parks has its own rhythm throughout the day, according to which it is subject to change.
- Psycho-cultural factors create an additional layer in the soundscape that modifies its assessment.
- Intentional activities and actions in the park modify the evaluations of the different sound categories.

Aletta and his team of researchers distinguished four basic methods of soundscape research: sound walks, laboratory experiments, interviews and behavioural observations (Aletta et al., 2016). Given the stated objectives, two of the aforementioned methods were used in this research: soundwalks and interviews. The sound walks - conducted during the first stage of the research - took the form of purposeful walks to designated areas, with an emphasis on observations focused on listening to the sounds heard in these locations. The methodology of the walks was based on the individual experience of sounds and was limited to collecting and recording the sounds heard. Compared to other ongoing studies, it did not focus on multiple

aspects of the soundscape (Jeon et al., 2013). The walks, which took place in May and June in designated zones, were conducted by a group of five architecture students involved in the research. The aim of the activities undertaken was to identify the different types of sounds present in the park space and make a categorisation using the division into mechanical, social and natural sounds according to the concept of R.M. Schafer (1977). In line with the research objectives, walks were taken at different times of the day to obtain data on the variability of sounds. During this phase of the research, sound recordings were also made using digital sound recorders. The recordings served to confirm the sound effects heard and were not used in further phases of the research.

In the second stage of the research, 15 structured interviews were conducted with park users.

According to the data resulting from the literature review, there are 8 main soundscape discs: 1. noise annoyance, 2. pleasantness, 3. quietness or tranquillity, 4. music-likeness, 5. perceived affective quality, 6. restorativeness, 7. soundscape quality. 8. appropriateness (Aletta, 2016). The main descriptor used in the soundscape research was the pleasure-unpleasantness dimension. It is considered useful for design purposes because it is more explicit and not context-dependent. Table 1 shows the main questions asked of the survey participants.

Table 1.
Questionnaire detailed descriptions

No.	Question	Open/close qustions. Scale type.	Desired information
Q1	How often do you visit the park?	5 pre-defined options	very occasionally/very often
Q2	How much time do you usually spend in the park?	4 pre-defined options	"<20", "21-40", "41-60",">60 min."
Q3	What is the usual purpose of a visit to a park?	5 pre-defined options	"physical activity", "path of passage", "walking the dog", "walk with child", "other".
Q4	What sounds do you hear in the park at the moment?	open question	subjective description of the soundscape
Q5	Which of these sounds do you find enjoyable?	open question	subjective assessment of the soundscape
Q6	Which of these sounds do you find bothersome?	open question	subjective assessment of the soundscape

Source: own research.

3.1. Research area

The research covered one of the oldest parks in Gliwice - Park Grunwaldzki (pre-1945 Preussenplatz). It is located in the Wójtowa Wieś district bounded by Adam Mickiewicz, King Jan III Sobieski, Jan Długosz and Zawisza Czarny streets (Figure 1). This park was chosen for its central location, size, relatively least intrusion into the greenery design of the park. The nearby avenues of trees in A. Mickiewicza Street and in Króla Jana III Sobieskiego Street were entered in the register of monuments of composed greenery in 2013.

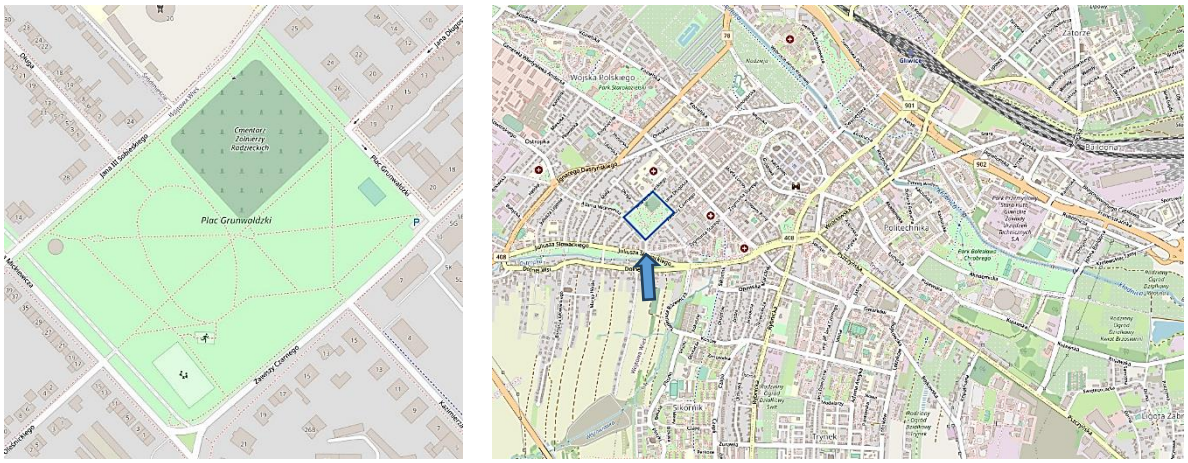

Figure 1. Park Grunwaldzki w Gliwicach.

Source: OpenStreetMap (CC BY-SA 2.0).

For the purpose of the survey, the park was divided into 5 zones differing in the functions performed (Figure 2). The data collected during the survey included the following division:

Zone 1 contains a multi-purpose pitch, structured low and high greenery and paved pedestrian and cycle routes.

Zone 2 is the central part of the park, where the paved pedestrian and cycle routes intersect to form a fairly large area devoid of greenery.

Figure 2. Grunwaldzki park in Gliwice. The park's zoning for the study.

Source: Wiśniowska (with the written permission of the author).

Zone 3 - the area in the north-west corner of the park. There are few paved footpaths here and most of the area is covered with untidy low and tall vegetation and shrubs in the form of hedges. Small architectural objects in the form of benches and litter bins are located along the pedestrian and cycle paths.

Zone 4 - in this part, in the south-western corner of the park, there is a playground and numerous objects of recreational equipment and small architecture, such as benches and waste bins. The playground area is fenced off from the street with ornamental greenery. The area around it is covered with low and tall greenery of an unstructured nature.

Zone 5 is a fenced area of the Soviet Army soldiers' cemetery with an entrance from the north-west side. There is a monument and mass graves in the central part of the establishment, and individual tombstones on the outskirts. The area is covered with low and tall vegetation of an untidy character and shrubs in the form of hedges.

4. Results

4.1. Acoustic map analysis of the park

Due to its location, the park is exposed to road noise, as illustrated by the Gliwice noise maps. The park is surrounded on three sides by fairly busy streets, while on the fourth side it is bordered by a quiet area consisting of courtyards, inner-city townhouses, single-family houses and access roads. The averaged noise level indicator (L_{DWN}) in the most exposed parts of the park is between 65-69.9 dB, with values ranging from 70.0-74.9 dB at the road itself. According to the Ordinance of the Minister of Environment of October 1, 2012, the permissible noise level for recreational and leisure areas is 68 dB (Figure 3).

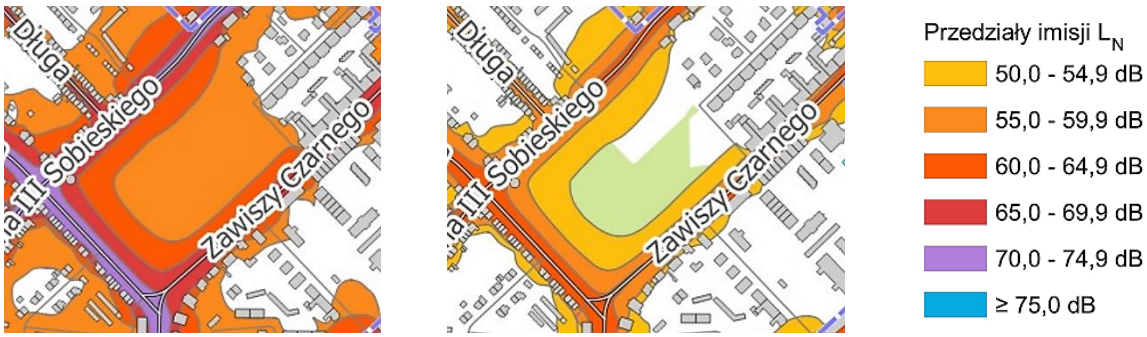

Figure 3. Acoustic map of the Grunwaldzki park (L_{DWN} and L_N indicators).

Source: own elaboration based on Acoustic Map of Gliwice Strategiczna Mapa Hałasu (gliwice.eu), https://pma.gliwice.eu/layout/mainmaps.aspx?t=0.

4.2. Sounds heard in the park space based on sound walks

The park has its own daily rhythms (Table 2). Mechanical and natural sounds dominate during the morning hours. Driving cars and motorcycles can be heard during the ongoing traffic rush. Workers hired to carry out neighborhood renovations and workers cleaning up the park start working, which is an additional source of sound. Within the park there are people walking their dogs and people heading to work, taking shortcuts through the park. Commands given to dogs and barking can be heard. More people show up around midday, so the intensity of social sounds increases. At the time of the survey in May and June, most people used the park between 12 noon and 2 p.m. Among the sounds heard at that time are: conversations, crying children, sounds of children playing, the sound of bookcrossing book cabinets being opened, footsteps on paved paths, and animal calls.

Table 2.
Sounds heard in the park according to the daily rhythm

Time	Mechanical sounds	Natural sounds	Social sounds
8.00-12.00			
12.00-16.00			
16.00-22.00			

Note.

Mechanical sounds

car, repairs, bike, city buzz, plane, motobike, scooter, playground, stroller

Natural sounds

rusteling leaves, birds, dogs barking, dogs steps, wind

Social sounds

conversation, dog commands, playing children, steps, bookcrossing, babies cry, phone call, laughter, rumbling music

Source: Wiśniowska (with the written permission of the author). Own elaboration.

In the early afternoon there is an increase in mechanical sounds generated by two-wheeled vehicles, such as bicycles, scooters and motorcycles. Footsteps, moving baby carriages, playground recreational equipment and passing airplanes can also be heard. After 2 p.m., people with small children begin to disappear from the park, and sounds generated by adults appear. Mechanical sounds associated with repairs and cleanup work can no longer be heard. In the evening, both mechanical and natural sounds decrease. Groups of young people appear in the park talking to each other and listening to loud music.

4.3. Grunwald Park - ways of using the park space

Grunwald Park offers many possibilities for use due to its varied facilities. There are areas for contemplation, meeting others and physical activities.

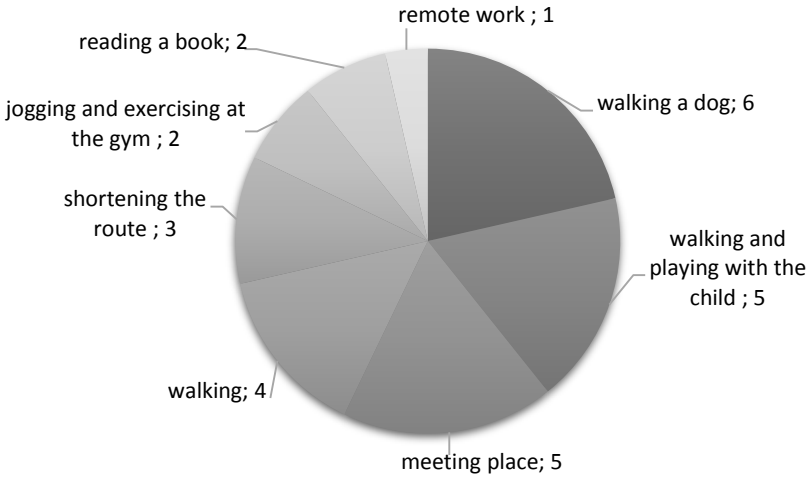

Figure 4. Uses of the park space.

Source: own research.

Park users surveyed are dominated by people who walk their dogs or go for a walk or playground with their children (Figure 4.). Most of them visit Grunwald Park frequently, even several times a day. The park is also a place for intentional and casual encounters with relatives, friends and neighbours. In this way, all sorts of social needs to be with others can be realised.

There are many paths through the park, which respondents sometimes use only as a shortcut to get around town. This is due to the fact that the park is on the line connecting their place of residence with their workplace. According to respondents, this is the only reason for being in the park.

The park also happens to be a place for joggers and people using sports equipment: outdoor gyms and a tennis table. In a group of 15 respondents, only two people indicated this way of functioning in the park. Similarly for using this space to relax with a book. Another activity that can be observed in a single case is the implementation of remote working using a private computer. The park as a work space is arguably a new idea for the role of an urban park in the warm season.

4.4. Park sound assessment

Sounds rated as pleasant are mainly birdsong and other sounds of nature, but this response does not always appear in respondents' statements (Figure 5).

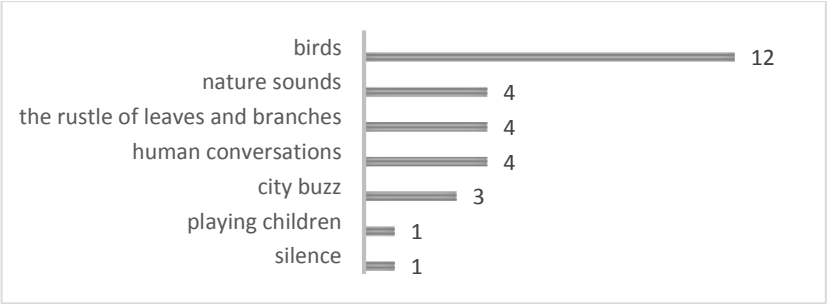

Figure 5. The most pleasant sounds in the park.

Source: own research.

The sound of people talking and the background noise of the city can also be considered pleasant by some people. Age is not a differentiating variable in this case, as both younger and older people stated this way. An older person who came to the park with her grandson perceived the sounds of children playing as pleasant.

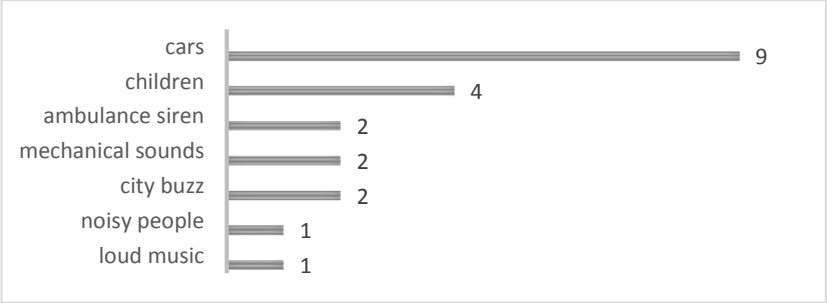

Figure 6. The most unpleasant sounds in the park.

Source: own research.

The majority of park visitors who were interviewed identified cars as a source of unpleasant noise (Figure 6). Screaming children came second most often. However, these do not disturb people who came to the park with children. Indeed, no one who indicated such a purpose for being in the park found the noises made by children unpleasant. The sound of passing ambulances with their sirens on is also perceived negatively. People are also unhappy with the background noise of the city, which can be heard in almost all parts of the park. Loud music and people behaving noisily are also among the nuisances. Interestingly, none of the people taking part in the survey found the barking of dogs unpleasant, although these noises were indicated as being audible in the park.

5. Discussion

The problem of noise pollution in recreational areas is confirmed by numerous studies conducted in many cities in Europe (Zanin et al., 2006; Sztubecka et al., 2020; Juszczak, 2021). Using the terminology of R.M Schafer (1977), it can be noted that parks are full of mechanical sounds, which in some parts dominate the soundscape in recreational areas. In studies,

this phenomenon is perceived by park users as negative (Irvine et al., 2009). Similar conclusions can be drawn from the case study of Grunwald Park. This study was qualitative in nature, so the comparisons made may serve more to formulate detailed hypotheses in further research than to present hard evidence. However, it can be posited that car sounds can be heard throughout the park throughout the day, especially on the outskirts, which are surrounded by busy streets. Nonetheless, it appears that the sound background created by the low-level noise of the city may be perceived ambivalently. Perhaps the park is seen as a kind of oasis in a hustle and bustle-filled urban space, and the audible urban noise is only a confirmation of this condition. Checking the reasons for the dissimilarity in evaluations of city noise requires further research.

In this study, human-generated sounds are perceived as positive if they are within the culturally determined social norms associated with the use of public spaces. Similarly, a study of Paris parks by Jo et al. (2020) highlights the positive perception of the social factor in soundscape studies. According to the researchers' assessment, the presence of people lends vitality to the parks. However, it can be thought that the din of conversation is also related to a sense of security. Sounds made by people are perceived as signals indicating safety and danger in an area. For R.M. Schafer, these signal souds are the basic components of a soundscape (Schafer, 1977, p. 10).

The present research points to a situation of greater acceptance of those sounds potentially associated with one's own activity in the park. Hence the positive perception of the sounds of children's play if one is in the park with children, or the absence of negative feelings toward barking dogs when the purpose of the visit to the park is to introduce one's own dog. In this case, a relationship can be seen between the type of activity in the park and ratings of the sounds heard. A study that Fang and his team (2021) conducted also considers a similar variable. However, the specifics of park use in China, including the focus on collective activities, are different from the habits found in Polish parks.

The following investigation has its limitations due to the timing of the study. The spring period when the surveys were carried out may not allow us to see other factors involved in the soundscape assessment. In the year the study was conducted (2023), outdoor temperatures in May and June were unusually low, contributing to slower plant vegetation and fewer developed leaves. Researchers have previously shown a link between the perception of sounds and the types of vegetation found in a park (Szubecka, 2020; Song, 2018). The physical parameters of the environment can influence the choice of where to be in a park and the subjective feelings of the audiosphere.

Future research may develop the concept of soundscapes taking into account the physical paramenters of the space.

6. Conclussion

Grunwald Park in Gliwice, which was the subject of the case study, is an old urban park with diverse functions. During the day, the audiosphere of the entire area is dominated by mechanical sounds, mainly from traffic. This phenomenon is noticed by park users and assessed negatively. Creating, improving or modeling the environment is a matter of soundscape design. By planning the outdoor space taking into account the relevant acoustic characteristics, it is possible to influence the improvement of the quality of life of residents. In the case under study, a factor that could improve the acoustic characteristics of the park is a thoughtful concept of greenery in the park. Examples of Chinese parks prove that different types of green space influence the creation of sound-rich, satisfying acoustic landscapes in an urban environment.

Another point is to note that the park under study plays an important role in improving the health of residents, building social relationships, opportunities to carry out caring functions towards other family members and owned animals. These activities are so important that they displace some of the negative feelings associated with the audiosphere. Parks, as components of the urban system, need to constantly follow the changing needs of residents.

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CHALLENGES OF COMPARATIVE LIFE CYCLE IMPACT ASSESSMENT AND TERRESTRIAL ECO-TOXICITY MEASUREMENT. A CASE STUDY OF FOSSIL-BASED PET VERSUS ITS RECYCLED AND BIO-BASED COUNTERPARTS

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Purpose: The primary goal of this research is to compare the results of the LCIA phase based on the 2008 and 2016 versions of the ReCiPe method at the midpoint level and to identify interpretation problems related to the measurement of **terrestrial ecotoxicity**. The aspiration, however, is to support the scientifically and technically sound development of LCIA methods that provide reliable and reproducible results.
Design/methodology/approach: Life cycle assessment (LCA) was applied to compare the environmental performance of fossil-based PET plastic and its two increasingly used alternatives, i.e. recycled PET (rPET) and bio-based polylactic acid (PLA). Data for modelling was retrieved from the ecoinvent database (3.6), SimaPro (release 9.1). The results of LCIA are presented at the midpoint level with both ReCiPe2008 and ReCiPe2016, with a hierarchist (H) perspective.
Findings: Although the research showed some differences in the LCIA results performed with ReCiPe 2008 and ReCiPe2016, there is a general convergence of results, except for the terrestrial ecotoxicity. Thus, rPET has the best environmental profile across the range of impact categories analysed, with few exceptions (human toxicity: cancer and non-cancer, freshwater ecotoxicity and marine ecotoxicity), regardless of the version of the ReCiPe method. The use of ReCiPe2016 leads to significant differences in the results of terrestrial ecotoxicity compared to the use of ReCiPe2008. The contribution analysis at the level of inventory results shows that there is a discrepancy in substances contributing to a given terrestrial ecotoxicity score.
Originality/value: The variation in results using ReCiPe2008 and its updated version ReCiPe2016 does not substantially change the conclusions obtained, except for the terrestrial ecotoxicity category. For practitioners, this means that further research and clarification on the modelling of terrestrial ecotoxicity is necessary as to achieve the best available practice.

Keywords: circular economy, life cycle impact assessment (LCIA), polyethylene terephthalate (PET), polylactic acid (PLA), recycled plastics.

Category of the paper: Research paper, Technical paper.

1. Introduction

Life cycle impact assessment (LCIA) constitutes the third phase of life cycle assessment (LCA). Its aim is to understand and evaluate the magnitude and significance of potential environmental impacts of a product throughout its life cycle (ISO, 2006a). Consequently, LCIA involves a complex sequence of steps through which the man-made interventions in the form of an inventory data are further processed and sorted into classes according to either the effect they have on the environment (impact categories) or the damage they cause to the environment (areas of protection) (Rybaczewska-Błażejowska, 2019). Given the great complexity of the LCIA phase, an average LCA practitioner has limited knowledge of the dependencies between inventory data and impact categories/areas of protection, characterisation models and category indicators, and thus applies standard LCIA methods, such as ReCiPe, ILCD2011 or CML-IE for the calculation.

The international standards ISO 14040 and ISO 14044, regulating the LCA methodology, do not recommend one specific method for the performance of the LCIA phase. They, however, define a series of recommendations concerning the selection of impact categories, category indicators and characterisation models including, inter alia: 1) the impact categories shall represent the aggregated impacts of life cycle inventory (LCI), 2) value-choices and assumptions made during the selection of impact categories should be minimised, 3) the characterisation models needs to be scientifically and technically valid, 4) the extent to which the characterisation model and the characterisation factors are scientifically and technically valid should be identified, and finally 5) the category indicators are to be environmentally relevant (ISO, 2006b). Naturally, the LCIA phase shall be strongly coordinated with the remaining LCA phases to reduce possible omissions and sources of uncertainty.

Although there is a spectrum of methods supporting the performance of the LCIA phase, the practice shows that ReCiPe is one of the most often used LCIA methods worldwide. The ReCiPe method was first developed in 2008 through cooperation between RIVM and Radboud University, CML and PRé Consultants (Huijbregts et al., 2016; Rybaczewska-Błażejowska, Sulerz, 2017). Subsequently, it was updated in 2016 to make harmonised category indicators at two levels: eighteen midpoint impact categories and three areas of protection at three different perspectives: the individualistic, the hierarchist and the egalitarian.

Despite the fact that both ReCiPe2008 and ReCiPe2016 versions cover eighteen impact categories at the midpoint level and three areas of protection at the endpoint level, there is no direct translation between impact categories. Consequently, ReCiPe2016 encompasses the following impact categories: global warming (GWP) (kg CO_2 eq), stratospheric ozone depletion (ODP) (kg CFC-11 eq), ionising radiation (IRP) (kBq Co-60 eq), fine particulate matter formation (PMFP) (kg PM2.5 eq), photochemical oxidant formation: ecosystem quality

(EOFP) (kg NOx eq), photochemical oxidant formation: human health (HOFP) (kg NOx eq), terrestrial acidification (TAP) (kg SO2 eq), freshwater eutrophication (FEP) (kg P eq), marine eutrophication (MEP) (kg N eq), human toxicity: cancer (HTPc) (kg 1,4-DCB), human toxicity: non-cancer (HTPnc) (kg 1,4-DCB), terrestrial ecotoxicity (TETP) (kg 1,4-DCB), freshwater ecotoxicity (FETP) (kg 1,4-DCB), marine ecotoxicity (METP) (kg 1,4-DCB), land use (m^2a crop eq) (LOP), water use (WCP) (m3), mineral resource scarcity (SOP) (kg Cu eq), fossil resource scarcity (FFP) (kg oil eq). The endpoint level is related to the following areas of protection: human health (HH) (DALYs), ecosystem quality (ED) (species*year) and resource scarcity (RA) ($) (Huijbregts et al., 2016). The approaches at the midpoint and endpoint levels are complementary, but there is a stronger relation to the environmental flows and thus lower uncertainty at the midpoint level (Hauschild, Huijbregts, 2015).

The goal of this research is to systematically compare the results of the LCIA phase based on the 2008 and 2016 versions of the ReCiPe method at the midpoint level and to identify interpretation problems related to the measurement of terrestrial ecotoxicity. For this, a case study of fossil-based PET plastic and its two increasingly used alternatives, i.e. recycled PET (rPET) and bio-based polylactic acid (PLA) are used (Rybaczewska-Błażejowska, Mena-Nieto, 2020). The aspiration of this research is to support the scientifically and technically sound development of LCIA methods that provide reliable and reproducible results.

2. Methods

The research is fully compliant with the international standards ISO 14040 and ISO 14044 and thus consists of four phases: the goal and scope definition, inventory analysis, impact assessment and interpretation (ISO, 2006a; ISO, 2006b). It is partially based on the former author's study regarding "Comparative life cycle assessment of fossil polyethylene terephthalate (PET) and its recycled and bio-based counterparts" (Rybaczewska-Błażejowska, Mena-Nieto, 2020), but taking into consideration many modifications resulting from the application of updated SimaPro version (release 9.1) and ecoinvent database. In addition, current research follows an attributional approach and presents the LCIA results using both ReCiPe2008 and ReCiPe2016.

2.1. Goal and scope definition

The scope of LCA covers conventional fossil-based PET plastic and its two supposed sustainable alternatives, i.e. 100% recycled PET (rPET) and bio-based plastic, i.e. polylactic acid (PLA). The functional unit is 1 metric tonne of plastic. For all plastics, the system boundary covers the manufacturing stage (cradle-to-gate analysis), but obviously, the plastics are made of different raw materials: petroleum, post-consumer PET or corn starch.

2.2. Inventory analysis

Data for modelling of the plastics manufacturing was retrieved from the ecoinvent database (3.6) (Ecoinvent Centre, 2019). Consequently, the inventory data regarding the PET manufacturing process are based on the average unit process from the eco-profiles of the European plastic industry. The inventory data for the rPET manufacturing process is based on the PET recycling data for Europe and includes all processes of the production of recycled PET granulate, amorphous. Finally, the inventory data for the PLA manufacturing process is based on the data from the world's largest bio-plastics producer, i.e. Nature-Works LLC, and thus has a global context. However, regarding PLA the market process was applied and thus inputs from transport processes are included, since it has replaced the process of PLA production, which was available in the former version of the ecoinvent database.

2.3. Impact assessment

Calculations of the environmental profiles of PET, rPET and PLA were done with the use of ReCiPe2008 (Goedkoop et al., 2013) and ReCiPe2016 (Huijbregts et al., 2016), hierarchist (H) perspective. The results are presented at the midpoint level. However, taking into account the requirement of the ISO 14044 regarding the LCA comparative assertions that the category indicator can only be compared with exactly similar category indicator, the research encompasses the following impact categories: global warming (GWP), terrestrial acidification (TAP), freshwater eutrophication (FEP), marine eutrophication (MEP), human toxicity: cancer and non-cancer (HTPc and HTPnc), **terrestrial ecotoxicity** (**TETP**), freshwater ecotoxicity (FETP), marine ecotoxicity (METP), water use (WCP) and fossil resource scarcity (FFP).

3. Results and discussion

The results of the research are twofold. The first relates to the comparative analysis of the manufacturing processes of fossil-based PET plastic, rPET and PLA. Taking into account the argumentations of Bueno et al. (2016) that the former versions of a given method could draw to different conclusions, the result are discussed based on ReCiPe2016. The second relates to the comparative analysis of the results of the LCIA phase of the aforementioned plastics, especially regarding terrestrial ecotoxicity, using ReCiPe2008 and ReCiPe2016.

The research proved that rPET has the best environmental profile in almost all examined impact categories, regardless of the version of the ReCiPe method (Figure 1). And thus, rPET has the lowest characterisation values in the following impact categories: global warming – 1140 kg CO2 eq, terrestrial acidification – 2.81 kg SO2 eq, freshwater eutrophication – 0.514 kg P eq, terrestrial ecotoxicity – 5430 kg 1,4-DCB, water use – 10.6 m3 and fossil

resource scarcity – 285 kg oil eq of ReCiPe2016. Concurrently, the fossil-based PET plastic has very promising characterisation results in the following impact categories: marine eutrophication – 0.0823 kg N eq, human toxicity: cancer and non-cancer – 2637.2 1,4-DCB, freshwater ecotoxicity – 154 1,4-DCB and marine ecotoxicity – 200 1,4-DCB. PLA demonstrates the worst characterisation results in comparison to fossil-based PET plastic according to ReCiPe2016, except for the categories of fossil resource scarcity – 830 kg oil eq and surprisingly terrestrial ecotoxicity – 9490 kg 1,4-DCB. The greatest difference occurs in the category of marine eutrophication where the characterisation value for PLA is equal to 1.3 kg N eq.

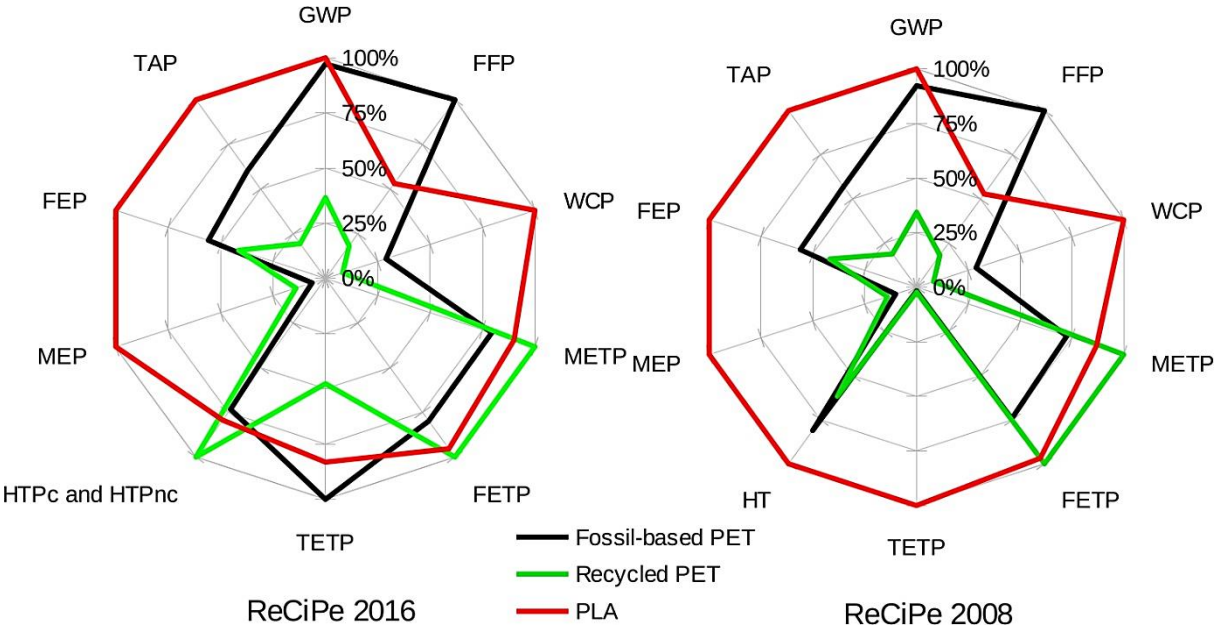

Figure 1. Characterisation results for fossil-based PET plastic, rPET and PLA using ReCiPe2016 and ReCiPe2008.

There are some differences in the LCIA results using ReCiPe2008 and ReCiPe2016, though to varying extent (Figure 2). In practice, this means that there are – either impact categories, such as for instance marine eutrophication, having considerably better characterisation results using ReCiPe2016 (0.502; 0.7; 5.0 kg N eq in ReCiPe2008 versus 0.0823; 0.182; 1.3 kg N eq in ReCiPe2016 for fossil-based PET plastic, rPET and PLA respectively) – or impact categories, such as for instance human toxicity: cancer and non-cancer (HTPc and HTPnc), having much worse characterisation results using ReCiPe2016 (764; 582; 942 kg 1,4-DB eq in ReCiPe2008 versus 2637.2; 3600.5; 2857.8 kg 1,4-DB eq in ReCiPe2016 for fossil-based PET plastic, rPET and PLA respectively). However, there are also impact categories having almost similar characterisation profiles in ReCiPe2008 and ReCiPe2016. These are freshwater eutrophication, water use and fossil resource scarcity. Just to illustrate this point, the characterisation results for the last case are as follows: 1590; 290; 840 kg oil eq in ReCiPe2008 versus 1560; 285; 830 kg oil eq in ReCiPe2016 for fossil-based PET plastic, rPET and PLA respectively.

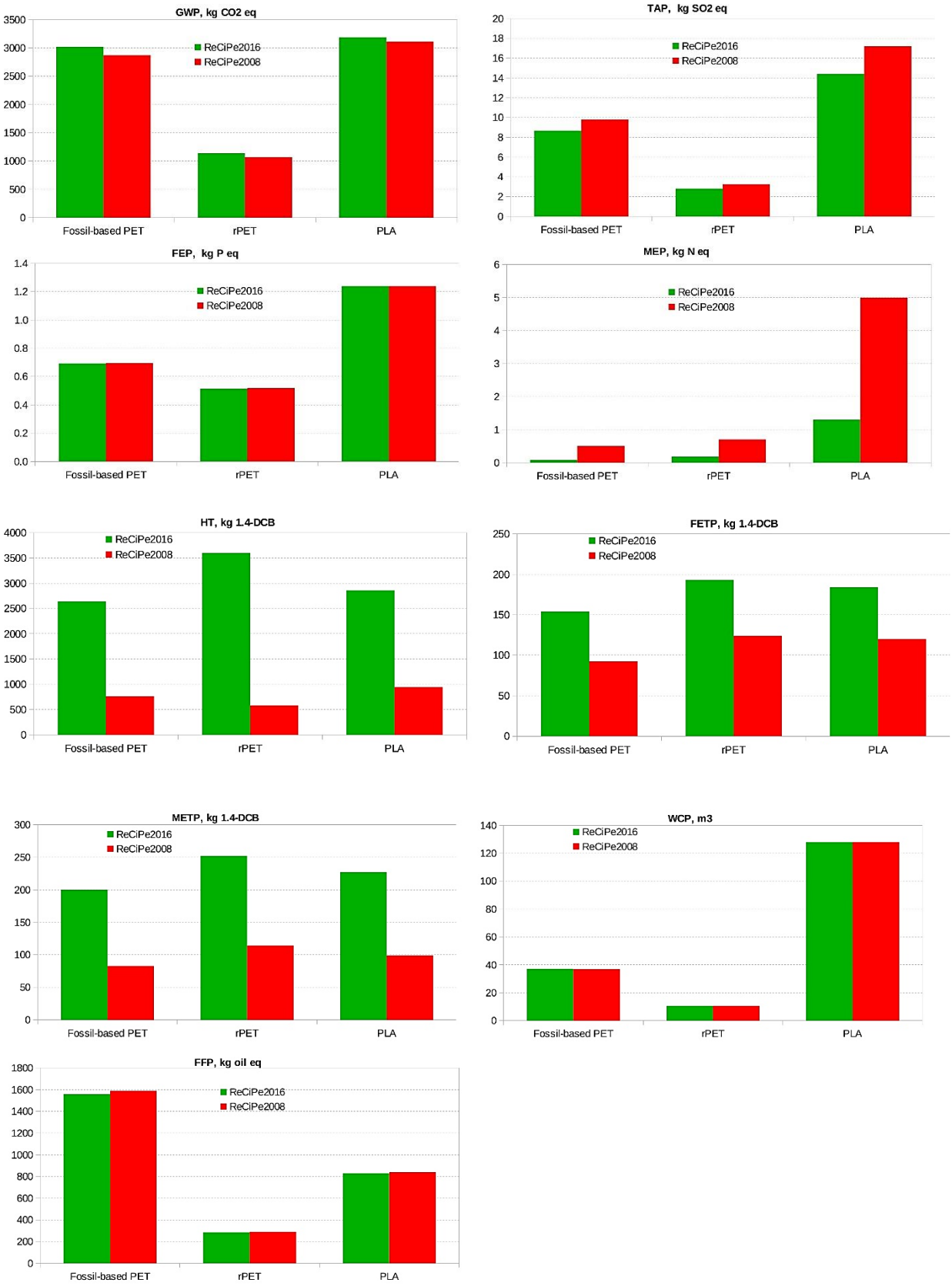

Figure 2. A comparison of characterisation results (without terrestrial ecotoxicity) for fossil-based PET plastic, rPET and PLA using ReCiPe2016 and ReCiPe2008.

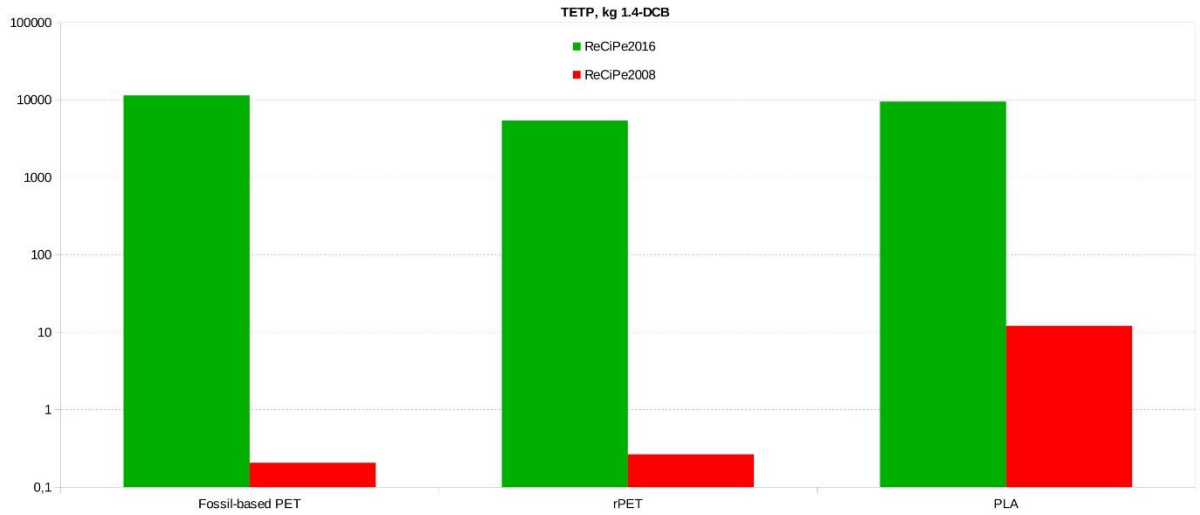

Figure 3. Characterisation results for terrestrial ecotoxicity for fossil-based PET plastic, rPET and PLA using ReCiPe2016 and ReCiPe2008 [in logarithmic scale].

Although the use of ReCiPe2016 leads to different characterisation results compared to the use of ReCiPe2008, the interpretation of the results does not change significantly except for the impact category of terrestrial ecotoxicity. Figure 3 shows in logarithmic scale the difference in the absolute values of terrestrial ecotoxicity when the calculations were done with ReCiPe2008 and ReCiPe2016. And thus, the characterisation results for terrestrial ecotoxicity are equal to 0.206; 0.266; 12.1 kg 1,4-DB eq in ReCiPe2008 versus 11400; 5430; 9490 kg 1,4-DB in ReCiPe2016 for fossil-based PET plastic, rPET and PLA respectively. In addition, an increase in the level of terrestrial ecotoxicity is uneven, since it falls within the range of 784 for PLA – 55339 for PET. In consequence, the comparative analysis of the manufacturing process of fossil-based PET plastic, rPET and PLA using ReCiPe2008 and ReCiPe2016 leads to different conclusions. ReCiPe2008 gives priority to fossil-based PET, followed by rPET, whereas ReCiPe2016 to rPET followed by PLA.

The toxicity set of categories encompasses human toxicity, freshwater, marine and land ecotoxicity in both ReCiPe2008 and ReCiPe2016 (Acero et al., 2015). Consequently, terrestrial ecotoxicity is one of the impact categories within the above set and thus it is subject to the same methodological rules. The characterisation factor for toxicity accounts for the environmental persistence (fate), accumulation in the human food chain (exposure), and toxicity (effect) of a chemical. Comparing with ReCiPe2008 the following updates in the toxicity calculation were introduced: separate midpoint factors for human cancer and non-cancer effects, fate and exposure for dissociating organics were included, the USEtox organic and inorganic database was implemented (incl. 3073 organic chemicals and 20 metals), the individualistic perspective of 20 years time horizon was added, linear effect factors were included, effects on agricultural soil were excluded (Huijbregts et al., 2016). Terrestrial ecotoxicity itself expresses hazard-weighted increase in natural soils and its unit is kg 1,4-dichlorobenzene-equivalents (1,4-DCB) to industrial soil. Details regarding the modelling of terrestrial ecotoxicity, including characterisation models, are somehow limited and thus, in reality, the interpretation of results poses certain difficulties.

Contribution analysis identified substances having the greatest contribution to the results of terrestrial ecotoxicity for individual types of analysed plastics using ReCiPe2008 and ReCiPe2016. Table 1 and Table 2 shows that regarding fossil-based PET plastic – copper, nickel, zinc, antimony and vanadium – have substantial contribution to the results of terrestrial ecotoxicity regardless of the version of the ReCiPe method. The contribution of individual metals is, however, different and thus, for instance, copper constitutes 35.05% in ReCiPe2008 versus 64% in ReCiPe2016. There is similar situation regarding rPET, where – copper, antimony, zinc, vanadium, nickel and silver – have the greatest contribution to the results of terrestrial ecotoxicity, but their percentage share is different depending on the version of the ReCiPe method. And thus, for instance the contribution of copper to the results of terrestrial ecotoxicity equals 38% in ReCiPe2008 versus 65% in ReCiPe2016. Concerning PLA, apart from copper, entirely different substances are associated with the impact category of terrestrial ecotoxicity using ReCiPe2008 and ReCiPe2016. These are predominantly atrazine metolachlor, azoxystrobin, cypermethrin and terbuthylazin in ReCiPe2008 versus copper, nickel, antimony, vanadium and zinc in ReCiPe2016. Additionally, the contribution of copper to the results of terrestrial ecotoxicity equals less than 1% (0.56%) in ReCiPe2008 versus 67% in ReCiPe2016. Finally, it is worth emphasizing that notwithstanding the type of analysed plastic and the version of the ReCiPe method, 10 identified substances contributes to 89% – 99% of the results of terrestrial ecotoxicity.

Table 1.
Contribution analysis for terrestrial ecotoxicity for fossil-based PET plastic, rPET and PLA using ReCiPe2016

	Fossil-based PET	Amount [in %]	rPET	Amount [in %]	PLA	Amount [in %]
1.	**Copper**	64.12	**Copper**	64.83	**Copper**	67.33
2.	**Nickel**	16.67	**Antimony**	14.51	Nickel	7.09
3.	**Zinc**	4.64	**Zinc**	4.57	Antimony	6.99
4.	**Antimony**	4.07	**Vanadium**	4.25	Vanadium	5.10
5.	Chromium	3.25	**Nickel**	3.35	Zinc	5.06
6.	**Vanadium**	2.44	Chromium	2.39	Lead	1.91
7.	Lead	1.72	**Silver**	1.34	Chromium	1.78
8.	Arsenic	0.89	Mercury	1.28	Mercury	1.16
9.	Cadmium	0.88	Lead	1.11	Arsenic	0.92
10.	Mercury	0.69	Arsenic	0.45	Cadmium	0.90
Total		**99.36**		**98.09**		**98.23**

Table 2.
Contribution analysis for terrestrial ecotoxicity for fossil-based PET plastic, rPET and PLA using ReCiPe2008

	Fossil-based PET	Amount [in %]	rPET	Amount [in %]	PLA	Amount [in %]
1.	**Copper**	35.05	**Copper**	37.97	Atrazine	55.70
2.	**Nickel**	20.20	**Zinc**	14.29	Metolachlor	29.26
3.	Bromine	10.15	Cypermethrin	9.89	Azoxystrobin	4.27
4.	Acetic Acid	5.44	Bromine	6.65	Cypermethrin	2.20

Cont. table 2.

5.	**Vanadium**	4.34	Metam-sodiumdihydrate	4.51	Terbuthylazin	1.89
6.	**Zinc**	3.98	**Antimony**	3.52	Terbufos	1.49
7.	Cypermethrin	3.09	**Vanadium**	5.73	Alpha-cypermethrin	0.93
8.	**Antimony**	2.57	**Silver**	2.65	Isoxaflutole	0.69
9.	Copper	2.15	**Nickel**	2.29	Chlorpyrifos	0.61
10.	Selenium	2.05	**Zinc**	2.04	**Copper**	0.56
Total		**89.00**		**89.53**		**97.60**

4. Conclusions

The research shows that rPET has lower environmental impacts than the corresponding fossil-based PET and PLA across the range of impact categories analysed, with few exceptions. These are human toxicity: cancer and non-cancer (HTPc and HTPnc), freshwater ecotoxicity and marine ecotoxicity (METP) following the ReCiPe2016 method. Concurrently, given the present state of the art, PLA does not demonstrate sufficiently superior environmental performance compared to conventional fossil-based PET, which should be a condition of market entry in a circular economy.

The presented research confirms that the results of the LCIA phase are based on relative measures and thus are largely dependent on both the method that is selected and the version of the same method. This is exactly the case regarding ReCiPe and thus the use of ReCiPe2016 leads to different characterisation results compared to the use of ReCiPe2008 in absolute value. The variation in results, however, does not substantially change the conclusions obtained, except for the terrestrial ecotoxicity category. Considering the aforementioned arguments, the author posits that the LCIA method (incl. the version of the same method) should be clearly defined in any LCA research, including the reasons for its selection.

Calculations done with the use of ReCiPe2016 for the category of terrestrial ecotoxicity give the priority to rPET followed by PLA and fossil-based PET plastic, whereas ReCiPe2008 gives the priority to fossil-based PET plastic, followed by rPET and PLA. This all makes that giving an unequivocal recommendation for the optimal material from the point of view of the terrestrial ecotoxicity for packaging manufacturers is very difficult. And these are actually the expectations of decision-makers creating a circular economy for plastic materials. Consequently, it is strongly recommended to investigate the usefulness and the feasibility of the methodological approaches for the modelling of terrestrial ecotoxicity as to achieve the best available practice.

Although the research allows a number of interesting conclusions to be drawn, there are still issues that require deeper evaluation. The reasons for the discrepancy in results between ReCiPe2008 and ReCiPe2016 are one of them. Consequently, the forthcoming research should encompass different products, the endpoint areas of protection and other perspectives (individualistic and egalitarian). This would definitely provide deeper insight into the methodology of the ReCiPe method, including the value choices and modelling steps.

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THE FUTURE OF THE DIGITAL AGE: IMPACTS ON MENTAL HEALTH AND OVERALL WELL-BEING

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Purpose: The purpose of the papers is to analyze the effects of social media that have been discussed over the last two decades. Researchers found both positive and negative aspects of social media usage. We cannot deny that everyday activities are associated with social media, the internet, mobile phones, or computers. However, we argue that there are potential benefits (as already demonstrated by current research) to using social media for the general population and vulnerable groups (people with social anxiety, depression, increased loneliness, or others). We also recognize the potential risks and strongly warn against overly using social media.
Design/methodology/approach: We use different articles regarding technology and the impacts of social media on mental health or well-being. We analyze the negative and positive aspects and compare the contemporary research to determine benefit to risk ratio. We focus on contemporary studies because they contain the most actual data.
Findings: Our analysis found that the old research primarily focused on the negative aspects of digital technologies, often ignoring the benefits or potential benefits of using digital technologies for different groups of people.
Research limitations/implications: The research often focused only on specific groups, lacked proper samples, and did not consider a broader range of variables that may impact the conclusions of older studies. We have therefore included a section about the future of research to offer some suggestions.
Social implications: The paper is helpful for organizations focusing on social media and digital technologies, especially when it comes to promoting more positive aspects of using digital tools or social media.
Originality/value: The study compares different forms of research regarding social media/digital technologies, bringing a more balanced approach and analyzing the positive side of the digital age.

Keywords: technology – internet – social media - mental health – well-being.

Category of the paper: Research paper (ethical/philosophy/technology).

Introduction

In contemporary society, we experience new trends online, have access to many social networks, and have easy access to communication to establish new friendships or relationships. It is not simply the availability of options we currently possess but also our ability to adapt and understand how to use them properly that needs to be discussed. We exist bound with our online world, our online profiles, and personal or job-related. We all use some form of digital communication or portfolio, as most jobs require it. Many people argue against the usage of social media, online communication, or other tools that are available online. Throughout the years, the criticism became less severe as more data and research showed a lack of evidence to support overly negative conclusions about the impacts of digital technologies on human beings. Social media, internet usage, and gaming can be dangerous, just like anything, if we do not use them in moderation. We must consider many factors and name specific impacts to test if they are the result of internet usage or if other factors are playing a role in determining these results. In this analysis, we are aiming to search through different literature from the last decade and see how the research changed and what are the most common answers to the impacts of social media, the internet, and the online world on a person.

The early criticism of the digital age

Let us begin with criticism and warning from a famous German neuroscientist and psychiatrist, Manfred Spitzer. He argues in his books against the impacts of digital technologies on our minds and capabilities. His two most famous books with German titles *CYBERKRANK! Wie das digitalisierte Leben unsere Gesundheit ruiniert* and *Digitale Demenz. Wie wir uns und unsere Kinder um den Verstand bringen* both talk about the dangers of social media and its impacts on us and our children, who are especially vulnerable to many different threats in our society. Throughout his work, Spitzer warns us that we must be cautious regarding several things with digital technologies. For instance, he says we must do more than replace education by copying and pasting data and information from websites into our essays and writings. We must learn and use facts in the future (Spitzer, 2014, pp. 59-60). Spitzer's biggest worry is that younger generations won´t know how to use and work with texts, hindering their critical thinking and analysis of problems (Spitzer, 2014, pp. 87-88). We recognize that studying using digital tools and the internet can make our lives much easier, especially for many college students. Quicker access to the data, easier way to make notes, or more extensive databases available are just a fraction of what digital technologies offer us regarding research. However, for younger children in elementary or high schools, technology usage could be very

damaging as the children often do not know how to regulate the proper usage or focus on using technology in a desired way for studying. Instead, they use social media, browse the internet, or play games.

Similarly, he argues against using social media instead of face-to-face communication. He argues that we often lie through online communication, make ourselves better than we are, and often feel more powerful because of our anonymity on the internet (Spitzer, 2014, pp. 101-107). In his later work, he expands upon his criticism of using social media instead of face-to-face communication. He argues that we are becoming addicted to different forms of digital technologies. He describes the addiction as dangerous and life-threatening as many people may feel anxiety or frustration when cut out from social media or smartphones (Spitzer, 2016, pp. 84-99). For Spitzer, it is crucial to talk about prevention rather than waiting for the catastrophic results of our behavior and the damage we could do to ourselves and our children. He argues that even though we don´t yet have the data with concrete results, it does not mean that we cannot devise a preventive mechanism (Spitzer, 2016, p. 99). He also emphasized that we are prone to anxiety and stress by being too addicted to our technological gadgets. For instance, he argues that we are overloaded with information and constantly fear missing out on some new trend or something similar (Spitzer, 2016, p. 142). In the end, Spitzer argues that we must use our technology in moderation. We must be cautious with children and teenagers because they are prone to get easily addicted as they don´t know how and when to limit usage. He says we can try to restrict usage by forbidding the use of phones and social media on our children, educating them, or believing that they will be smart enough to recognize the dangers themselves (Spitzer, 2016, p. 298). Spitzer´s contribution as one of the earliest social media critics is significant for advancing research, but we cannot rely only on the early data he provides. We need to improve the methodology to ensure that the conclusions of future studies are as objective as possible.

However, not all researchers agree with these types of conclusions. For instance, a study about the fear of missing out (FoMO) and the impacts of social media on well-being said, “As hypothesized, the present study found that FoMO is positively associated with social media intensity. Although the correlational nature of these studies precludes one from any causal attributions, it is likely that FoMO encourages the use of social media to stay connected. As informed by the Belongingness Hypothesis and Information Foraging Theory, humans have an innate drive to be in relationships with others. Social media is simply an omni-present conduit for attempting to make such connections” (Roberts, David, 2019, p. 5). The authors add, "Study results suggest that, although FoMO is generally negatively associated with social connection and well-being, this is not always the case. Importantly, the results show a more nuanced model of FoMO and its relationships with social media use, connection, and well-being. FoMO drives social media intensity and has an indirect positive effect on social connection through social media intensity, thus suggesting that FoMO may in some instances be a good thing which can lead to greater feelings of social connection” (Roberts, David, 2019,

p. 5). Like everything else, social media and digital technologies present new challenges in our society, and their impacts must be discovered. In many cases, such as with children and teenagers, we must be cautious not to cause severe and extensive consequences on their abilities to learn, think critically, or socialize. Social media can pressure people to be trendy and follow the latest developments or news. Many people may feel pressured to share their experiences and stories to fit in society and stay in touch with others. However, these factors apply to more than just digital technologies and social media. People also want to fit in, be trendy, and follow the latest developments—those who do not often feel stigmatized and fear being labeled weird.

Are digital technologies only bad for us?

Everything depends on how we use social media or technology. We can have positive impacts from using digital tools. It all depends on what sort of activities we use these for. For instance, experts who wrote the article "The Impact of Social Media on College Students" conclude in their study that there "is no simple conclusion to draw from the research about social media networking sites and their impact on college students, other than the sites are certainly a part of today´s student´s lives" (Mastrodicasa, Metellus, 2013, p. 27). We cannot simply ignore the fact that this statement is much more valid ten years later as social media and the role of the internet become much more critical in our society. The authors add, "One must remember that technology is merely a tool for concepts that have been around for decades—communication and connections. How college students use these sites makes all of the difference; some researchers have found positive impacts of various activities, while others have found the exact opposite" (Mastrodicasa, Metellus, 2013, p. 27). The authors in their study mentioned different forms of impacts, from essential well-being to the changes to one´s identity. In a more recent study focused on social media and adolescents' perspectives, authors found that social media are part of life for adolescents. They mention that throughout the years, there has been a broad focus only on the negative aspects of the internet or social media. This approach created a culture of fear; therefore, many adolescents incorporated this view as their own (O´Reilly et al., 2018, p. 9). Many people often have irrational fears, believe superstitions, or have prejudices against other people. It is not only concerning social media that people have views that might damage themselves and others.

Some studies also focus on active social media use (ASMU) and passive social media use (PSMU). Determining whether the impacts are purely negative or positive and evaluating any form of data on digital technologies is challenging. For instance, authors who wrote the study "The associations of active and passive social media use with well-being: A critical scoping review" argue that "The aim of this scoping review was to investigate the validity of the ASMU and PSMU hypotheses. These hypotheses argue that ASMU (e.g. posting, sending messages)

leads to increases in well-being/decreases in ill-being, because it elicits likes and support, whereas PSMU (e.g. browsing, reading messages) results in decreases in well-being/ increases in ill-being because it induces social comparison and envy" (Valkenburg et al., 2022, p. 540). They add, "our review yielded limited support for both the ASMU and PSMU hypothesis. In fact, 79% of all associations disconfirmed the public ASMU hypothesis, whereas 74% of all associations refuted the public PSMU hypothesis. Likewise, 90% of all associations refuted the private ASMU hypothesis and 80% the private PSMU hypothesis. Finally, like the meta-analyses, we found considerable heterogeneity in the effect sizes of ASMU and PSMU" (Valkenburg et al., 2022, p. 540). Similarly, experts in study oriented on well-being and effects of social media argue that the "majority of adolescents do not experience any short-term changes in well-being related to their social media use. And if they do experience any changes, these are more often positive than negative. Because only small subsets of adolescents experience small to moderate changes in well-being, the true effects of social media reported in previous studies have probably been diluted across heterogeneous samples of individuals that differ in their susceptibility to media effects" (Beyens et al., 2020, Discussion para. 3). If we want to promote safer use of social media, if we focus on cyber-aggression, we also need to focus on teaching people a certain level of behavior and manners online (Mishna et al., 2018, p. 7). Social media usage is essential to consider because how we use technology and social media in our life matters. If we use them responsibly and consider what we share with others, we can find that social media can be helpful in only well-being and mental health as more people are in touch with us and can interact with us even though they might be far away. Digital technologies have many uses for individuals or society.

Mental health and social media

Some studies suggest that many people with mental health issues use social media to share personal experiences or seek support (Naslund et al., 2020, p. 245). The authors of this study add that "we consider three potentially unique features of interacting and connecting with others on social media that may offer benefits for individuals living with mental illness. These include: (1) Facilitate social interaction; (2) Access to a peer support network; and (3) Promote engagement and retention in services" (Naslund et al., 2020, p. 246). Besides these, they thoroughly examine the negative aspects of social media and warn that there are still a lot of potential dangers associated with prolonged use (addiction) of social media or having to deal with hostile interactions/environment (Naslund et al., 2020, pp. 249-250). Overall, there are potential benefits to using social media when dealing with mental health problems. However, we need to be cautious about regulating and managing these options. As the experts point out, "It is critical to monitor the actual content of social media posts, such as determining

whether the content is hostile or promotes harm to self or others" (Naslund et al., 2020, p. 250). Another research paper dealing with people with intellectual disabilities and the use of social media shows that social media have the potential to elevate the feeling of loneliness and isolation from people who have more challenging access to meet with their peers or people with similar diagnoses (Caton, Chapman, 2016, pp. 1-2). The authors emphasize developing the skills necessary to use social media and the internet appropriately and not become victims of scams or mistreatment online (Caton, Chapman, 2016, pp. 7-8). Developing safe spaces, dedicated social networks, or offering digital education are necessary factors to consider while working with people with specific needs who require further support. We must take as many precautions as possible to prevent possible harm and enhance the experience of people with disabilities who might benefit from using digital technologies and social media. The authors find potential benefits such as creating or maintaining relationships, helping with social identity, sharing experiences, or boosting self-esteem by learning new skills or gaining new abilities (Caton, Chapman, 2016, p. 11). They also describe negative aspects or possible for people with disabilities and their encounters on social media. For instance, they worry about the lack of support or availability, lack of literacy or skills, and reluctant behaviors of others to communicate with people with intellectual disabilities (Caton, Chapman, 2016, p. 11). In the end, the authors conclude that we still need to do further research as this field is still unexplored, and we need more data to use all the digital tools at our disposal effectively.

There is a study focusing on eight years of research depicting the impacts of social media on mental health called "Does time spent using social media impact mental health?: An eight year longitudinal study". The authors of this study thoroughly illustrate the possible effects of social media on individual mental health problems. The researchers in this study argue that "the within-person, cross lagged estimates painted a very different picture. Specifically, there were no associations between time spent using social media and mental health across eight years, spanning early adolescence into young adulthood. That is, when individual adolescents used more social media than their own cross-time averages, they did not increase in either depression or anxiety" (Coyne et al., 2020, p. 6). Authors argue that adolescents do not have an increase in depression or similar when they increasingly use social media. They state that adolescents "changes in one (e.g., social media use) do not reliably predict changes in the other (e.g., depression). In other words, although adolescents higher in social media time use have more mental health challenges (in general), their own, individualized fluctuations in social media use do not covary with fluctuations in mental health. This suggests that there may be other processes at play, involving extraneous or confounding variables, that more than likely account for these between-person associations" (Coyne et al., 2020, p. 7). Other experts also argue that there is little evidence to support these claims about the impacts on mental health through social media, and to prove this phenomenon, we need more that would prove the harmful effects (Vuorre et al., 2021, p. 832). The authors argue that we cannot simply blame time spent on social media for increased mental health problems. People often spend time on

platforms that they find exciting or relaxing. We cannot ignore all the other reasons and difficulties people face today and blame digital technologies. The authors do not deny people might become addicted to social media but point out that the general population did not suffer any significant mental health[1] problems from using social media extensively. As we also argue in our paper, social media might be helpful for many people to socialize, maintain personal connections, and help with their overall well-being.

Future of the research

Many authors, experts, and scholars have argued that we have insufficient methods, data pools, and samples for studying social media and their impacts (Scott, Woods, 2019, p. 146). We often approach research from a biased perspective and only focus on the negative aspects of social media, having different presumptions on how they negatively impact the quality of our lives. For instance, Amy Orben, in her studies about teenagers and social media, argues that "the research area examining these crucial questions does not deliver concrete results, but is instead weighed down by a lack of quality that causes the production of much conflicting evidence. Across the board a small negative correlation between digital technology use and adolescent well-being can be located, but it is not clear whether this represents a clear casual relationship or an association driven by third factors. By implementing improvements to the research the effects of digital technologies should increase in transparency, consistency and efficiency" (Orben, 2020, Conclusion para. 1). Similarly, other experts argue that they "urge researchers interested in exploring the social media-well-being relationship to incorporate experimental and longitudinal designs into their work to strengthen their ability to draw inferences about causality. More work is also needed to validate the methodologies we use to study the impact of social media on well-being" (Kross et al., 2021, p. 63). A study focused on the impacts of social media on mental health, especially of youth, deals with potential challenges and opportunities. The author, in the final remarks, argues that "more research is needed as the digital media landscape continues to rapidly evolve. Much of the existing research has relied on self-report measures of adolescent media use, and has been conducted at a single tie point, preventing any definitive conclusions regarding whether media use precedes and predicts mental health outcomes or vice versa" (Nesi, 2020, p. 120). Other authors point out similar problems with contemporary research and methods and argue that the "new decade of

[1] There are other studies that also focus on social media and mental health. For instance, the study „Social Media Use and Mental Health among Young Adults" (2018) by Chloe Berryman, Christopher J. Ferguson, and Charles Negy focuses on using vaguebooking on social media to get attention. Similarly, the study "The Impact of Social activities, social networks, social support and social relationships on the cognitive functioning of healthy older adults: a systematic review" (2017) by Kelly et al. analyzes the impacts on cognitive functioning by using social media and spending time doing different activities on social media.

research on CMC, social media, and MH should operationalize channels through their core features, tease apart the types of interactions users engage in across channels, and consider the characteristics of messages they send and receive. Ideally, research tests how these interactions and messages are modulated by the core features and affordances of social media" (Meier, Reinecke, 2021, pp. 23-24). Author also adds that "future investigations must continue to move beyond previous notions of 'screen time' as a primary contributor to mental health, and instead consider the specific social media experiences and individual characteristics that may make certain adolescents particularly vulnerable to social media´s positive or negative effects" (Nesi, 2020, p. 120). These authors argue that we must still improve our methods and data collection. It is difficult to do research on such broad topics as digital technologies, and social media, and their impacts on people or mental health. We also need to focus on different aspects of social media and digital technologies rather than just the length of use or type of outlet (social media) we consume.

Conclusion

Our article focuses on analyzing different forms of studies done on the effects of social media and digital technologies. We are fully aware of the fact that there are multiple factors influencing the mental health[2] of children, teenagers, and adults. We, therefore, do not believe that only social media or technologies are the culprit in the increase of depression or anxiety. There are more factors to be considered, and we also recognize that the current society is building pressure on individuals by utilizing politics and other forms of societal pressure to oversaturate individuals with various information. The workload is also increasing, and working time is becoming so flexible that we can observe a private and work life merging. Besides these, living in Western society has become quite expensive, and many people feel like they are being exploited by working in poor conditions and having to pay increased expenses on necessities. These examples might lead to new problems and increase the depression, stress, or anxiety we are experiencing. We conclude that there might be negative aspects of digital technologies, as demonstrated by Spitzer. Some people might feel pressured by social media and feel depressed or lonely because they heavily rely on digital tools for entertainment. However, not every person is like that, and many people often have prejudices against using technology. These trends and views are constantly changing because the digital age quickly evolves, and people use technology for everyday activities. We argue that social media can also positively impact our lives, mental health, or well-being. It all depends on how we use them.

[2] For information about mental health and loneliness/isolation, see, for instance, the study „Divergent effects of social media use on meaning in life via loneliness and existential isolation during the coronavirus pandemic" (2022) by Peter J. Helm and Kenneth Vail.

Some people may even look for people with similar health issues or mental health problems to get help or advice Many people even use online therapy because they get quicker access to support from therapists through online communication platforms. To properly determine the negative impacts, we need to rework our methodologies, data collection, and sample analysis to avoid oversimplifications or oversights in our results. We strongly advise researchers to keep an open mind during any digital technology research because our digital age is quickly evolving, and we must do thorough work to present the best and most accurate results possible.

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LEVERAGING CRITICAL TECHNOLOGIES IN EMERGENT AI IN BUSINESS PROCESSES

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Purpose: The primary objective of this article is to examine and clarify the transformative potential of emergent and generative artificial intelligence (AI) concerning the current business environment. The article explores the practical applications of emergent AI, with a particular emphasis on its flexibility and ability to analyze real-time data. Furthermore, it discusses generative AI, highlighting its role in promoting innovation, automating the generation of ideas, and contributing to the development of new products and services. The article seeks to provide insights into how these AI approaches can support strategic decision-making, improve organizational adaptability, and facilitate innovative problem-solving in the dynamic and data-driven realm of modern business. Throughout its analysis, the article also addresses the challenges and ethical considerations associated with the implementation of AI.
Design/methodology/approach: The techniques employed for carrying out a literature review encompass systematic and structured methodologies that aim to collect, analyze, and amalgamate prevailing research and information about a specific subject matter.
Findings: The findings demonstrate that emergent AI systems exhibit adaptability when analyzing real-time data, thereby improving decision-making in crucial fields. Moreover, the creative abilities of generative AI contribute to innovation by automating the generation of ideas and accelerating the creation of new products and services. The existence of challenges in implementing AI, such as transparency concerns and employee reluctance, underscores the importance of considering ethics and enacting strategic changes within organizations. In terms of prospects, the article stresses the significance of responsible AI development and the use of vigilant evaluation tools.
Originality/value: This article offers an examination of emergent and generative AI in the business domain. The article provides an analysis of emergent and generative AI and their respective roles in the business sector as well as challenges the organizations. The article serves as a valuable resource for decision-makers who are navigating the ever-evolving area of AI technologies.

Keywords: emergent AI, generative AI, modern business.

Category of the paper: Literature review.

1. Introduction

In today's business environment, the focus on data-driven insights is of utmost importance. Organizations recognize the value of using large amounts of data to identify meaningful patterns, correlations, and predictions. The ability to convert raw data into actionable insights not only informs strategic decision-making but also drives innovation. Companies that effectively use data analytics and AI-driven technologies can quickly adapt to market changes, identify emerging trends, and proactively respond to customer demands.

In recent times, the incorporation of AI into business operations has undergone a significant transformation (Kuzior, Kwilinski, Tkachenko, 2019; Kwilinski, Tkachenko, Kuzior, 2019; Tkachenko, Kuzior, Kwiliński, 2019; Kuzior, Kwilinski, 2022). AI technology, including machine learning algorithms and natural language processing, has become an essential part of organizational strategies. Companies from various industries use AI to streamline processes, improve efficiency, and gain a competitive advantage in the fast-paced global market.

Within this context, this study aims to explore the transformative potential of emergent and generative AI. Emergent AI refers to systems that exhibit behaviors or patterns that are not explicitly programmed but emerge through interactions and learning. On the other hand, generative AI involves autonomously creating new content or ideas. By understanding and harnessing these capabilities, businesses can optimize their strategic decision-making processes and foster a culture of continuous innovation. This investigation seeks to uncover how emergent and generative AI can be utilized to drive strategic decision-making, enhance organizational agility, and stimulate creative problem-solving in the ever-changing landscape of modern business.

2. Methods

A combination of methods for analysis, synthesis, and organization was used to conduct a literature review. A systematic search for relevant literature on the information employed academic databases, reports, and other materials. An examination was conducted to analyze the collected information. Every literary work went through an assessment to determine its relevance, reliability, and influence on the thorough understanding of the research topic. By conducting a comparative analysis of various viewpoints and discoveries, a synthesis was attained, facilitating the extraction of valuable insights and the identification of significant themes.

3. Emergent AI and Data-Driven Insights

The concept of emergence has been studied in various fields such as physics, biology, mathematics and, more recently AI. Such word combinations as “emergent behaviour” or/and “emergent abilities” are met. The emergent behaviour is specified as the unforeseen or unintended abilities of a large language model that are enabled by the model's ability to learn patterns and rules from its training data (Pasick, 2023). It is worth mentioning that models trained specifically on programming and coding platforms can generate new code (Pasick, 2023). Emergent abilities encompass the capacities that manifest unexpectedly because of complex interactions among elementary components (Babu, 2023). These attributes cannot be anticipated solely by examining the individual elements but instead reveal themselves when these parts engage in collective behaviour (Babu, 2023). In recent times, the notion of emergence has gained prominence in machine learning, particularly with large language models (LLMs) like GPT, PaLM, and LaMDA, where they display "emergent abilities" not directly deducible from a detailed understanding of their microscopic components (Schaeffer et al., 2023).

Therefore, emergent AI encompasses a group of artificial intelligence systems that possess the ability to adapt and develop in correlation with dynamic and real-time data inputs. In contrast to conventional AI models, which depend on pre-established rules and unchanging algorithms, emergent AI systems possess the capability to acquire knowledge and autonomously adapt their functioning as they encounter novel information. So, the term "emergent" denotes the capacity of these systems to showcase behaviours or insights that were not explicitly programmed but arise because of the sophisticated nature of the data they analyse.

The analysis demonstrates that the perceived emerging capabilities of LLMs are probably attributable to the application of rigorous metrics (Miller, 2023). The implication for the future is reassuring: the risk of accidentally encountering artificial general intelligence (AGI) seems low (Miller, 2023). While AGI could have significant societal impacts, the argument is that if it does emerge, there should be discernible signs in advance.

Aside from generative AI, several other emerging AI techniques have the potential to greatly enhance digital customer experiences, improve business decision-making, and establish sustainable competitive differentiation (Gartner Places…, n.d.). These technologies encompass AI simulation, causal AI, federated machine learning, graph data science, neuro-symbolic AI, and reinforcement learning (Gartner Places…, n.d.). In the age of decision-making guided by data, the significance of emergent AI becomes crucial in enhancing understanding. In general, emergent AI, with its flexible ability to adjust, revolutionizes the process of analyzing data, enabling prompt decision-making, and enhancing predictive analytics for the identification of trends (Ninness, Ninness, 2020). Such three criteria as real-time data analysis and decision-making, predictive analytics and trend identification and improved accuracy and reliability are singled out.

Emergent AI demonstrates exceptional proficiency in conducting real-time data analysis through rapid processing and interpretation of extensive datasets. Its adaptable characteristics enable it to promptly modify its analytical approaches in response to immediate circumstances, facilitating rapid and well-informed decision-making. This attribute proves especially advantageous in situations where timely reactions to shifting conditions are essential, including domains like financial markets, cybersecurity, and emergency response systems (European Commission. Joint Research Centre, 2020). Through continuous learning and advancement, emergent AI can generate insights that not only align with present circumstances but also capture the most recent patterns in data.

Emergent AI is of great importance in predictive analytics as it utilizes past data to detect and comprehend patterns and trends. By engaging in ongoing learning processes, emergent AI can enhance its predictive models, thereby generating more precise forecasts over time. This aspect holds significant value in diverse domains such as finance, marketing, and healthcare, as the ability to anticipate future trends can offer strategic benefits. By exploring extensive datasets and identifying discrete associations, emergent AI augments its predictive proficiencies, thereby enabling organizations to proactively address emerging opportunities or obstacles.

One of the principal advantages of emergent AI originates from its capacity to enhance precision and dependability through ongoing learning (Harnessing the power of AI…, 2022). As it encounters novel information and refines its comprehension, the system becomes increasingly proficient at identifying pertinent data and disregarding irrelevant noise. By consistently updating its repository of knowledge, emergent AI becomes a trustworthy source of insights, providing organizations with a more resilient base for decision-making and strategic planning.

4. Generative AI and Advancing Innovation

Generative AI pertains to a segment within the domain of artificial intelligence that concentrates on the independent creation, production, or generation of content (What is generative AI?, 2023). In contrast to conventional AI systems, which are designed for specific tasks and rely on predetermined rules, generative AI exhibits creative capabilities, enabling it to generate outputs that are original and distinctive. This form of AI harnesses approaches like neural networks, deep learning, and machine learning to discern patterns, acquire knowledge from data, and generate content that surpasses mere duplication or mimicry.

Generative AI exhibits the capacity to generate a wide range of outputs, encompassing text, images, music, and even complete scenarios (García-Peñalvo, Vázquez-Ingelmo, 2023). Its capability to produce content that is not explicitly encoded but rather acquired from pre-existing datasets allows it to foster innovation by offering new viewpoints and inventive concepts.

Generative AI exhibits its creative capabilities in the realm of innovation by automating the process of generating ideas, offering alternative design possibilities, and enabling the development of novel products and services through the production of unique and perceptive content (The state of AI…, 2023). The integration of human creativity and generative AI in design processes not only supplements creative output but also accelerates the innovation timeline, enabling prompt progress in the development of pioneering ideas and products.

The utilization of generative AI is of great importance in the automated process of creating ideas and concepts. Through the analysis of extensive data, this technology can recognize patterns and connections that may not be readily observable to human individuals (Using Generative AI, n.d.). Consequently, this capability facilitates the generation of inventive ideas and concepts that can potentially be utilized as the basis for novel products, services, or solutions.

In addition, generative artificial intelligence can merge seemingly disparate data, thereby promoting interdisciplinary thought and stimulating innovative solutions (Eapen et al., 2023). Its capability to investigate multiple potentialities and iterate through diverse concepts quickly accelerates the phase of generating ideas in the innovation process (Kuzior, Sira, Brożek, 2023).

In the field of design, generative AI serves as an asset in augmenting the creative processes. It aids designers by offering alternative design choices, proposing enhancements, and even producing novel design concepts within predetermined parameters (Eapen et al., 2023). This cooperative interaction between human designers and generative AI yields more inventive and polished designs.

The capability of Generative AI to comprehend aesthetic preferences and design principles enables its contribution to visual, graphic, and product design. Through the automation of specific design elements, it liberates human designers to concentrate on more advanced levels of creative ideation and decision-making (Weisz et al., 2023).

Generative AI plays a crucial role in fostering the growth of novel products and services (How generative AI can drive…, n.d.). By examining market patterns, consumer actions, and records, generative AI can detect market gaps and propose potential pathways for innovation. Consequently, this aids organizations in making well-informed choices regarding the creation of new products or services and in devising strategies to distinguish them from already existing options.

Moreover, the implementation of generative AI has the potential to streamline the initial stages of prototyping and testing through the generation of virtual models or simulations, thereby diminishing the time and resources necessary for product development (Ammanath,

Barroso, Soral, 2023). This expedites the cycle of innovation, allowing companies to introduce novel and enhanced products or services to the market with increased efficiency.

The creative potential of generative AI renders it an asset in promoting innovation in diverse sectors. Throughout the stages of conceptualization, design, and product advancement, its capacity to produce original content and perspectives facilitates the emergence of inventive concepts, imaginative resolutions, and ultimately, the creation of offerings and solutions.

5. Discussion

While implementing AI-driven solutions organizations can face challenges connected to such issues as ethical dilemmas associated with AI and the importance of responsible AI use, concerns related to the privacy and security of data, employee resistance to AI adoption and the need for proper training.

The lack of transparency in certain AI models poses a significant challenge in comprehending their decision-making processes. This lack of clarity can engender distrust, particularly in critical domains such as healthcare or finance (Lewicki et al., 2023). AI systems possess the capacity to supplement existing societal biases present in the training data they rely on. It is crucial to actively acknowledge and mitigate these biases to guarantee fair and objective decision-making processes. As AI systems gain more autonomy, determining and assigning responsibility for their actions becomes a challenging matter. Identifying who should be held accountable for the consequences of AI decisions is a complex challenge that necessitates careful consideration. The implementation of AI technology can lead to job displacement, prompting concerns about unemployment rates and the broader societal impact of this technology. Mitigating these concerns involves designing strategies for job transition and enhancing individuals' skills.

The ethical concern of obtaining explicit and informed consent for the collection and use of personal data emerges as a crucial issue (Fui-Hoon Nah et al., 2023). The issue of determining rightful ownership of the data employed to train and operate AI models can give rise to legal and ethical conflicts.

Resistance from employees may arise from a lack of comprehension regarding the functioning and advantages of AI to their work. Implementing comprehensive training initiatives becomes fundamental to bridge the knowledge gap and establish trust. Employees may exhibit resistance towards the adoption of AI technology due to fears of job displacement. It is imperative to effectively convey the message that AI is designed to enhance human abilities rather than replace job positions. The incorporation of AI into existing workflows necessitates a shift in organizational culture (Kuzior, Kettler, Rąb, 2021). Employing change management strategies and receiving support from leadership are vital elements in successfully overcoming resistance.

Researchers envisage the hypothesis that emergent abilities are an illusion. Through the three analyses conducted, Schaeffer et al. presented substantial evidence indicating that purported emergent abilities diminish when alternative metrics or more robust statistical methods are employed. Consequently, it is plausible to argue that these abilities may not constitute an inherent characteristic of scaling artificial intelligence models (Schaeffer et al., 2023).

The conclusion for the future could be accepted as promising: the risk of accidental collision with artificial general intelligence (AGI) seems to be low. Although AGI may have a significant impact on society, the argument lies in the fact that if it does emerge, its signs should be noticeable in advance (AI's Ostensible Emergent Abilities Are a Mirage, 2023).

According to Schaeffer, the emergence of skills isn't necessary for AI models to become significantly more capable and potentially risky (Morris, 2023). He emphasizes the need for precise assessment tools to track AI development. Concerns are raised about the rapid advancement of AI research, surpassing traditional scientific controls. The challenge lies in the lack of access to the models controlled by private companies, hindering independent researchers. Schaeffer highlights a potential conflict of interest, as companies may be motivated to exaggerate AI capabilities to boost sales and downplay possible negative effects for business reasons (Morris, 2023).

The emergent abilities of LLMs have notably shaped Natural Language Processing (NLP), leading to a shift in research focus towards comprehending and enhancing these capabilities. Sociologically, they have influenced the broader landscape of NLP and AI, underscoring the significance of scale in current systems. Bommasani suggests the need for a shared understanding of these abilities, urging exploration of their unrealized potential and the ultimate limits of scale (Dickson, 2022).

6. Summary

This article investigates the potential for emergent and generative AI to bring about significant changes in the current business environment. It highlights how emergent AI systems can adapt to real-time data analysis, improving decision-making in crucial areas such as finance and cybersecurity. Additionally, generative AI, with its ability to be creative, aids in innovation by automating the generation of ideas and speeding up product development. The challenges of implementing AI are also discussed, including concerns about transparency and employee resistance, highlighting the importance of ethical considerations. The article considers the need for responsible AI development and thorough assessment tools in the future.

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CITY IDEA. ON THE STRATEGY OF BUILDING THE IMAGE OF THE CITY

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Purpose: Cities from ancient times to the present day have been centres of civilisation, centres of science, culture, economy and power. Some, thanks to their functions and location, have grown into huge metropolitan centres, others have retained a more intimate or peripheral character. The city as a special social space, as opposed to as a special social space, in contrast to non-urban areas, has always attracted diversity, development and education, but has also been associated with a sense of freedom, liberty and the development of a democratic and civil society.
The city in its social dimension is also identified with place as an expression of cultural identity, of a small homeland, of belonging to a particular cultural community.
This specific form of organisation of space, both the physical or material one expressed in the form of architecture and landscape, as well as the spiritual and social one, creates a specific and unique atmosphere described as a specific genius loci.
The city as an economic formation, like a company, must also define its profile and mission. In order to build a city's image and thus promote its 'brand', an idea - an 'idea for the city' - is therefore necessary.
This article aims to present examples of how a city's image can be built on the basis of based on its cultural heritage and a specific original atmosphere. However, the author's attention has been drawn not so much to large and significant urban centres with an established position on the cultural map of the country, but to cities that are today rather peripheral in character, which, however, as it turns out, can be an asset in creating their positive and original image.
Project/methodology/approach: The article is explanatory and descriptive in nature.
The research methods adopted in this paper indicate a qualitative type of research. These include, both the technique of observation and content and document analysis, i.e. on the basis of the observed phenomena and facts occurring in urban space, as well as the analysis of the subject literature and found factual data (desk research), the process of creating the image of the city will be presented.
Findings: A contemporary creative city is a city that makes innovative use of its assets, including its cultural heritage, the special qualities or symbols of its landscape, or the cultural industries present in its space, to build its image and brand.
Originality/value: The innovativeness of the article consists in the analysis of the ways in which the city carries out creative activities that are conducive to promotion and development, taking into account its particular character and specificity, i.e. what makes the city attractive and interesting, as well as the development of the cultural and tourist offer and activities related

to the process of developing creative industries. The results of the analysis and the conclusions formulated may allow similar solutions to be used and implemented in other cities in order to stimulate their future development and build their own image.

Keywords: image of the city, branding, creative city, creative industries, urban space, cultural areas.

Category of the paper: empirical research (observation) and desk research.

1. Introduction

Cities, as centres of civilisation, gathered scientific, religious and cultural administrative centres on their territory, around which city life naturally revolved. Institutions with their architectural superstructure built and created their prestige, became an element of urban identity and a broadly understood culture of memory.

City life usually revolved around not only prestigious institutions, but also in central squares (especially the market square), places of trade, exchange, i.e. peculiar agoras, meeting places, bringing people together and thus creating peculiar social forums.

A significant number of cities with medieval origins, are able to use the historical space of the city, both in the material and immaterial sense, to create and write a contemporary city narrative that, in addition to what is specific to the modern city, also maintains continuity with what is historical and which defines the current character of the urban space, making it interesting and attractive to the participant in the space.

A contemporary city, in order to be able to develop and exist in the social consciousness, must "define" itself, or more precisely, it must determine the direction of development in accordance with its own potential, with what is original and characteristic for the city, with what distinguishes it, makes it attractive and constitutes its specific "genius loci" (Smołka-Franke, 2022, p. 349).

The article aims to show the process and manner of creating the image of the city on the example of a city with a historical origin, which is Cieszyn.

The choice of the city is not accidental. It is a city of unquestionable historical and urban values, however, today it does not belong to the top of the most famous, recognisable and "besieged" by tourists Polish historical cities like such as the royal Cracow city or the multicultural Wrocław city.

The basic research question posed is therefore: How do provincial cities, with a historical pedigree, build their contemporary image?

The research method used for the purposes of this paper is a case study of the city selected for analysis, which is Cieszyn (the capital of Cieszyn Silesia).

The aim of the research undertaken for the purposes of this article is to discuss, on the basis of a selected example, the process of creating the image of the city and branding, i.e. creating the brand of the city with the use of its potential and historical-cultural heritage or, in other words, searching for an idea for the city!

The majority of publications on branding issues revolve around city marketing strategies and the creation of a brand as a symbol. This publication, however, refers to a deeper, sociological understanding of urban space and the creation of the city as a unique place, which, apart from the physical space, also consists of its specific genius loci.

The research methods adopted in this study indicate the qualitative nature of the research. These include both the observation technique used in qualitative research and the analysis of literature and source documents.

The analysis of the development and creation of the image of the city was also based on professional literature, such as that by the creator of the concept of the 'creative city', Charles Landry, or Richard Florida, the author of the concept of the 'creative class'.

2. Materials and Methods

2.1. The city as a place

"Places are spaces defined on a map, having a name and distinguished from others by their materiality and identity", specifies Lucile Grésillon (Grésillon, 2010, p. 21).

So what is the uniqueness of places? Among the important characteristics that determine of a place include its location and the beauty of its landscape, its rich history recorded in unique works of architecture, the legend of the famous people who lived and worked in a particular place, the specific creativity developed there or the important and sometimes unusual events that have become embedded in the collective memory (Jałowiecki, 2010, p. 10).

For these reasons, special places, most often of historical significance, form a specific spectrum of memorials in urban areas, and some memorials of places of significant social value. They all make up the social space defined by Alexander Wallis (Wallis, 1980, p. 71) as the *cultural area of the city*. It is these areas that usually create the special atmosphere and give character to a city, making it unique from other cities.

A place is always a fragment of space distinguished, because of some special feature, by a perceiving subject. A distinguishing feature of a place may be historical or contemporary objects, unique buildings, monuments, outdoor sculptures, as well as features given to some banal fragment of space (Jałowiecki, 2010, p. 12).

Places, which are carriers of collective memory, simultaneously form the contemporary fabric of the city, melding with the present into a single urban organism. These significant objects, squares and places are therefore the core, the core of the cultural identity of the participants in the social space of the city.

"[...] The identity of a city is the sum of the elements that identify it. It is a set of qualities, characteristic of a city, that distinguish it from others and are expressed by all the activities that are undertaken in the city, creating its personality and character" (Stanowicka-Traczyk, 2008, p. 14).

An unquestionable advantage of these towns, such as Cieszyn discussed here, is their provinciality in relation to large and very popular urban centres, where, despite the enormity of attractions, it is difficult to find peace and rest from the urban bustle.

In smaller urban centres, such as the Cieszyn referred to here, the "user of space" - the tourist, does not feel tired of the crowd, and participation in space takes the "slow" form so desirable today.

2.2. Shaping the city's historic image - the importance of creativity in city development

[...] Identity is also a set of characteristics, attributes, through the prism of which the city wants to be perceived by its surroundings and which create a specific background or context for the process of communication with the surroundings. [...] It is only the perception of identity by the environment that leads to the creation of a specific image of the city" (Stanowicka-Traczyk, 2008, p. 14).

Looking from the point of view of a contemporary city as a 'market product', it is the historical and cultural assets that create an attractive image of a city and constitute an increasingly appreciated branch of the economy today, referred to as the creative economy (Landry, 2013, p. 36), according to the principle that attractive space attracts creative people (Florida, 2010, p. 271) and thus generates interesting, creative events.

Referring in this article to the Cieszyn city, it is possible to see the way of creating its contemporary image, or to use marketing nomenclature, creating a brand, based on this historical and cultural heritage. Despite the fact that Cieszyn is not one of the most well-known and crowded urban centres today, on its example one can observe the process of creating the city's image on the basis of this heritage.

As Dobroslawa Wiktor-Mach emphasises: Creativity is not only about finding the new, it is also the ability to deal with the old. In her view, cultural heritage and tradition also have a special power, because cultural heritage is the sum of past creations, and in the rush to change, people find inspiration in buildings, artefacts, values and social rituals (Wiktor-Mach, 2022).

The city discussed here has a medieval pedigree, which gives it a special character, primarily because of the traces in its space of a very distant history. The development of the city and its historical cultural and economic significance, determined the shaped the attractive space that is today its core value.

Cieszyn is also a border town, and in the past also a multicultural town. (during the partitions of Poland it belonged to the Austro-Hungarian Empire, and the development of the town was also influenced by the large number of Jews living here before World War II, as evidenced by the presence of two historic Jewish cemeteries within the town limits). Hence, the city also owes its development to the influence of other nations, which undoubtedly not only shaped its unique character, but also enriched its tangible and intangible cultural heritage.

The historic tissue of the city is therefore an undoubted asset, enabling the city to promote itself and to "draw in" the tourist with its offer. Infrastructure alone, however, will not be sufficient if the city does not take proper care of the aesthetics and functionality of this space and an appropriately prepared tourist and cultural offer.

The concept of city development and promotion based on the so-called creative economy was developed by Charls Landry in the 1980s. Charls Landry, introducing the concept of the creative city into urban policy, he exposed the importance and impact of creativity on urban development (Zgłobiś, 2015, p. 7).

Ch. Landry defines the creative city as a process that requires a change in the way people and institutions think and function to one that enables urban development and problem-solving to be understood in an integrated way.

Balance, according to Landry, is not only about environmental and ecological issues, but also about the broader psychological, economic and cultural balance so that the city space inspires new thinking and allows for sustainable forms of creativity (Landry, 2013, p. 36).

In contrast, Elizabeth Currid writes: "The fundamental shift in economic development focuses on attracting people through the development of arts and culture" (Currid, 2009, pp. 368-382). In the referenced article, the author considers the importance of the arts in economic development through several discrete but related lenses: 1) As a place of recreation or consumer product, 2) As a tool for redevelopment and development, 3) As a means of 'branding' a place and 4) As a generator of jobs and income.

The strand of research pursued by the author, allows for a better understanding of the function of the arts and cultural potential in economic development.

3. Results, discussion and conclusions

Cieszyn is a city with centuries-old traditions, dating back to the 13th century, ruled by the Piasts and Habsburgs, and therefore the capital of Cieszyn Silesia, has significant historical sites, including those of medieval origin, which are used today as a symbol - a landmark of the city. Undoubtedly, one of them is the Romanesque Rotunda of St. Nicholas located on the Castle Hill, the image of which was also placed on the Polish 20 zloty banknote

(photo below) (www.Cieszyn - one of the oldest towns and its famous rotunda - PolskaZachwyca.pl, 2023).

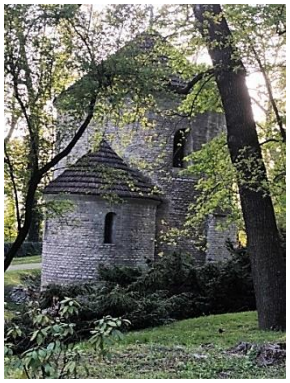

Figure 1. The medieval Rotunda of St. Nicholas in Cieszyn.

Source: Own study.

Figure 2. Banknote of 20 Polish zloty (reverse side).

Source: Appearance of Polish Zloty banknotes (currs.info).

The town of Cieszyn, which, like the whole of Silesia, has been under the influence of different states over the centuries, has retained its specific borderland atmosphere. In 1920 the city was officially divided into Cieszyn (the part belonging to Poland) and Český Těšín (Czech Cieszyn), and the natural border of the cities became the Olza River, and although today it does not belong to one of the largest or most thriving urban centres today, it is the rich history of the cultural and religious borderland (Cieszyn is considered the main Lutheran centre in the country, more than half of the Polish in the country, more than half of Polish Evangelicals of Augsburg tradition live here) and the interesting urban tissue are today its greatest asset.

A picture of Cieszyn's market square and the atmospheric, historical Głęboka Street, leading from the market square to the Castle Hill are presented below.

3.

4.

Figure 3, 4. Market square in Cieszyn.

Source: Own study.

Figure 5. The historic Głęboka Street in Cieszyn.

Source: www.Cieszyn - ulica Głęboka - dyskusje na Garnek.pl.

In addition to medieval buildings such as the aforementioned Rotunda of St. Nicholas or the Castle Tower, located on Castle Hill, and historic residential buildings, symbolic architectural elements certainly include the Well of the Three Brothers, commemorating the meeting place of the brothers Bolko, Leszek and Cieszko, who founded a settlement here.

Historic places, all the more shrouded in legend and special symbolism, always constitute the most interesting cultural areas of the city, forming the core of the cultural identity of the inhabitants on the one hand, and creating a space naturally inspiring interesting cultural events on the other.

As a historic and border town, Cieszyn is keen to refer to its legacy, creating its cultural offer as a historic town, a town of culture and an academic town (the Faculty of Arts and Sciences of the University of Silesia is located in its area).

Examples of these activities can be found, for example, in the offer of the *Festival Kino na granicy/Hranici* (Cinema at the Border), organised cyclically by the Association Culture on the Border.

The festival aims to promote Polish and Czech cinematography and literature, emphasising the border character of the city, which means that some of the film screenings take place on a stage located on the actual border between Polish and Czech Cieszyn.

The film festival is accompanied by numerous accompanying events, such as exhibitions or meetings with filmmakers, which make up a cultural festival of the city.

It is worth noting that the rank and character of the event is also given by the setting related to its promotion, i.e. gadgets issued with the Festival logo referring to the Olza river border (photo 6), or information leaflets distributed in public places, especially cultural institutions and catering establishments. As a result, the event also became part of the city's image.

Figure 6. Logo of the Cinema at the Border/Kino na granicy/hranici.
Source: www.25. Kino na Granicy / 25. Kino na hranici.

The important aspect of referring to history in shaping a city's image was also mentioned by the creator of the concept of the creative city, Charls Landry, quoted earlier. He encourages city managers and citizens to look at their own history and future in order to best identify and 'brand' (create a brand) their advantages. In this approach, the process of arriving at creativity is as important as the outcomes, as its purpose is to reflect on how to create meaning in a place, how to maintain and re-create it so that the place is constantly alive (Landry, 2013, p. 36).

Cieszyn is an example of a city that identifies and uses its assets for its own promotion, while creating a unique climate for the development of arts and cultural activities.

An interesting example of promoting the town's cultural heritage is the opening of the "Kornel and Friends" bookshop-café in its central historic space, which is also a tribute to a writer connected with the town - Kornel Filipowicz, who belonged to a group of young writers from Cieszyn working under Julian Przyboś, and privately was a partner of the Polish Nobel Prize winner Wisława Szymborska.

Due to the volume limitation of this article, it is impossible to present all promotional activities, but it is worth mentioning one more spectacular form of city promotion called *the Route of the Blooming Magnolia in Cieszyn*.

On the website promoting the Route, we read: "The most beautiful magnolias bloom in Cieszyn! We invite you to take a walk along the Magnolia Blossom Route, which shows the most impressive and spectacular shrubs in the centre of Cieszyn. The trail has 11 stops and is over 1 km long; it takes about 1 hour to walk it. The best time to visit it is at the beginning of April (in case of frosts a bit later), when the magnolias bud and blossom in a short time" (Route of the Blooming Magnolia Cieszyn - Silesia. Information Tu... slaskie.travel, 2023).

Figure 7. Route of the Blooming Magnolia in Cieszyn.

Source: Walking... Magnolia Blossom Route in Cieszyn (frantkiwedrowniczki.pl).

The creation and promotion of a local "product", which is the discussed Route, is not only to show the beauty of nature, in this case blooming magnolias, but also to encourage a walk through the city along the trail of interesting places and objects, thus creating something like another significant symbol of the city - the magnolia (an example of a souvenir from Cieszyn - magnet - photo 8).

Figure 8. Magnesium promoting the Magnolia Blossom Route in Cieszyn.

Source: Own study.

It should be added that in the city, during the period of the magnolia blossom, tours along the Route are organised by the Tourist Information Office and precise maps with the location of buildings on the Route are made available.

This is another example of the ability to brand the city's assets and make them into an interesting form of local product, while encouraging interest in the city's architecture and history.

This is also mentioned by Ch. Landry, writing: "City leaders simultaneously need to understand how changes of a material nature alter the emotional and symbolic perception of space and the subtle systems of a city's social ecology" (Landry, 2013, p. 38; Kinal, 2015, p. 19).

Another interesting example of creating an interesting atmosphere in a city and making it an attractive and inspiring space is taking advantage of its border location and drawing on the so-called cultural crossroads.

Cieszyn uses and implants on its territory elements of Czech culture, not only high culture, but also culinary culture. For example, the famous Czech flatbreads (chlebíčky), or exquisite sandwiches, have become a hit in Cieszyn's gastronomy in recent years.

Diversity and creativity drive each other and thus help to stimulate innovation and economic growth. A city must be authentic, original and unique, providing the opportunity to actively build its own identity.

The key to a city's success, according to Richard Florida, lies not in reducing the costs of its operation, but in enhancing the quality of life of its inhabitants by creating a diverse urban space, rich in attractions and full of charm (Florida, 2010, pp. 271, 277-278).

4. Summary

In an age of market economy, a city is treated as a special kind of enterprise, hence the importance of clearly defining and highlighting its character, what it will stand out from other cities, i.e. creating a kind of "brand".

What most defines and characterises a city is usually its cultural heritage, both tangible and intangible. The tangible heritage most often includes a city's historic architecture (sometimes also post-industrial), while the intangible heritage defines the totality of cultural achievements, such as literature, music, art, customs, tradition or culinary heritage. These are often developed in the form of creative industries.

The historic capital of Cieszyn Silesia attracts visitors with its rich history, cultural events and slow food offer.

The city can even be considered to be escaping from metropolitanity, offering its own unique and inspiring atmosphere of a provincial town at the crossroads of cultures.

Cultural and creative industries already make a significant contribution to the national product of many European countries, as does cultural tourism. They are interactively co-creating the next phase of human development towards a knowledge-based economy based on the tertiary sector" (Janikowski, 2010, p. 52).

Many cities and regions are also creating local or regional 'brands' ('branding' of regional products) to promote their own cultural and creative potential as a significant pillar of social and economic development (Smolka-Franke, 2019, p. 542; Evans, 2015, pp. 135-158; Anholt, 2005).

The research undertaken for the purpose of this study was explanatory and descriptive in nature, and concerned the characteristics of image-building and city branding on the selected example of a historic border city such as Cieszyn.

The basic research question was: How do provincial towns of historical origin build their contemporary image?

Creating an interesting and attractive urban space undoubtedly brings tangible benefits to a city or region. In addition to increased interest and income from tourism, which translates into economic gain, cities also gain "value" by attracting, through their attractiveness, so-called "demanding" and creative residents (representatives of the creative class) and creative residents (representatives of the creative class), contributing to the holistic development of the city and region to the holistic development of the city and region (Florida, 2011, p. 9).

This approach was sanctioned by urban development strategies that commonly envisaged the use of historic heritage to develop the local economy. Interventions in city centres usually involve the renewal of symbols of urban and regional culture, which makes it possible to realise the principle of spatial complementarity of the revitalisation process consisting in translating its effects into other areas (Jadach-Sepioło, Kułaczkowska, Mróz, 2018, p. 175).

To conclude, it is also worth mentioning that in recent years the city has taken the initiative to revitalise the historic central space as part of another major project that is part of the city's image-building and promotion strategy: "On the Route of the Cieszyn Tramway - development of cross-border tourism", which, in addition to extensive revitalisation and archaeological works, will see a tram rail, symbolically showing which way the tram travelled, embedded in the surface of the market square, along the former route of the Cieszyn tram, leading through the entire Route of the Cieszyn Tramway, and a plaque commemorating the tram stop (Scope of work (www.cieszyn.pl), 2023).

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CIVIL SOCIETY IN THE PROCESS OF UKRAINE'S SUSTAINABLE POST-WAR RECOVERY – IMPLICATIONS FOR THE RESILIENCE AND MODERNIZATION

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Purpose: The objective of this paper is to analyze the role of civil society in the process of Ukraine's post-war recovery with regard to the principles of sustainability, resilience, and equitability. The framework for the National Recovery Plan is established and the priorities of post-war reconstruction aim to foster just and sustainable transition. The question of civil society contribution and community-led approach to act for societal change is addressed in the paper.

Design/methodology/approach: To achieve the objective of this paper, the analysis of available secondary data, which consists of reports and studies of international institutions, research agencies, Ukrainian national program documents and statistics, research conducted by international and domestic NGOs. Secondary research material was enriched with the use of virtual ethnography methodology - i.e. online material obtained as part of participation in the Telegram group "Program for Sustainable Recovery of Ukraine", bringing together leaders of Ukrainian civil society.

Findings: Due to the ongoing war, Ukraine is facing devastating humanitarian losses as well as catastrophic damage to its infrastructure and natural environment – it's economy deteriorated by a 30% decline in 2022. The cost of Ukraine's reconstruction is estimated from USD 349 billion to 750 billion. The issue of civil society role in the sustainability oriented post-war recovery was discussed. According to experts successful reconstruction require involvement of national actors, including variety of stakeholders e.g. local officials, entrepreneurs, civil society organizations etc. The unprecedented power of social commitment unleashed with the beginning of the Russian invasion on February 24, 2022 and the role civil society mechanisms and institutions play in the current situation in Ukraine should be understood as a trigger of democratization and modernization of the country.

Research limitations/implications: The presented study is of conceptual character and is based on available secondary data. Collecting original data during ongoing war is imitated mostly to the virtual ethnography approach. Trying to measure civic engagement and civil society's contribution to the post-war recovery require the use of more complex methodologies.

Practical implications: Presented paper outlines a framework for rethinking civil society mechanisms and institutions during post-war recovery. The issue of sustainable transition and resilience is vital for policy makers, local communities' leaders, educators, social workers, etc.

Social implications: Considering the civic engagement during the war, it seems clear that civil society institutions and mechanisms will become essential for Ukraine's post-war

reconstruction. Apart from a vision consistent with the principles of sustainability, recovery requires reconciling the needs of different stakeholders – civil society is a key player enabling facilitation of the dialogue.
Originality/value: Contemporary Ukrainian civil society is not only a support for the authorities in the ongoing conflict, but also a pillar of democratization and modernization. It is worth monitoring whether the civic response to war will turn into lasting social initiatives and will contribute to achieving greater cohesion and sustainability by Ukraine. Certainly, a deeper look at the role of civil society institutions and mechanisms in the process of post-war reconstruction is necessary, addressing the issue with tailor-made methodologies.

Keywords: civil society, sustainability, resilience, post-war recovery, Ukraine.

Category of the paper: conceptual paper.

1. Introduction

On February 24, 2022, Russian Federation initiated a full-scale military aggression on Ukrainian territory to achieve a goal that it failed to achieve despite annexing Crimea in 2014 and fueling the conflict in the east of the country. Vladimir Putin's intention was to seize Kiev, overthrow the Ukrainian government and gain political control over the entire country – military intervention in Ukraine is a part of broader Russian strategic plan to maintain its sphere of influence over territories of the former Soviet Union (Dyner, Lorenz, Legucka, 2023). The largest military conflict in Europe since the World War Two caused thousands of civilian casualties, extensive internal and external migration, and large-scale material losses. According to the International Institute for Sustainable Development (IISD), Ukraine is facing devastating humanitarian losses as well as catastrophic damage to its infrastructure and natural environment; "a joint assessment by the Ukraine government, the European Commission, the United Nations and the World Bank estimated the cost of reconstruction and recovery across social, productive and infrastructure sectors in Ukraine to be USD 411 billion" (iisd.org, April 25, 2023). Ukraine's economy deteriorated by a 30% decline in 2022. Furthermore, the scientific facilities – crucial for the country's reconstruction and development towards integration with EU structures – also suffered. It is estimated that the war has damaged about 120 research institutions, costing the research sector about US$500 million (Gaind, Liverpool, 2023).

The objective of this paper is to outline the framework for the question of Ukraine's post-war recovery with regard to the principles of sustainability, resilience, and equitability. The issue of Ukraine's ongoing challenges is examined referring to the available secondary data (surveys of domestic and international organizations, research groups, and think-tanks), and road maps of recovery drawn by Ukraine's authorities in cooperation with international partners and experts. In particular, the role of civil society in the sustainable recovery process is analyzed, and the implications of stakeholders' engagement may cause for the potential

EU membership. Ukraine's ongoing challenges are discussed also referring to the insights outlined from the online sessions conducted with Ukrainian civil society leaders in the field of local development, democracy enhancement and clustering in June 2023 within the use of Telegram group "Program for Sustainable Recovery of Ukraine" (Cluster Sustainable Recovery UA),

2. Methods

The course of study involved analysis of secondary data, which consists of available reports and studies of international institutions, research agencies, national documents and statistics, research conducted by international and domestic NGO's. The main question posed in the paper address opportunities and challenges arising from the adoption of sustainability-focused recovery concerning civil society role in the process. To achieve this objective the method of virtual ethnography was appointed (Kozinets, 2012) – netnographic study required content analysis of posts of civil society leaders in the Telegram group @Program for Sustainable Recovery of Ukraine. The group consists of 140 members from various regions of Ukraine, related to the R&D sector, local communities development, project management and social and economic innovations. This group was created to discuss and implement the principles for sustainable post-war recovery of communities and regions of Ukraine. The analysis of the text material from the Telegram group and participation in online ZOOM sessions on networking for sustainable recovery took place from June to July 2023. Texts in the group were searched using the #together and #sustainability tags – as a result, 107 posts were obtained for the content analysis.

3. Results

3.1. Ukraine's post-war recovery

The consequences of the Russian war against Ukraine, which has been going on since February 24, 2022, apart from tremendous humanitarian consequences, also have an economic and ecological dimension. In terms of losses not only the destruction of infrastructure should be regarded, but also damage of assets such as business potential of enterprises, education, natural environment or unpredictable future outcomes of demographic crisis caused by out migration processes (money.pl, 14.06.2022). Ukraine's losses are constantly increasing: as reported by the Kiev School of Economics, in December 2022 the total value of damage caused by the Russian invasion of Ukraine increased by almost USD 2 billion and then was

valued at USD 137.8 billion (Kiev School of Economics, 22.03.2023). The Polish Economic Institute estimates that Ukraine's GDP decreased by over 30% in 2022 as a result of Russian aggression, and the conclusions drawn from the analysis of the experience of other countries affected by the armed conflict show the lengthy and costly nature of the reconstruction process. Returning to pre-war GDP per capita in 5 years was achieved only in every third country, while in 50% of the war-torn countries GDP endured below the pre-war period for 25 years (Kopiński et al., 2022). The cost of Ukraine's reconstruction is estimated from USD 349 billion to 750 billion (Kopiński et al., 2022) – for example the expertise of the World Bank estimated the cost of reconstruction and recovery across social, productive and infrastructure sectors in Ukraine to be USD 411 billion" (iisd.org, April 25, 2023).

According to experts from the Kyiv School of Economics, damages to infrastructure, education, energy, transport, trade, and healthcare continue to grow (Report on Damages…, 22.03.2023). Detailed data on Ukraine's losses in infrastructure, construction, energy, agriculture, industry and other sectors of the economy are provided by the project "Russia will pay". The "Russia will pay" is a result of cooperation of scholars from Kyiv School of Economics with government agencies, the project's objective is to collect data on material damage caused by the war (damage.in.ua). The data collected so far under the project show three spheres that suffered the most since the war has started: infrastructure (USD 35,6 billion), industry and enterprise assets (USD 13 billion) (Report on Damages…, 22.03.2023). "Damages from the destruction of the housing stock are estimated at $54 billion. In December, this amount increased by another $1.5 billion. For more than ten months of the war, a total of 149,300 residential buildings were damaged or destroyed, including: 131,400 private houses, 17,500 apartment buildings and 280 dormitories" (Report on Damages…, 22.03.2023). The ongoing war in Ukraine significantly complicate reconstruction and increase its costs.

Assessments of the damages are made due to document claims for reimbursement against Russia in international courts. Both the EU and the US have literally admitted that Russia is to blame for the damage caused, and US Secretary of State Anthony Blinken has hinted that "Russia will eventually bear the costs of Ukraine's reconstruction" (The Moscow Times, 21.06.2023). The EU is looking for solutions to use Russian frozen assets for the post-war reconstruction of Ukraine – it was already confirmed by EU authorities that across the bloc there are more than 200 billion euros that belong to the Russian central bank and Russian citizens (Cnbs.com, 13.06.2023).

The war continues, but the Kyiv authorities, together with international organizations, are developing plans for post-war reconstruction. A special body was also established: the National Council for the Recovery of Ukraine from the war. The council is an advisory board under the President of Ukraine (Presidential Decree, № 266/2022 as of April, 21, 2022 about the National Council for the Recovery of Ukraine from the War). The prerogatives of the Council include, among others: development of the Post-War Recovery and Development Plan for Ukraine; identification and preparation of proposals for priority reforms, the implementation

of which is necessary in the war and postwar periods; preparation of strategic initiatives, draft regulations, the adoption and implementation of which are necessary for the effective operation and recovery of Ukraine in the war and postwar periods (kmu.gov.ua). The main task of the Council is to develop a Roadmap for the post-war reconstruction. "The Council of Europe is already involved in discussions with stakeholders in Ukraine in order to support the further development of the reforms and policies under the Roadmap that will include Ukrainian local and regional governments, ensuring that they are in line with Council of Europe standards and best practices" (Council of Europe, 7.06.2022). The National Council for the Recovery of Ukraine identified three objectives for the recovery plan: 1) economic and environmental resilience on the path to victory; 2) recovery – efficient solutions for the soonest recovery of the crucial economic and social processes, and natural ecosystems; 3) modernization and growth – modernization regarding sustainable economic growth and improvement of the quality of living in Ukraine (Ukraine's National Recovery Plan, National Recovery Council, July 2022). The recovery plan outline strategic goals of integration with the EU together with national security accomplishment, pointing to strategic vectors of development such as the Green Deal and digitalization. In order to achieve strategic goals, Ukraine has recognized two key conditions for the post-war recovery: business enabling environment and macro-financial stability. As for a business enabling environment, the plan assumes deep economic, social and cultural transformation of the conditions for economic performance by means of the introduction of a series of institutional changes concerning investment attractiveness, fiscal system, labor market, tackling corruption, and development of entrepreneurship Ukraine's National Recovery Plan (National Recovery Council, July 2022, p. 6). The drivers for the reconstruction were defined as: 1) priority sectors transformation taking into account global trends and Green Deal policy; 2) strengthening human capital by increasing the quality of life and immigration policy standards encouraging returns of people who fled Ukraine after 2022, February 24th; 3) effective infrastructure including transport infrastructure, housing and energy, and impact on digital development. As underlined by international experts, "Ukraine's recovery will encompass a wide-ranging effort beyond 'mere' physical rebuilding. It will need an unprecedented modernization project encompassing transformation of state institutions, the recovery of human capital, environmental restoration, new urban planning, and connectivity" (Chathamhouse.org, 29.03.2023). The priorities of National Recovery Plan aim to foster a complex, just and sustainable transition on national and regional levels. Deep societal change require community-led approach so the question of empowering communities to act for the transition is vivid and worth reflecting on.

3.2. Development of civil society in Ukraine

The authors of the report *Experiences of post-war reconstruction. Inspirations for Ukraine* emphasize that "the success of reconstruction depends on the extent to which national actors are involved in it. This applies to the widest possible group of stakeholders - the highest

representatives of the authorities, local officials, civil society organizations, the private sector, state-owned enterprises, etc. Including them in the reconstruction process allows not only to properly identify financial needs and priorities, but also to create a sense of shared responsibility for the effects" (Kopiński et al., 2022, p. 5).

The question of mobilization of the internal resources due to the socio-political, economic and cultural changes in Eastern European Countries was widely discussed in sociological literature since 1990s. The implicit condition for civil society development is stimulation of social resources – as Piotr Sztompka claims: it is in the network of interpersonal relations that social subjectivity is created, the driving force of all more complicated social phenomena at the micro, meso and macro level - groups, organizations, institutions, etc. - as well as the driving force of social change, the constant transformation of society" (Sztompka, 2016, p. 32). Until recently, most Western researchers emphasized that civil societies in the post-Soviet area are still weak due to low participation in social organizations and a low level of civic awareness compared to Western European and North American countries (Burlyuk et al., 2017).

The reasons for this phenomenon were sought primarily by referring to a broader social, political, cultural and historical context – as for example Victor Stepanenko justified the deficiency of the ethos of civil society in Ukraine with weakness of the Ukrainian state itself: "In the post-Soviet context, this still implies (to varying degrees) the shortage of developed modern traditions, practices, and especially institutionalized mechanisms that enable systematic (not spontaneous) citizens' political and social engagement. The lack of historically stable democratic institutions, values, and often civic identities for the people living in post-Soviet countries still places tremendous obstacles on their road to democracy" (Stepanenko, 2006, p. 2). However, since the period of the Ukrainian Orange Revolution Stepanenko is referring to, many changes have taken place in Ukraine, also in the institutional sphere, at least mentioning the decentralization reform (2014), which to some extent became the trigger of self-organization of a non-spontaneous nature at the local level. Many observers of socio-political life noted the development of civil society in Ukraine in relation to the heritage of the so-called Revolution of Dignity 2014. But even in 2018, despite a noticeable increase in trust in social organizations, participation in some form of social activity was declared by only 7% of respondents, which corresponded to the level of social involvement in 2008; majority of the pollees expected top-down initiatives and solutions (Democratic Initiatives Foundation, 2018).

This new kind of paternalism was recognized by sociologists as part of the *homo post-sovieticus* syndrome: the category describing the permanence of manifestations of the Soviet mentality useful for the analysis of socio-cultural effects of transition in the countries of the former Eastern Bloc (Ganev, 2018). Volunteer movement in Ukraine has been developing rather slowly until the events of Revolution of Dignity, Crimea annexation and war in Donbas in 2014 – "In December 2014 GfK Ukraine conducted a nationwide research of volunteering in Ukraine, commissioned by the United Nations. According to the stud, 23% of Ukrainians

possessed volunteering experience" (Matychak, 2019). Anne Applebaum called this social upheaval supporting military needs "the other Ukrainian army" (Applebaum, 2022).

The unprecedented power of social commitment was unleashed with the beginning of the Russian invasion on February 24, 2022. The survey conducted by the Sociological Group "Rating" on April 6, 2022 showed that "About 80% of respondents are involved in defending their country in one way or another. 45% of the respondents help protect the country by financial contributions (in March 2022, this share was 39%). 35% volunteer: they help other people or the military. 18% participate in information resistance, 13% work in critical infrastructure, 3% serve in territorial defense, and 3% serve in the military. A quarter of the respondents are unable to help defend Ukraine" (Rating Sociological Group, 6.04.2022). Social commitment is visible on many levels of support both in the rear and at the front, "Ukraine is showing that an investment in civil society, as part of the essential social fabric, is an investment in resilience" (Civicus Lens, 24.02.2023). Civil society organizations since the very beginning of war are involved in fundraising, delivery and distribution of humanitarian aid, organization of assistance for internally displaced, building shelters for animals, bool donation, recording war crimes and human rights violations etc. More than a year after the war outbreak civic activists and volunteers are perceived as a category of population that, according to 26% of respondents, will contribute the most to the Ukraine's development in future (Rating Sociological Group, 6-11.06.2023). Findings of the research conducted by the Research Triangle Institute in 2022 among Ukrainian nationals and representatives of Ukrainian diaspora also show the significant shift in civic engagement: 86% of respondents donated their money and 42% volunteered to support Ukraine (Leonchuk et al., 2023). "This study provides evidence of ongoing strengthening of Ukraine's democratic society. Despite the fears and reports about people illegitimately trying to take money, 99% of the participants did not regret donating money to organizations and individuals (…). A high level of trust in civil society and the government was made evident by the sustainable nature of giving behavior (…)" (Leonchuk et al., 2023, p. 11).

4. Discussion

4.1. Civil society in the process of post-war reconstruction: implications and conclusions

Reference to the material obtained through the use of virtual ethnography is intended to derive implications for the post-war modernization and development of Ukraine with the support of civil society mechanisms. In particular, the question of civil society development in regard with the potential accession of Ukraine to the European Union is interesting. As it was already mentioned – collecting original research material in the conditions of ongoing war is very difficult, however researchers still can reach interviewees through social networks sites

such as Facebook, Telegram or Twitter. The special position of Telegram App in Ukrainian society is worth noticing – this messenger is perceived as a digital tool for countering Russian propaganda, since the president Volodymyr Zelenskiy used the communicator to disclaim fake news about Kyiv's surrender (The Guardian, 5.03.2022). Currently the app is recognized as source of information beyond the wide information field established by state and private media sector; "it has become a 24 hour news lifeline for civilians, journalists and even the military" (The Guardian, 5.03.2022). This is the reason why particularly Telegram environment was chosen as a site of digital observation. The idea was to confront the picture of civil society development emerging from the reports and program documents with reporting on social initiatives and activities undertaken for the reconstruction of Ukraine declared by the members of the analyzed Telegram group. As a result of preliminary monitoring of 107 posts searched by the tags #together and #sustainability. On this basis, general implications were derived for further exploration of the issue of the role of civil society in the process of Ukraine's transformation towards sustainability and social cohesion. Contemporary Ukraine is described by the concept of highly developed self-organization - both scientists and journalists underline this fact, deriving the traditions of self-organization in Ukraine from the Cossack movement and the specific Slavic category of collective activities for the community called *toloka* (The Economist, 22.04.2022). What is interesting: both historical concepts of Ukrainian self-organization mentioned above do not assume permanent engagement; involvement results from a particular social demand to be fulfilled.

"Everyone fights on one's own front" – this phrase is often used by social activists in the Telegram group and on their private Facebook accounts, which illustrates the thesis about self-organization in practice. The large-scale social turmoil called by Anne Applebaum the raise of the "other Ukrainian army" (2022), from the point of view of social theory can be categorized as a social capital revival. Concerning the notion of social capital, the explanation suggested by Adam Bartoszek (2008) can be appointed: "(…) social capital should be perceived as a set of factors determining the ability to act, and not only as something objectified or reified in the form of a network of connections and structures. Social capital is then associated with cultural capital, and both have the form of a moral and competence resource resulting from the activity of people in social networks" (p. 74).

Ukrainian activist evaluate the strength of civil society on the basis of four components: actions (i.e. participation, donation), values (common views), responsibilities (duty, desire to change) and belonging (societal, national, citizenship) (Zarembo, Martin, 2023). In terms of engagement the approach on local communities as development triggers is noticeable. Post-war recovery is a complex process affecting communities to different extent, depending on many factors, such as direct exposure to violence, experience of internally displaced influx, internal conflicts and crises etc. Activist involved in the group clearly understand this feature while underlying the priority of "needs recognition", "prioritize local interventions adequate to the situation", "necessity to meet local needs" "overcoming mistrust towards local administration"

(Telegram group @Program for Sustainable Recovery of Ukraine, 17.06.2023). There is an awareness of work in the sphere of reconciliation and intergroup relations – especially in communities where internally displaced persons from areas affected by direct hostilities arrived.

Reference to moral competence, i.e. the link between social activity and the sphere of values, is also identified in the analyzed posts. For example, the sustainable restoration of communities and regions is understood as "the restoration of mental and physical health, secondly, the restoration of infrastructure and the use of smart technologies in the management of territories and, thirdly, the circular economy at all levels: from the household - to national production" (Telegram group @Program for Sustainable Recovery of Ukraine, 13.06.2023); "The change in the state of the community occurs due to the activation and unification of cultural, intellectual and material resources of people who live in the territory of the community and are involved in the production and distribution of a high-quality, competitive, local product/service" (Telegram group @Program for Sustainable Recovery of Ukraine, 13.06.2023). Values in this context can be examined as sharing common views and a sense of being united against the evil symbolized by Russia (both in Ukrainian official and unofficial discourses, Russia is depreciated at the axiological level, through the use of the vocabulary from fantasy literature like "non-humans", "orcs", "Mordor" etc.).

Responsibility is understood as individual and collective contribution to the victory but also as willingness to involve in sustainable transition process: "And we have to do our part - help the army!", "And, one day, boys and girls will return from the front and ask us how we brought Victory here. And we may not even answer, but each of us will have to look into those eyes. "What is starting a MOVEMENT? It's finding the right time, place and people so that every word comes true", "It all starts with PEOPLE who have aspirations. Then, around people united by an idea, a system is formed. Today, each and every one of us, we bring the Victory closer where we can be most effective" (Telegram group @Program for Sustainable Recovery of Ukraine, 5-7.06.2023).

Belonging – the sense of being a part of the society, nation, or community has also changed. Issues of national identity in Ukraine are very complex and not directly related to the presented topic, so in this study they will not be discussed. As result of Russian aggression the sense of community emerged powerfully (Zarembo, Martin, 2023). Participants of the group are aware that for the successful implementation of sustainability principles there is a need of networks of new leaders, who will be able to act effectively in the interests of the community. Community development can be done mainly by the recognition of possibilities and resources and making advantage of it for seeking new solutions and undertake difficult challenges.

The conviction about the agency of the individual, emerging from the collected statements, is the result of institutional changes taking place in Ukraine, but also illustrates the shift in thinking about common interests and values. The new context, which is the ongoing war, is an impulse for social activists to think about long-term changes consistent with the idea of

sustainable development. As aptly noted in one of the discussions in the analyzed group: "small communities are part of the overall picture of Ukraine, small communities are crucial for the integrity and stability of Ukraine as an independent country with its own identity and competitive economy" (Telegram group @Program for Sustainable Recovery of Ukraine, 20.07.2023).

Anne Applebaum predicts that "the *volonteri* will create Ukraine's postwar culture, rebuild the cities and run the country in the future" (Applebaum, 2022, para. 32). The process of social change currently taking place in the society of Ukraine in the conditions of the ongoing war is a particular important vector of analysis. Ukrainian society has already made a Western choice, however overwhelming post-war aftermath concerns many aspects of social life in Ukraine, including re-establishing of social capital potential, and constituting conditions encouraging Ukrainian refugees to come back to the homeland.

5. Conclusion

The question of civil society role in Ukraine's sustainable post-war recovery is current and worth analyzing in terms both of issue of resilience as well as modernization. Some – like Anne Applebaum anticipate the role of bottom-up actions and institutions as crucial to these processes. The choice of the Ukraine's "Western track of development" is already being legitimized, although the path to achieve it will require deep structural changes, like prevailing over corruption. The sustainable restoration of communities and regions demand contemporary approach to the use of resources and social organization, which was indicated in Ukraine's National Recovery Plan. A separate question is the reintegration of war refugees into society - numerous experiences in the field of conflict resolution and community building can be applied here. It is worth to mention that Ukraine encountered this problem already in 2014, when internally displaced persons from occupied Crimea and Donbas experienced hostile attitudes from the media and host communities. Research on civic engagement and civil society's contribution to the post-war recovery require the use of more complex methodologies, mostly when we move from the level of national strategies to the level of action in local communities and try to measure the actual impact of bottom-up initiatives in different contexts of *hromadas* and regions.

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VALUES OF ENVIRONMENTAL ETHICS IN BUILDING INTERCULTURAL DIALOGUE

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Purpose: This paper analyses the value system proclaimed by environmental ethics, emphasizing that it plays a key role in integrating and unifying the thinking and activities of each and every member of Earth population around the overriding common goal of protecting and defending the natural environment. It builds and strengthens a moral community focused on protecting and defending the primary values - life and the health of the planet, emphasizing the significance of responsibility, community, a culture of moderation, solidarity or justice
Design: The structure of the study relies on descriptive and comparative analysis of views and opinions dealing with the topic quoted in the paper's title.
Findings: In a divided world, where vested interests take precedence over the interests of humanity and the Earth, below presented values show the communal support on which intercultural dialogue should and can successfully be based, consolidating people concerned about the fate of our civilization and striving to build a new beneficial relationship between the world of humans and the world of nature.

Keywords: environmental ethics' values, life, health, responsibility, intercultural dialogue.

Category of the paper: Conceptual paper.

Introductory remarks

Environmental ethics, like eco-philosophy, grew out of concern for the ever-deteriorating condition of the world of nature. It focuses its interests on disclosure of the moral relationship between man, society and the natural environment. It not only analyses these relationships in moral terms, but gives them moral status. Unlike traditional ethics, it broadens the scope of morality, going beyond the world of interpersonal relationships to include the non-human world. It strongly criticizes traditional beliefs emphasizing the exclusively utilitarian-instrumental nature of human-nature relations. It recognizes that the category of moral good and evil plays a significant role in evaluating man's relationship with his natural environment, that moral evaluation is an important criterion for valuing anthropogenic activities in the world

of nature. Thus, it rejects the centuries-old conviction that the sphere of morality concerns only the human world, and that relationships beyond this world are taken out of the realm of moral rationing. In turn, this way of thinking occupied a monopolistic position in the positivist-technocratic paradigm that dominated the modern era. It drew a firm line of demarcation between the world of humans and the world of nature, recognizing that only the former is subject to defence and protection, while the latter is subject to exploitation and use.

Environmental ethics has two fundamental tasks: 1. the defence of the natural environment against human aggressions and destructive activities, and 2. the defence of humans as individuals and as a species against the negative consequences of their aggressive activities in the environment. Therefore, it advocates the defence of both natural assets and of goods of man, and does so in the firm belief that the good of the human world and the good of the natural world are integral values serving the good of both worlds. It believes that the mental error of modern civilization was the belief that it was possible to fund an increasingly superior future for the mankind regardless of the condition of the non-human world and, as it soon turned out, at its expense and degradation. How misleading this belief was we are already finding out almost first hand. We are witnessing the constantly deteriorating state of the natural environment and are becoming increasingly aware that its poor condition is already clearly limiting the development of many regions of our planet, and in the near future will become an effective barrier to the continued existence of our civilization. Environmental ethics, together with other disciplines committed to ecology, diagnoses this dramatic situation in which man acts as the perpetrator of the world's extremely difficult ecological situation, but also becomes a victim of his reckless, aggressive activity in the environment. The man can reasonably be said that it is both a perpetrator of emergency situations and an object experiencing the harmful consequences and effects of its activities on the environment. And the main victim of this situation is the steadily deteriorating quality of life on our planet, including both human and natural life.

We know perfectly well that there is an urgent need to overcome the conflict between man and nature, dramatic in its effects, and to build a reasonably peaceful relationship between the two worlds. Environmental ethics makes a significant contribution to the process of repairing what has been damaged and devastated over the centuries. In carrying out this task, it is taking advantage of those opportunities at its disposal. It is primarily on its foundation that the world of moral values is built, and it is these that will determine the model of axiological preferences in the relationship between man and the environment. Axiology, which represents grounds for many human activities and endeavours, plays the role of a kind of signpost, gives a general orientation and directs thinking and action towards what is elementary and at the same time valuable and momentous. If, therefore, we recognize - which should not raise doubts - that human thinking is programmatically oriented towards the world of values, it certainly seems right to believe that axiological issues should be in the heart of considerations concerning the formation of desirable thinking and action also in the board area of human-nature relations.

A clearly defined and articulated order of values does not allow a person - if one may say so - to get lost in the essential aims of his world-shaping activities. A badly recognized or even false value system contributes to mistakes and wrong solutions. A properly designed value system is undoubtedly an important factor in strengthening and fostering order and integrative activities around common and accepted goals in both theory and practice. It also performs the function of correcting original inappropriate or erroneous proposals and solutions. Therefore, environmental ethics places such a strong emphasis on its system of values, as it is able to unite thinking and action in a great community-based effort to attain what is key from the environmental ethics perspective - the good (protection and defence) of the world of nature in its richness and diversity of life and the welfare of the human being who lives in it. In the programme formulated by environmental ethics for the consciousness reconstruction in the spirit of ecological awareness, axiology takes priority because:

1. values carry a certain knowledge of the basic, essential goals and objectives of environmental ethics.
2. Values are evaluative in nature; from their perspective, a particular theory and programme and their practical implementation can be assessed both holistically and on a piecemeal basis - thus they can have a corrective function.
3. The respected values that one is clearly aware of always encourage, mobilize, put obligations not only on the individuals, but also on the societies and the entire states. On the grounds of environmental ethics, values take on a universal dimension.
4. Clearly and distinctly articulated values allow to resolve, or at least tone down, conflicts between the human (society) economy and the natural environment, and breed choices that do not violate the fundamental interests (well-being) of man, society and the world of nature.
5. Values provide rationale for their imperative counterparts (codes, norms and rules of conduct), which regulate human relations with the natural environment. Environmental ethics builds a normative system of principles and rules of conduct, and in acting in this role it becomes deontological ethics.

One must therefore agree with Henryk Skolimowski when he states that the values proclaimed by environmental ethics become "the guardians of nature's goods, they become ecological values to the highest extent" (Skolimowski, 1991, p. 71), when he insists that "the solution to environmental and ecological problems lies in the matrix of our values. As long as we are unable to enter deeply into what values we recognize and how they determine our behaviour, in other words, as long as we are unable to establish a new reasonable, sound and supportable basis in the form of the relevant values, all brilliant expertise (based on a limited and fragmented vision) and technical considerations will be futile" (Skolimowski, 1993, p. 189).

This demand has been realized in the form of a catalogue of values constituting the axiological dimension of environmental ethics. At its core the following fundamental beliefs are present.

Firstly: it recognizes (which places it in the opposition to traditional approaches) that the world of non-humans has intrinsic value, and this in turn causes us to think of them as those beings who are entitled to their due obligations and moral significance (P.W. Taylor).

Secondly: as a consequence of the previous one, that the world of man's relationship, with the natural environment, is not limited to an instrumental-utilitarian relationship, but has a deeply moral dimension. This imposes obligations and, at the same time, moral responsibilities on man for his activities in the environment (good or bad).

Thirdly: in the catalogue of values formulated by environmental ethics, it introduces a division between primary values and values used to protect and defend them.

Fourthly: it includes among the primary values the most fundamental ones determining the well-being of the entire natural environment, i.e. life in a universalistic sense and health as a desirable attribute of every form of life.

Fifthly: environmental ethics points to those values, respect for which promotes the good of the supreme values, in effect protecting and defending the environment. Among these values, it comprises responsibility, community, a culture of moderation (consumer restraint) solidarity, justice and others.

It is impossible at this point to provide an extensive characteristics and in-depth exegesis of the values mentioned. Such was presented someplace else (Tyburski, 2011, 2013). Here, we will limit ourselves to a few introductory remarks only outlining the meaning and understanding of selected contents that make up the above-mentioned values of environmental ethics.

Primary values of the environmental ethics

In the catalogue of values formulated and promoted by environmental ethics, the value of life is the primary value. Facing this value, the man accepts the obligation to defend and protect it and is willing to bear the consequences of his actions and omissions. Environmental ethics proclaims the demand for respect for life, with which comes the fundamental belief that non-humans have the right to live and to have their lives protected. This postulate was vividly formulated by Albert Schweitzer and developed in an ethical programme that the author himself called "an ethic of reverence for life". It proclaims that "the good is the preservation of life, the promotion of life, giving the highest values to a life capable of development; the evil is the destruction of life, harming life, pushing down a life capable of development" (Lazari-Pawłowska, 1976, p. 44). In formulating such a definition of good and evil in the context of

life, Schweitzer is aware that dramatic conflicts between human interests and those of non-human beings are unavoidable, that the lives of some beings must come at the expense of others, and therefore, he insists, when I harm a life, I must be sure that it was necessary, and anyone who follows an ethic of reverence for life, harms life and destroys life only out of necessity, which he cannot avoid, and never out of thoughtlessness.

Schweitzer's views reverberated around other thinkers and penetrated the consciousness of a wide audience of them. Among other things, the ecologist and philosopher Jean Dorst refers to them when he says: "we must incorporate into our rules of behaviour and recommendations respect for all forms of life, for they are all us, since we derive from a common source" (Dorst, 1987, p. 199). The environmental ethics, seeking to resolve difficult, sometimes unavoidable conflicts, wants to help us by providing criteria according to which we can make the right choices. H. Skolimowski. believes that the direction of evolution itself indicates the criterion of the value of different forms of life. What is more perfect and complex in its design deserves more intensive protective measures. Such, he says, is nature's modus operandi and the resulting ecological imperative.

Utilitarianism interprets the problem of the value of life from a different perspective. It argues that the pursuit of multiplying pleasure in the world and minimizing suffering is a basic moral imperative. From this perspective, life becomes valuable according to the extent in which it allows to increase the sum of pleasures and decrease the sum of sufferings. We value life and desire to live as it enriches us with desirable goods; it loses its value as a state of distress and suffering builds up. And when it comes to the world of non-humans, according to utilitarians, beings capable of experiencing suffering should be protected. The right to protection is granted proportionally to the degree of development of the nervous system of a living being. The higher an organism is developed, the more valuable its life becomes. Therefore, the life of lower animals is not covered by the protective standard. This way of thinking faces strong criticism from the supporters of respect for all forms of life and their inviolability. They point out the communal nature of life, that higher beings are unable to exist in separation from the rest of the world (ecosystem), that failure to protect every form of life, in the nearer or longer term, actually threatens with annihilation of the entire complex diversity of life.

It should be noted that the demand for the defence of all forms of life acquires new and important meanings in the face of those civilization processes that have proved particularly dangerous to many forms of natural life. As a result of the spontaneous, predatory exploitation of vast amounts of natural resources and the rapid degradation of living standards, the entire populations of animals and plants are being rapidly annihilated. Man's astonishing carelessness has wiped off a huge number of species of flora and fauna from the face of the Earth. And the loss of each species means not only a reduction in population diversity and the loss of a unique genetic makeup, but also a weakening of the stability of entire ecosystems. In the face of exponentially growing and extremely dangerous phenomena, the demand for protection of

all forms of life takes on a new very specific meaning. As it were, until recently, a utopian idea is transforming into a real, deeply grounded imperative.

Inherent in the category of life is another fundamental value of environmental ethics, which is **health**. We are increasingly aware that the health of humans and all living organisms depends largely on the extent to which we are able to respect the laws of the natural world, read and understand its inherent rhythms and survival mechanisms. We also know that in the name of preserving this value (the good health of the planet and its various regions), it is necessary to take decisive action in the name of maintaining the ecological balance, taking care of the purity of air, water and soil, etc...

This kind of knowledge is not only shared in modern times, as the awareness of organic connections and dependencies between human health and the good state of his natural surroundings was close to people of different eras and cultures. This fact was already pointed out by Hippocrates (460-377 B.C.), when in his treatise *On Airs, Waters and Places* he argued that "we cannot comprehend the body without knowledge of the whole of things". Bucolic themes were a constant theme in Virgil's idylls (Arcadia), and his work inspired authors of later eras. During the Renaissance, the idea of the dependence of health on environmental conditions was particularly vividly exhibited by Paracelsus (1493-1541). He called for respecting nature's order and harmony, as they are the manifestation of its health, vigour, exuberance of life, slumbering healing power.

The relationship between nature and health was articulated even more widely and vividly in Eastern philosophy. The health and even happiness and prosperity of a person were linked there to the conduct following the rhythm of nature and living in harmony with it. The need to respect the universal laws of nature were proclaimed and the man was perceived as a particle of the universal system whereas the human body was conceived as a miniaturized image of the universe. The man cannot be separated from nature, as the man is an integral part of it, and his health is organically linked to the health of nature. This is how this relationship is understood on the grounds of Taoism, which conceives the health of man and the health of the natural world as a state of equilibrium, and the mutual balancing of the opposing factors of yin and yang is supposed to safeguard this state. Thus, any imbalance in the natural world, caused by anthropogenic activities, is seen here as a great threat to human health.

The fact that health is universally and extremely highly valued in the public consciousness of the present day can be a key argument in favour of mobilization of environmental protection efforts. We are much more aware that in the effort to remain healthy, how we relate to other animate entities and the entire natural environment is extremely important. This was pointed out more than once by a prominent physician and environmentalist Julian Aleksandrowicz when he stressed that our struggle for health begins with the realization of this truth, that certain environmental relations are responsible for every life process. They are the ones that "condition health as well as disease and premature death" (Aleksandrowicz, 1980, p. 61). Therefore, in long-term health care programmes, "the search for new rational proposals to make a higher

form of treatment come true, i.e. nature conservation-based prevention, is justified" (Aleksandrowicz, 1980, p. 61). The implementation of prevention understood in such manner is facilitated by the development of cultural patterns of behaviour "which, by combining biological knowledge of the environment with ethical knowledge of its protection, will form the grounds for the science of survival" (Aleksandrowicz, 1980, p. 61).

Recognizing health as a distinguished value in ecological thinking significantly promotes efforts to protect the natural environment. On the grounds of environmental ethics, these actions gain a moral dimension and are subject to moral assessment.

World Health Organization (WHO) documents emphasize that health is conditioned by three basic parameters: individual, social and environmental. The first is determined by the behaviour of individuals, striving for the quality of their own health; the second is related to the organization and functioning of public institutions responsible for the state and quality of health care; and the third - the one of most interest to us here - the environmental context - concerns the values, norms and actions that secure well-being, health and the natural balance in nature. We are informed about the significance of the environment significance for health by the so-called Belgrade Report of the Fourth European Environmental Assessment, which states that globally up to one-third of the diseases that occur are caused by the environment condition. "This highly disadvantageous situation", reads the aforementioned Report, "is further enhanced by the growing number of victims of extreme weather phenomena, whose growing intensity is the result of negative human impact on the global environment and the lack of adaptation measures.

The fact that health is one of the most highly cherished values can lay important foundations for integrating environment-oriented thinking and activities, including on a global scale, efforts targeted at maintaining conditions conducive to human health being in harmony with the well-being (health, balance) of the natural environment.

Let us note that in the discussions around the problems of globalization, there are proposals that refer to the values analysed above - which are life and health. It is pointed out that the breakdown of faith in the success of globalization is due to the fact that, as Zdzisława Piątek argues, "the liberalization of trade and the free flow of capital, i.e. the global free market, has been adopted as the basis of globalization, which by its very nature leads to the polarization of conflicting interests, and thus to the intensification of what divides people rather than what unites them (Piątek, 2005, p. 123)". Therefore, Z. Piątek believes that the development of a new global socio-economic order can and should be oriented at the common health and life values. These values bring people together by teaching them how to tolerate things that divide them. The lady author believes that in addition to the free market model, it is worthwhile to consider another globalization model, coupled with life and health, while its advantage is that it makes it relatively easy to define common goals, allowing all Earth population to work together in the field of health care and living in a healthy environment" (Piątek, 2005, p. 123).

Values of environmental ethics supporting activities oriented at life and health of the world of nature

Let us focus on those values referred to by environmental ethics that divert us to thinking and acting in accordance with the nature well being. Here we have in mind the values inherent in traditional ethics, which environmentalism reveals in man's interactions with nature. It turns out that human beings can be connected with the natural world by many values and emotional acts, such as responsibility, restraint, justice, community, solidarity, beauty, contemplation, harmony, love, peace.

From the catalogue of values proposed by environmental ethics, let us list here and in brief remarks comment on such as responsibility, solidarity, community, moderation, justice. Respecting them significantly promotes the good condition of those values we have deemed paramount (life, health), consequently protecting and defending the natural environment.

We know that **responsibility** is generally viewed in individual or group dimensions. The entity's responsibility is to the area it can have positive or negative environmental impact. Traditionally the environmental ethics covered the area of an individual's interpersonal relations, but, on the other hand, it advocates the individual's responsibility for his environmental activities. According to Hans Jonas, responsibility has become "the basic imperative of civilization" (Jonas, 1996) and should be an inalienable criterion for evaluating anthropogenic activities in the environment.

Meanwhile the group responsibility, here rather presented from generation perspective, is that it is our collective moral duty to leave the environment in such a condition that we do not diminish the chances of survival of future generations. J. Feinberg believes that the responsibility of the modern generation involves "a duty to our posterity, and it has a right to do so. Our unborn descendants will have interests that can already be represented on per procura basis, so it makes sense to talk about their right to inherit the world in a certain shape and our present obligations to preserve the world in such a shape" (Feinberg, 1980, p. 35). Therefore, we do not have the right to solve, our social and economic problems at the expense of future generations. The resources of the world of nature are the capital, that we as trustees rather than owners should manage, its substance must not be depleted. Our responsibility for future generations is that we must act today so that future generations do not have to take drastic measures to survive on this planet. Based on environmental ethics, the ecological model of thinking, referring to the principle of responsibility, proposes such a strategy of action in accordance with which nature must first be protected. in order to then be able to benefit from it.

Proclaiming the idea of **community**, environmental ethics seeks to build a sense of community between the human world and the natural world. This idea, which is an important component of modern ecological thinking, is borne out by natural knowledge and the biocenotic

worldview that has grown out of it, which makes it sufficiently clear that we share a common dependence on the Earth with all species of life. Not forgetting the obvious differences between us and other species, we should bear in mind the fact that we, along with other beings, are in a certain relationship with the Earth's ecosystems. The laws of genetics, natural selection and adaptation apply on equal footing to all living beings as biological systems. From such a perspective, we should perceive ourselves in unity with others, realize this community of life, rather than treating ourselves and others as two separate worlds, completely opposed to each other without community bridges. Such a dualistic vision of the world dominated the thinking for many centuries of modern European civilization, whose philosophical rationale was supposed to be the Cartesian concept dividing the world into *res cogitans* and *res extensa*. The vision perpetuated over the consecutive centuries, it deepened the division of the world and drew an increasingly thick demarcation line dividing the world of man and the natural world into two opposing realities, eliminating the manifestations of communal thinking, treating the world of nature in purely instrumental-utilitarian terms. Meanwhile, the practical manifestation of this thinking was the dominance in the sphere of activity, manufacturing and production of the positivist-technocratic paradigm.

In the cultures and religions of the East, the idea of a bond connecting man with everything around him was constantly alive and found numerous supporters. The issue of identity and unity of man with the world and also the idea of co-sensibility is emphatically emphasized by Buddhism, as well as Taoism. On their grounds, man is not outside the circle of nature, but is its integral and most important component. Nature and man are an inseparable unity, held together by a divine bond. Fraternity, community and affinity were used to derive demand for respect and protection of everything that exists: humans, animals, plants and all the rest of the natural world.

The idea of community with the natural world, as proclaimed by the environmental ethics, has not only a normative-persuasive dimension, targeted at changing our relation to the natural environment. It also goes to a certain concept of the development of civilization, namely one that would take into account the interests of the non-human world as well, treating them as community interests. This is because there is no doubt that any sensible concept of the development of civilization must take into account the axiom of the commonality of the fate of man and nature. In this context, it is right to recall the words of Hans Georg Gadamer in which he argued that nature can no longer be viewed as an object of exploitation, "it must in all forms of its manifestation be experienced as a partner" (Gadamer, 1992, p. 20).

There are many arguments today in favour of the view that environmental protection cannot be effectively implemented without consciously self-imposed restrictions on the use of all that the world of nature around us has at its disposal. Mineral resources, water, soil, forests, clean air are not inexhaustible and unlimited. Policies inspired by the environmental ethic take into account the fact of the rapid depletion of nature's resources and strongly advocate the view that the environmental crisis cannot be solved without a viable programme of self-restraint in the

wide consumption of produced and natural goods. The threat of impending disaster calls for a change in our consumption habits toward **sustainable consumption or eco-consumption**. There is a need for a fundamental change in the philosophy of life and behavioural patterns, a reevaluation in the hierarchy of values and lifestyles, a decisive curbing of exuberant consumer appetites (where they clearly come to the fore) and restraint in the use of nature's goods. The need for intensive efforts directed at building what can be called a culture of moderation is emphasized. At the same time, it applies to individual development (self-restraint, voluntary simplicity, sustainable consumption) and socio-cultural development (culture of restraint, moving away from the ideology of growth) Note that the idea of moderation and restraint is not an invention of our time. In the historical development of culture in the West and East, there was a concept inherent in the culture of moderation. Do not overdo anything, meden agan, the right measure, the golden mean, virtue the middle ground between extremes - this is in Aristotle, Stoic autarky and apathy, Roman "Ne guid nimis" - nothing in excess, medieval "asceticism", simplicity according to Gandhi, the idea of moderation in Taoism and the rule of "taro wu shiru" - Shintoism. These concepts were meant to promote a lifestyle that enabled the realization of some other value, usually related to the man himself or transcendence. Aristotle's rule of the golden mean (do not exaggerate with anything) was to lead to a wise, rationalized, dignified life, stoic autarky allowed to achieve perfection, excellence, asceticism to free oneself from the pressures of carnality and matter and focus on what is most important, the sphere of spiritual life, moderation in Taoism - the realization of several of the already mentioned values, this modern understanding of moderation is directed at protecting the health of non-human, the natural environment, indirectly also the well-being of man. It is a response to modern civilization, which abandons all the aforementioned understandings of moderation and restraint focusing attention on the sphere of economic values, disregarding the fact that their unconditional acceptance leads to the development of various patterns of consumption beyond actual human needs, consumption of excess, prestige, ostentation, hyperconsumption. The forms of consumption that are based on violent and irrational overexploitation of the environment, are opposed by the model of pro-environmental consumption built into the environmental ethics.

It should be noted that it is necessary to distinguish, (sometimes equated erroneously) such concepts as moderation, restraint or self-restraint from such concepts as resignation, renunciation, asceticism.

There are four types of green consumption models, eco-consumption, ethical consumption, sustainable consumption and anti-consumption" (El-Jai, 2011, p. 35). Eco-consumption boils down to the use of goods and services that satisfy basic human needs and raise the quality of life, but at the same time minimize the consumption of natural resources, the production of waste and pollution protecting the needs of future generations. The ethical consumption is emerging as a result of raising consumer awareness and focuses on the importance of ethical choice, which refers to how and to what extent one satisfies one's needs. Almost every decision,

for instance, about purchases (but also about production, new investments) is in some sense a moral decision, since it determines to a larger or smaller extent man's relationship with the natural environment. Thus, the processes of manufacturing, acquisition and product consumption implicitly involve, in each phase of the process, certain moral responsibilities of manufacturers and consumers. Sustainable consumption is part of the underlying assumptions of sustainable development and is intended to respect the requirements for the implementation of this very concept. It seeks to bring about an order in consumption that would ensure that the sector functions in concert, in harmony, as an integral component of the sustainable development agenda. Prospectively, it is about satisfying the needs of the present generation in such a manner that it does not reduce the ability to meet the needs of future generations. Anti-consumption is the most radical model of consumption, indeed the one with the fewest supporters. It advocates limiting the consumption of goods and services to those quantities "necessary for survival" (El-Jai, 2011, p. 35). This type of consumption serves the supporters of the model of unlimited consumption and enhanced production to criticize, often violently attack, the model of environment-oriented consumption model in all the versions presented here, as if the critics were unable to distinguish between these models, the concepts inherent in them and the proposals behind them. They wrongly equate the idea of moderation and consumer restraint with the concept of resignation, renunciation, prohibition.

Meeting of eco-friendly consumption demands requires a change in awareness, attitudes and behaviour. It is to be marked - broadly speaking - by a shift from more to enough, from quantity to quality, from desire to need. At the same time, it is a style of thinking that is a reaction to a model of life based on prestige consumption, ostentatious consumption, hyperconsumption. The latter are born on the grounds of specific sociocultural and production-technological premises. The question of needs plays a fundamental role here. Theodor Adorno writes about true and false awareness in the area of needs. "Needs", he argues, "are a conglomeration of truth and falsity; (...) if the theory according to which needs are to be read not on the basis of some natural condition but on the basis of a so-called cultural standard is accurate, then social conditions, together with their bad irrationality, are also part of that standard" (Adorno, 1986, p. 13).

The postulate of sustainable consumption speaks in favour of the elimination of false consciousness in the needs. This, in turn, requires both a change in consumption patterns and also a change in mentality. Numerous studies and observations provide sound rationale for the thesis that the postulate of moderation, restraint, self-restraint is unfortunately, extremely difficult to implement in practice (for the vast majority of consumers). It comes across numerous obstacles not only of a psychological nature. After all, we are very strongly attached, in general, to our permanent habits, tastes and consumption preferences. And we rather rarely give them up voluntarily.

Who are the addressees of the call for restraint and moderation in consumption. Despite the widespread opinions, which give such attitudes a maximally general dimension, in the sense that they include the principle of moderation and restraint in the philosophy and ethics of the planet, and therefore in the philosophy and ethics of everyone, of almost every inhabitant of our planet, I believe that this postulate actually has a quite specific addressee. In fact, it is directed at those societies that live in conditions of relatively high levels of productive forces and consumption, where exuberant consumer appetites that go well beyond high levels of need satisfaction are realized, where consumption of excess or hyperconsumption reigns supreme. I am not in a position to address the call for restraint and self-restraint, especially renunciation, to people and societies suffering from poverty, experiencing ordinary poverty and deprivation in terms of satisfying the most elementary needs It is difficult, even on an individual level, to come up with a call for restraint for a person who is struggling to make ends meet. The analogy can be drawn with the entire societies in e.g. Central Africa or Latin America, because such behaviour and appeals seem to be pure hypocrisy. On the other hand, in accordance with the principle of sustainable development philosophy i.e. the principle of solidarity - these countries should be aided economically, our achievements should be shared with them, so that they reach the level of satisfying the standard needs of their populations, while making sure that such aid, e.g. investments, takes into account the rules and standards of environmental protection, so that these communities, while striving to improve their economic position, do not do so at the clear expense and through excessive exploitation and destruction of the natural environment.

The idea of solidarity proclaimed by environmental ethics formulates the need to extend the meaning of 'I' 'we' not only to other human groups and their cultural contexts, but also to non-human sub-classes. It is a universal virtue because it brings new groups and sub-classes into the community by giving the bond between them a distinctly moral dimension. It presupposes concern for the community's well-being and benefits and reminds us that our duties towards other beings are no less important than our own rights and claims. The solidarity idea is an important component of contemporary ecological thinking, finding its justification in natural knowledge and the biocentric worldview that has grown out of it. It is not merely exhausted by means of a postulate of a communal understanding of the interests of mankind and the natural world. It speaks loudly about the need for solidarity in addressing common environmental issues, pointing to at least two understandings of it. The first is expressed in the call for solidarity between peoples, in adherence to the conviction that only by making a joint effort can stop threatening or existing dangers such as adverse climate change. This principle is violated by those countries that, although they protect their natural resources, such as forests, but exploit their economic advantage, making unrestricted use of the resources of other countries, usually lagging behind in their development, sometimes exploiting their natural resources in a barbaric manner. Secondly, the postulate of solidarity indicates the need to think and act also in terms of intergenerational solidarity. It is a question of ensuring that our generation manages the assets and resources of the world of nature in such a manner that the

interests of future generations and the conditions and options for their survival and development are also safeguarded. The man's solidarity with the world of nature, solidarity between nations in solving environmental problems and intergenerational solidarity make up what is increasingly referred to as global solidarity, treating it as one of the most constitutive components of new line of thinking and action. It should be emphasized that the idea of solidarity runs across political, professional, cultural or generational divides. It is the idea which, against the existing divides, differentiates people and societies spiritually unites them - it is their communal core.

Popularizing and implanting the idea of solidarity in the public mind is a fundamental task of education dealing with sustainable development. The idea of solidarity, guided by a sense of community, reinforces any action in favour of sustainable development, but it should also be borne in mind that action in the name of sustainable development contributes to the reinforcement of attitudes of solidarity and community. Therefore, "education for sustainable development is one of the essential mechanisms aimed at restoring the trends inherent in human nature to self-organization and to act in solidarity for the common good" (Piątek, 2007, p. 14). The idea of solidarity as well as the attitudes and actions stemming from its spirit are undoubtedly a powerful ally of any sustainable development efforts, and action taken in the name of sustainable development stimulates and reinforces the natural human trend towards community action, self-organization and solidarity-based activism.

Justice - is another value of environmental ethics. It is analysed in at least two main contexts. Its intra- and intergenerational dimensions are most often pointed out. The first dimension concerns the demand for the eradication of poverty, and the need for economically lagging countries to reach the development standards of developing and developed countries is also pointed out. It is also about equitable access to natural resources (e.g. clean water) for all people and nations. The principle of justice puts an obligation on developed countries to help less developed countries achieve equitable development standards. The aim should be, and this is the second postulate of intra-generational justice, that as many people as possible should have an opportunity to satisfy their basic needs. It is therefore compatible with the goal of intra-generational justice to strive to bring the least well-off consumers closer to the average of needs satisfaction. The demand for intra-generational justice proclaimed by environmental ethics will be implemented when the position of the poorest is systematically improved.

In the case of intergenerational justice, it is about the right of future generations to make fair use of their common heritage so as to safeguard basic natural resources and good environmental values for future generations as well. According to John Rawls, the elementary condition of justice is that each generation "receives from its predecessors what is rightfully due to them, and produces for those who come afterwards what is fairly due to them" (Rawls, 1988, p. 400). This elementary condition of justice imposes an obligation on us to leave the environment for the future generations in such a condition that their chances of survival are not diminished. After all, they too will certainly need the raw materials from clean forests, healthy air, water and soil.

Conclusions

By developing and justifying axiological programmes defining man's relations with the environment, environmental ethics immeasurably enriches all attempts to answer the fundamental question: how should man behave towards his natural environment and why should he do so? It proposes a model of axiological preferences, so that the values it represents constitute an important criterion governing man's relationship with nature. These values can significantly influence the toning down of possible conflicts between acting man and nature, and enable making choices that are conducive to maintaining an ecological balance when the man interferes with the world of nature. The environmental ethics focuses its interests primarily on those values that promote the preservation of life and the balance and harmony of ecosystems, with a strong emphasis put on the relationship between theoretical reflection and practical expectations. The theory aims at building and justifying a specific system of values defining the right relationship between the man and the world of nature, which environmental education then seeks to inscribe in the sphere of individual and social awareness, aiming in consequence to shape such attitudes and behaviour that would have a positive impact on the whole of man's practical relations with the natural environment. We will just remind you that the aim of environmental ethics is not exhausted at the point of value system development. Its second part is concerned with building a normative system of principles and rules of conduct, which are the imperative equivalents of these values. While pursuing the aforementioned aim, the environmental ethics takes the form of deontological ethics. Its examples are the 'ecological imperative of H. Skolimowski or the set of rules and principles contained in Paul Taylor's ethic of respect for nature. The deontological dimension of environmental ethics is a topic for a separate paper.

We are convinced that the aforementioned values undoubtedly stimulate and strengthen the natural human inclination towards community, self-organization and solidarity-based activities. They mobilize to protect and defend the natural environment and encourage responsible, solidarity-based activities by all members of population living on our planet. They are able to gain universal approval regardless of our worldview, cultural and linguistic preferences and economic status. They unite all those concerned about the well-being of the mankind and the world of nature. They fulfil such a role in defiance of political and economic divides and particularisms, which in the modern world so often prevail over the general human and global interests. The preservation of life becomes a universal value as we become more aware of the communal nature of life on the planet, as we focus our thinking and action more strongly on the defence of this so universally understood value, as we become aware that human life and the lives of non-humans have a community dimension, and that it is impossible to imagine human life in a void deprived of the lives of other beings. I believe that this kind of argumentation, skilfully presented, can be successfully accepted by people of different cultures, traditions and worldviews regardless of the various differences and divides that separate them.

A similar status is held by the second of the mentioned guiding values of environmental ethics, which is health. It is the protection and preservation of health that can provide a strong basis for integrating environment-oriented thinking and activities on an individual, collective and global scale. It is a strong inspiration for actions and efforts aimed at maintaining and sustaining conditions conducive to human health in harmony with the health (well-being, balance) of the natural environment. Health as an overriding value is becoming an important part of building a new global civilization.

Values such as responsibility, community, restraint (culture of moderation), solidarity and justice, which build and strengthen a moral community aimed at protecting and defending life and the health of the planet, can play an integrating and unifying role for the entire Earth population. Both overriding values and those committed to them to their benefit are characterized by the fact that they unite and group thinking and activities around overriding common goals. In a divided world, in which particular interests prevail over universal and global interests, these values provide a common ground on which intercultural dialogue can successfully take place, bringing together people who are concerned about the fate of our civilization, striving to build a new relationship between the world of humans and the world of nature that is beneficial to both.

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SOCIAL CAPITAL AND INNOVATIONS IN NON-GOVERNMENTAL ORGANIZATIONS. REPORT ON RESEARCH OF SILESIAN NGOs

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Purpose: The article attempts to answer research question: how do the individual components of binding and bridging social capital (in the area of trust, norms and connections) condition innovative activity in the state of morphostasis (structural continuity and cultural context) of selected non-governmental organizations.
Design/methodology/approach: The research was theoretically based on the concept of three components of social capital: trust, norms and connections (Coleman, 1998) and the assumptions of the morphogenetic theory of structure and agency, in particular types of reflexivity as a factor conditioning social agency (Archer, 2015). They concern the determination of the above-mentioned endogenous conditions limiting the innovative activity of the surveyed non-governmental organizations. On their basis and using the qualitative analysis of data obtained during group interviews (FGI), a diagnosis of developmental limitations and barriers will be made. This method allows for the analysis of structural elements, cultural features of a given organization, as well as the capabilities of individual social and organizational entities.
Findings: Among the members of the surveyed non-governmental organizations, the dominance of the components of social bonding capital over bridging capital was diagnosed. This key cultural condition, which constitutes its morphostatic nature, i.e. focus on maintaining the organizational status quo, has anti-innovation potential. The potential of a binding type of social capital is particularly visible in the area of trust between the entities of organizational activities. In addition, most members of the surveyed organizations were focused on maintaining the contextual continuity of the group and organization, i.e. reluctance towards new collective entities of action in NGOs, questioning the existing status quo, i.e. structural and/or cultural continuity. Such a context petrifies the power structure existing in them, but also the level of tensions and social distances, and limits the innovative potential.
Originality/value: The authors showed that the binding type of social capital, especially in the dimension of social trust, is a key cultural condition negatively shaping the functioning of Polish non-governmental organizations in the area of innovation.

Keywords: social capital, innovations, NGOs, morphostasis, focus group interview.

Category of the paper: research paper.

1. Introduction

Social innovations, as a type of targeted change, are conditioned by both endogenous factors, influenced by the entities operating in them, and exogenous factors, coming from the broadly understood environment, which in the vast majority are a variable independent of the analyzed social or social context. organizational. The article pays more attention to the endogenous determinants of innovation processes in the area of non-governmental organizations. In the literature on the subject, you can find a number of conceptualizations regarding endogenous conditions for the development of innovation, including social innovation (Cooter, Schaefer, 2008; Bendyk, 2020; Goldmann, 2019).

The key determinants are generally considered to be: organizational culture, the potential of social and creative capital, aspirations and educational needs of the community, together with ensuring the possibility of their continuous satisfaction by the education system and the quality of local public institutions (including, among others, NGOs), which create a micro-institutional environment for innovation (Lubimow-Burzyńska, 2014).

Effective implementation of innovations requires a special commitment of innovators, users and recipients - positive feedback between these entities. In the surveyed non-governmental organizations, the above requirements are largely ensured by the prosumer attitude of their leaders and members.

In order to study the functioning of Polish civil society, including its most institutionalized form - non-governmental organizations, the existing components of both bridging and binding social capital should be taken into account. Perhaps defining the role of the latter is the key to explaining the Polish specificity of civic participation, including in the sphere of non-governmental organizations. Based on my own research and the existing literature on the subject, it seems advisable to put forward a preliminary thesis about the current type of social capital as a key cultural condition shaping the functioning of Polish civil society institutions (Theiss, 2007; Żukowski, Theiss, 2009; Czapiński, Panek, 2015).

There are many sources of empirical data justifying the thesis about the dominance of social relations in Polish society based to a greater extent on the binding rather than bridging type of social capital. According to many years of research (e.g. CBOS, GUS, Social Diagnosis) in Poland, since the political transformation, despite a several-fold increase in GDP per capita and a relatively high level of enrollment ratios or, more broadly, human capital, there has been no increase in the level of social capital, especially its pro-innovative and inclusive varieties (Feliksiak, 2022; Czapiński, 2008). According to the GUS research published in 2020, in which association (bridging) capital and informal capital (family capital and neighborly and social capital, i.e. defined as binding in Putnam's conceptual convention) were analytically distinguished, they prove that only 12 percent. more often declare belonging to or identifying themselves with non-governmental organizations. Significantly more declarations of the

respondents, i.e. 82%, concerned the components of informal (family) capital, measured mainly by the degree of emotional bond, the frequency of contacts, the degree of mutual help and support (GUS, 2018, 2020). Hence the conclusion that in Poland the strongest element of network social capital is binding capital, and more precisely its family component. In second place in maintaining social networks are the elements of binding capital in its neighborly and social variety (about 62 percent of indications). The smallest share in building network social capital has its bridging diversity (measured, for example, by the level of participation in social organizations and the degree of general trust in people).

The above observations are also confirmed by the comparative studies of the European Social Survey (2022). The level of general trust of citizens and the scale of their membership in non-governmental organizations, as the main indicator components of bridging social capital in Poland, in relation to analogous indications in other European Union and OECD countries, is one of the lowest in years and usually amounts to 10-15 percent. With reference to the above observations, the authors will answer the research questions: how do the individual components of binding and bridging social capital (in the area of trust, norms and connections) condition innovative activity in the state of morphostasis (structural continuity and cultural context) of selected non-governmental organizations.

2. Social capital and innovation - a review of the literature on the subject

From the point of view of social sciences, the key factor determining the innovativeness of a given group or organization is its social capital potential. This is an important conceptual category, both in the theoretical and operational dimension, for the analysis of the relationship between structural and cultural conditions and the agency of the examined entities of action. Therefore, the concept of social capital will be conceptualized and the key variables describing it will be presented.

According to Margaret Archer (Archer, 1995, 2003, 2007, 2013, 2015), the components of social capitals existing in a given cultural context are the cultural system (ideas) and its socio-cultural, interactive manifestations (actions). The exemplary forms of social capital established over time, such as generalized trust and community of values, are a component of the cultural system, i.e. a set of ideas. They can be treated as social facts. On the other hand, socio-cultural interactions and actions include the remaining element defining social capital, conceptualized after James S. Coleman (Coleman, 1998), social connections and networks. Therefore, in order to diagnose and explain the mechanisms of creating specific contexts and innovative effects for a specific community, organization, taking into account their social capital, it is necessary to determine the conditions connecting individual forms of social capital (both resource-generating and resource-generating) with structural and cultural properties of a given group or environment.

The undertaken research will characterize the relationships connecting the social capital potentials of selected communities and organizations with the structural and cultural contexts conditioning their morphogenetic abilities, including innovative ones. The authors want to show that the quality of specific forms of social capital (trust, norms and connections) determines the effects of social innovations. It will be important to indicate the relationships between the resource-creating forms of social capital existing in specific socio-organizational frameworks and potential contexts limiting innovative activity in specific groups or organizations.

In the literature on the subject, you can find several dozen ways of defining social capital, the sources of its scientific application should be sought at the beginning of the 20th century (Adler, 2000; Rymsza, 2007). Two dominant concepts of this concept should be attributed to the main macrostructural theoretical paradigms: conflict theory and functionalism. The first emphasizes the importance of individual resources and exclusive group resources (environmental, social, corporate), which testify to the existing structural conditions, divisions, inequalities, tensions and conflicts, and not to a community of values or interests. Social capital understood in the convention of the conflict paradigm according to Pierre Bourdieu (Bourdieu, 1986) is the resources that an individual acquires while participating in more or less institutionalized groups that provide support to their members in the form of a permanent network of relationships based on knowledge and mutual recognition. According to Bourdieu, the position of an individual in the social structure is also determined by other types of capital: economic, cultural and the resulting symbolic capital.

Nowadays, more and more researchers emphasize the special importance of the network of social relations for multiplying individual resources of social capital. These are resources embedded in a social network, understood as part of a structural context (Lin, 2001). Janine Nahapiet and Sumantra Ghoshal define social capital as the sum of current and potential resources resulting from the network of relationships owned by operating entities (Nahapied, Ghoshal, 1998). According to Lin, social capital is both the resources that individuals or groups in the network have at their disposal, as well as the structure of their contacts (Lin, 2001). In turn, R. Burt claims that the network consists of positions and social relations in the network that provide access to specific resources and their flow within the social structure (Burt, 1992, 1997). For a full understanding of the phenomenon of social capital, both resources and relationships are important. Therefore, it seems appropriate to define that these resources, as the effects of individual or group activities in the network, are material (wealth), cultural (prestige) or political (power). They have the potential to perpetuate the existing social status quo (morphostasis) and introduce changes (morphogenesis).

The second theoretical stream of research on social capital emphasizes the importance of generalized trust, collective actions based on it, socially resource-creating, integrating, inclusive, building ties and networks of connections, created on the basis of an axionormative community. Contemporary integration concepts of social capital, most often drawing on the "associative" inspirations of A. de Tocqueville, focus mainly on finding answers to the question

about the sources of effectiveness of social institutions and identifying ways that allow given communities to solve their problems and implement innovations. Coleman, was one of the first to emphasize the integrative aspect of social capital. According to Coleman, the strength and scope of ties and the network of social relations are determined by: trust between actors of social, economic or public life, normative and institutional community, group and personal ties (Coleman, 1998, 1990).

Robert Putnam also understands social capital in a functionalist and integrative way. This refers to features of social organization such as networks, norms and social trust that facilitate network coordination and cooperation. The concept of social capital is explained in the context of the theory of rational choice, or rather overcoming dilemmas of collective action (Putnam, 1995). Putnam introduces an important theoretical and analytical distinction between two types of social capital: binding and bridging, which will be helpful in the following analyses. Binding capital is characterized by primary family groups, neighborhood groups, social groups, exclusive groups, connecting individuals with similar socio-demographic characteristics who have personal trust, to the exclusion of different people. Bridging capital is more universal. It connects people and groups with diverse socio-demographic characteristics. It allows you to build lasting ties and networks of cross-group and inter-group connections. This is particularly important for building communities, organizations and public institutions open to broadly understood innovations. Its role is defined briefly and precisely by the authors: "bridging capital is able to expand the boundaries of individuality (identity) and reciprocity" (Putnam, 1995).

In the literature on the subject, there are also concepts critical of the functionalist trend, defining the effects of too strongly functioning ties and social resources; e.g. as negative social capital or the concept of two types of social capital resulting from rootedness and autonomy, which were born in the context of criticism of the Putnamian approach (Fukuyama, 1997; Portes, 1998; Woolcock, 1998; Zarycki, 2004). These concepts are based on the criticism of the position that social capital is a universal good, positively affecting all areas of social life: human capital, productivity, economic success, democratic governance, as well as the well-being of the individual, generally in all aspects of human life. The allegations are formulated around the conditions that may arise as a result of too high a level of a certain type of social capital. They concern e.g. discrimination of individuals remaining outside the dominant group, resulting from the process of favoring participants of a given social structure with too strong potentials of binding social capital. An important role is also played by practices leading to the restriction of freedom, innovation, entrepreneurship and creativity, due to the excess of binding social capital prevailing in closed, traditional or extremely fundamentalist groups (Rymsza, 2007; Sztompka, 2016; Krzyminiewska, 2003; Portes, 1998; Bartelski, 2010).

3. Methodological Assumptions

With reference to the above conceptualizations of social capital and based on the ontological and epistemological assumptions of Margaret Archer's morphogenetic theory of structure and agency (Archer, 2013, 2015; Szlachcicowa, Nowalczyk, Morozowicki, 2013), an answer to the question will be sought: how the components of binding and bridging social capital (in the area of trust, norms and connections) determine innovative activity in state of morphostasis (continuity of structural and cultural context) of selected NGOs?

The elements of the model of morphogenetic causal analysis (Archer, 2015) will be presented below, which explains the course of morphostatic processing of the structural and cultural context and the scope of agency of the members of the surveyed NGOs. They will be the basis for the interpretation and structuring of the results obtained from focus groups.

- The distribution of structural, cultural and causative forces contributes to organizational morphostasis when there is agreement between the actors in the existing relations between the structural (group interests) and cultural context (dominant ideas and values focused on the survival of the group, NGOs) or there is an acceptance of tensions between structural and cultural contexts.
- In the case of an organization remaining in a state of morphostasis, ie the duration of the basic interests and values of its members, the existing resentmental structural and cultural contexts limit the emergence of innovations (an indicator of the state of morphostasis are attitudes aimed at maintaining the organizational status quo).
- Indication of the dominant type of reflexivity. The course and effects of potential innovative activities are also the result of the reflexivity of organization members who make decisions in the context of individual care for their practical projects, in relation to existing contexts.
- The morphostatic experience of contextual continuity is perpetuated by the dominance of the communicative type of reflexivity. An indicator of the existence of communicative reflexivity is the respondents' emphasis on the importance of structurally conditioned barriers to a greater extent than the opportunities and the possibility of overcoming them by members of the organization; lack of trust in the external environment, dominance of binding elements of social capital, i.e. based on family, neighborly and friendly ties.
- Agreeing mutual relations between operating entities within structural and cultural contexts blocks changes in the organizational status quo and innovation.

The analysis and interpretation of the results was carried out in relation to the research question posed according to the following scheme: organizing raw data - data descriptions - their interpretation. The order of research within the applied interview method, qualitative technique - focus group interview (FGI) - was determined by the focus scenario, in which the main research questions were operationalized. The interviews were conducted in the form of discussions led by a moderator and focused on the main thematic threads defined by research questions and included in the FGI scenario.

The method of analyzing data obtained through focus group interviews was determined by selected procedural recommendations of grounded theory. An inductive method of analysis of the collected research material was used. Therefore, no initial assumptions were made as to the nature of the relationship between the variables, no hypotheses were made that would be subject to verification during focus groups.

The selection of people for the research groups was purposeful. This means that obtaining fully representative distributions of socio-demographic characteristics in the composition of individual focus groups was not as important as saturation with people with maximally diverse and well-established attitudes, knowledge, judgments and opinions on the image, online communication and building relationships with the environment. It was also assumed, in accordance with the principles of grounded theory, that the data collected in individual groups will be compared with each other on an ongoing basis in order to extract codes from the focus groups that organize and interpret the research material. More generalized categories were then constructed (by grounding in similar cases) to show associations between categories (Konecki, Chomczyński, 2012).

192 people took part in the FGI qualitative study, including 96 leaders (presidents and board members of non-governmental organizations) and 96 members of non-governmental organizations. The study covered 24 Silesian non-governmental organizations. Focus group interviews were conducted with representatives of each of the surveyed organizations separately. When selecting NGOs for the research sample, equal percentages of representatives of organizations from the metropolitan area (cities over 100,000 inhabitants), urban (from 30,000 to 100,000 inhabitants) and small-town and rural areas (below 30,000 inhabitants) were taken into account. Respectively, rural communes and small towns were represented by organizations from Poręba, Łazów, Wojkowice, Lubliniec and Mikołów, organizations from Tarnowskie Góry, Mysłowice, Zawiercie, Piekary Śląskie from medium-sized cities, and respondents from Katowice, Sosnowiec, Gliwice, Bytom appear as representatives of large-city environments, Chorzów, Rybnik. In addition, the following variable was included in the configuration of the research sample: the main area of the organization's activity. Therefore, NGOs were selected for focus groups in equal proportions, four organizations each from the six most frequently represented areas of activity among all Polish NGOs, i.e. communities (including parish councils), residents' self-governments (housing estates, housing estates, housing cooperatives) and animal care (Feliksiak, 2021).

The group interview scenario included questions about the type of barriers and conflicts that hinder the introduction of innovations in the organization and its environment, the importance of personal and group envy and mistrust in the implementation of innovations, the existence of social capital components (in bridging and binding variants), such as trust in generalized others, the nature of connections with the socio-economic environment, local government authorities and the way of understanding the common good.

The Atlas.ti data analysis program was used to analyze the raw material from FGI. Created on the basis of grounded theory (symbolic interactionism). The reader can read about the method of coding (codes and codes family) of creating categories in the footnotes on page 12. Thanks to which it is possible to present in a graphic form the frequency distributions of opinion categories appearing in the FGI and the relationships between them.

4. Social capital and innovations in the state of organizational morphostasis. Result of research

For the purposes of the article, three forms of Coleman's social capital were referred to, which are expressed, respectively: 1) trust, and more precisely commitments, expectations and trust conducive to obtaining help from others, 2) norms and effective sanctions related to them, and 3) connections, i.e. access to information and social networks (Coleman, 1990). The forms of social capital presented below, which directly refer to the above conceptualization, will be referred to as resource-generating, in contrast to the forms which in the literature are sometimes referred to as negative, negative or dirty, and in this paper will be called as non-resource-generating (Levi, 1996; Wincenty, 2004).

The cultural morphostasis (status quo) in the Polish reality is sustained by the established, often taking the normative form of a social fact, dominance of patterns of behavior and relationships based more on binding (community, family and social, exclusive) than bridging capital (associative, task-oriented, inclusive). social as well as normative focus on the group (not common) good. Its dysfunctional manifestations for the social system are most visible in institutionalized interpersonal relations, e.g. among employees, applicants, clients and stakeholders of offices and public institutions, enterprises, members of non-governmental organizations. Wherever sustainable socio-economic development and building lasting and depersonalized networks of relationships, based on generalized trust (Sztompka, 2016) or a culture of trust, the presence of elements of bridging social capital is advisable. Its existence in a specific context contributes to the leveling of tensions and social distances resulting from strong, exclusive social ties (Theiss, 2007; Żukowski, Theiss, 2009).

Therefore, one of the aims of the research was to determine how the potentials of the individual components of binding and bridging social capital (in terms of trust, norms and connections) are distributed among the surveyed members of Silesian NGOs?

Of key importance, both in the theoretical and application context, i.e. when undertaking specific social innovations, is the level of trust between individual and collective entities. Therefore, during the focus group interviews, the respondents were asked: Who should be trusted most of all when introducing innovations: a) members of the organization, friends, family, or maybe b) all people equally?

It was noticed that when undertaking innovative activities, about 2/3 of the participants of the focus group interviews declared trust primarily in their closest co-workers, friends and family. She relied heavily on people from her closest circle of relatives and friends. She built social relations primarily within her primary groups, on the binding, non-bridge component of social capital.

This type of relationship is reflected in the following statements. The president of the board of an organization supporting the education of children and youth from environments at risk of social exclusion states: "…I think that trust between us in the board of the organization is at such a high level, first of all. With employees also on some other level, and then less and less". A similar opinion was expressed by a member of the board of an association whose goal is to support young people at risk of diabetes: "First of all, we trust each other, this is the first thing that starts here between us and that's where everything really comes from". Another participant in the same focus states that: "I think this is really familiar. Well, it's like… the trust you just have in your members. But in case you didn't know that we're going to introduce some new features. When the principal of the school is involved, we trust that the people who will use it, the people who will run the school, we just trust… conscientiously". On the other hand, a scout activist from a medium-sized city states: "Bearing in mind that the organization is an educational organization, I believe that you should trust the members of this organization and possibly the people who are gathered around this organization and their families, etc.".

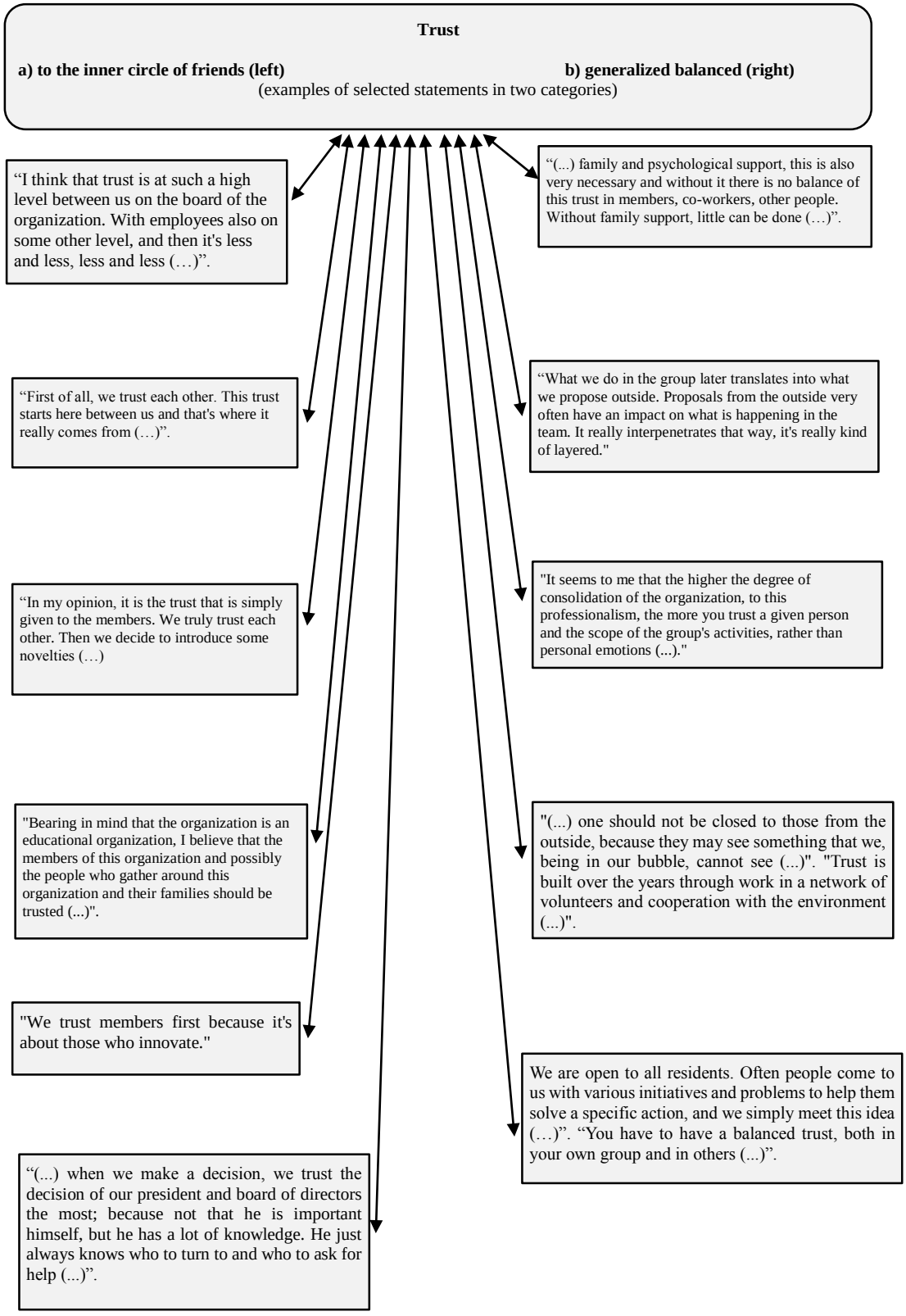

Figure 1. Code citation map: trust in two categories: a) to the inner circle of friends (left), b) generalized balanced (right).

Source: own work.

In addition, signs of balanced trust were observed among the remaining participants (about one-third) of the focus groups, i.e. both towards members of their primary groups and towards generalized others. The aforementioned group of respondents also declared trust in external participants of innovative activities. Such attitudes are an example of the evolution from the community ties characteristic of bonding capital to a relative balance between the components of bonding and bridging capital. For example, the president of an association whose aim is to activate disabled people from a large Silesian city says: "I believe that no novelty will be introduced if you do not trust the members and volunteers – that is, above all. You have to rely on them and trust them. On the other hand, family support, as a kind of psychological support for me, is also very, very needed, and without a certain balance of this trust in members, co-workers and family support, little can be done, at least in my opinion, in my opinion. In mature and efficient organizations, both in terms of structure and function, rooted in the socio-cultural environment, there is a process of limiting emotional ties in relations between members in favor of instrumental and task ties. A meaningful declaration was made by a member of the board of an association integrating local communities through historical reconstructions: "It seems to me that the higher the level of consolidation of the organization and its professionalism, the greater the trust in a given person and the scope of people's activities, more than personal emotions" and "what we do in the group later translates into what we propose outside. And outside inquiries...? Proposals from the outside very often have an impact on what is happening in the team". The balance between these two types of ties and trust among members of non-governmental organizations is also evidenced by the statement of the president of a student organization that operates both in its micro-, meso- and macro-environment: "I assume that it is worth trusting people who are just sitting in it or sat some time ago ... but also in order not to go too far in this direction, you should not close yourself off to those from the outside, because they may see something that we, being in our bubble, do not see. Sustainable social capital understood in this way, containing both a binding and bridging element, has been shaped over the years through painstaking work on the network of volunteers and cooperation with the broadly understood environment of the organization.

The second classic component of social capital, in the functionalist approach, are norms, i.e. a set of shared norms and values, which in the presented research has been operationalized as the respondents' attitude towards the opposition: the good of the group versus the common good. Hence the question in the interview scenario: Does the organization focus more on the activities and problems of its own members, or is it more open to the affairs of all residents of the city/municipality/region?

Among the representatives of the surveyed organizations, three types of orientation towards the normative opposition were noticed: group good (i.e. primarily the needs of the members of the organization) versus the common good (mainly the needs of all residents of the city, region, country, generalized "other"), which concerned undertaking innovative activities. Two orientations dominated, equally often represented, focused on the common good: the first,

treating the common good as an autotelic value, not taking into account the needs of members of one's own group, and the second, balanced, which tries to combine the needs of both the general public and members of non-governmental organizations. An example of autotelic orientation (1) is the following statement of the respondents: "… we act for others in practically every possible way, no matter where we are… I don't know. Well, we have our headquarters in Gliwice and we certainly operate throughout Poland, and if we take the Internet into account, then all over the world".

An example of a balanced orientation are the following statements: "This organization is open to all residents. Yes, it's not closed" or "We are open to all residents. Often people come to us with various initiatives and problems to help them solve taking a specific action, and we just implement this idea" and "The organization mainly plays a role towards people from the city, it activates the inhabitants of our city. However, it also undertakes some activities for itself for the benefit of the members...".

Orientation towards the good of the group remained in a definite minority, with which less than every tenth respondent identified. The president of the board of one of the surveyed associations states: "The organization focused more on activities within its own members, and within other NGOs it did not meet the needs of other residents". In a similar spirit, the normative orientation of the organization, whose statutory activity is aimed at civic activation of the city's inhabitants, is assessed by a member of its board: "In our case, let's say, the organization, the most committed people and the rest of the members have always been in the first place".

The third form of social capital, understood by Coleman, are connections, which are usually defined as the scope of access to information, the degree of participation in sectoral, local, regional, national and international cooperation networks. The functioning of the network of connections is manifested by belonging or not belonging to a network of third sector institutions (NGOs), cooperation or lack of cooperation with residents of the local community, local government authorities and representatives of local or regional business circles, which in the first case build and in the second weaken the resources of social capital (question in the FGI scenario: What is the organization's cooperation with: a) city/commune authorities? b) with the inhabitants of the city/municipality? c) with business? d) with other NGOs?

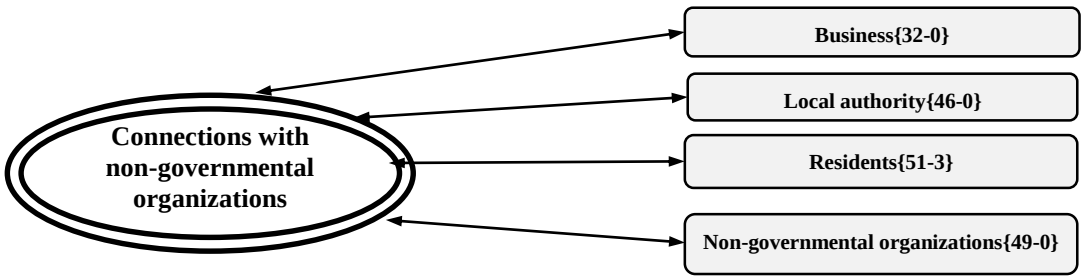

Figure 2. Perceptual map of the code family: connections with non-governmental organizations. Source: own work.

Most of the surveyed activists were able to name many different, permanent and mutual forms of links between their organizations and the broadly understood social environment: residents {51-3}, local authorities {46-0}, other non-governmental organizations {49 -0} and business representatives {32- 0}[1].

A member of the board of a historical reconstruction organization talks about connections with other non-governmental organizations - themselves: "First of all, a joint action, because if they lack people, we help them and vice versa, for example, we lack people for some shows for some event, so we can also talk with other bands and they will help us... It's kind of an exchange, probably kind of bilateral, kind of barter, kind of a favor for a favor and that's it, it's also nice, it's valuable, because we're riding on one horse and we want things to just happen and people benefited, so we help each other." The effectiveness of the actions taken increases with the expansion of bridging links embedded in a coherent system of norms and values. students, graduates, parents, and then it began to spread to other people in need. rebounds; twice a year, even at Christmas, some actions, e.g. collecting magnets for Sandra. Harvest for Ukraine. At that time, it also concerned the Pediatric Oncology Department in Gliwice and this activity is expanding to other cities, also on the international arena.

The key function of non-governmental organizations as institutions that constantly support and supplement the activities of local government authorities as well as connections and networks of mutual connections was mentioned by a member of the board of an organization that undertakes charity and integration activities among the homeless from one of the largest cities in Upper Silesia: "I always say yes - every non-governmental organization likes the city in some activity. They were, should be and are desirable because people do it, because then the city has to perform certain tasks for which it would have to pay".

5. Conclusions and discussion

Based on the results of qualitative research on the distribution of the three components of social capital (trust, norms and connections) and the assumptions of the morphogenetic theory of structure and agency, in particular the types of reflexivity as a factor conditioning social agency, it is assumed that organizational morphostasis occurs when the following endogenous conditions are present: limiting the innovative activity of the surveyed NGOs:

[1] The perceptual map (cf. Fig. 2) contains analyzes of transcripts of focus interviews obtained using the Atlas.ti program; concerns the network of connections of the surveyed non-governmental organizations with the environment occurring when introducing innovations. This tool enabled the generation of codes and their families, presenting the main categories of answers, which allowed for a transparent presentation of research results. For example, one of the most significant codes is called "residents" {51-3} and consists of two elements: the first is the degree of grounding (51), which is the number of code associations with quotes in a text document, the second (3) is coherence, i.e. linking a given code with other codes. This code has been included in the Code Family (CF): connections with NGOs.

(1) the predominance of the components of binding social capital over bridging, manifested primarily in trust in members of the organization, family and friends; distance to generalized others; links in the immediate environment, aversion to the subsidiarity principle, delegation of responsibility, limited cooperation networks with the socio-economic environment; (2) the agency of members is based to a greater extent on communicative reflexivity, i.e. focused on preserving the existing structural (power) and cultural contexts (norms and values similar to the idea of balancing between the good of the group and the common good) than on autonomous reflexivity, i.e. focused on changing these contexts; (3) most members of the surveyed organizations were focused on maintaining the contextual continuity of the group and organization, i.e. reluctance to new collective actors in NGOs, questioning the existing status quo, i.e. structural and/or cultural continuity; such a context petrifies the power structure existing in them, but also the level of tensions and social distances; (4) the appearance of the advantage of bridging social capital over bonding in about one third of organizations, manifested by trust in generalized others, links outside the immediate environment of non-governmental organizations, openness to the principles of subsidiarity, delegation of responsibility, a wide network of cooperation with the socio-economic environment. The above conditions make it easier to break the existing status quo in the organization, the emergence of contextual discontinuity (structural and/or cultural change), i.e. the introduction of morphogenetic elements facilitating the crossing of awareness and structural barriers when introducing innovations.

The presented results prove the existence of relatively large potentials of binding social capital and deficits of bridging capital in the surveyed organizations. Particularly important turned out to be the potentials of the trust component, i.e. the importance of trust in the inner circle of friends (members of the management board of one's own organization, friends and family) emphasized by two-thirds of the respondents, while at the same time a low potential of general trust. The presented results are a reflection of broader social processes. Historically conditioned, from the times of the partitions and the loss of its own statehood (1795-1918), perpetuated during the communist rule (1945-1989), a low level of bridging social capital and generalized trust in social partners or organizational interaction is a social fact in Poland in the sense of Durkheim, that is, it normatively regulates social and organizational relations through a commonly observed directive: cooperate with those you know, trust your own, do not trust strangers. The aforementioned social fact permanently determines today's Polish economic, social and political realities. It is one of the key socio-cultural factors negatively conditioning development, e.g. social innovation within civil society perpetuates existing social distances (Weryński, 2022). As it has been shown in many studies, including our own, it also makes it difficult to build institutionalized cooperation networks not only among members of non-governmental organizations, but also relations with scientific units, local government and state administration, and in the area of economic activity it hinders the development of sustainable business-for-profit networks. client (B2C), business for business (B2B).

In future research, in order to determine the agency and innovative potential of members of non-governmental organizations, it will be advisable, in addition to diagnosing the potential of social capital, to determine the level of indicators of two opposite types of respondents' reflexivity: communicative (morphostatic) and autonomous (morphogenetic); i.e. the importance of structurally conditioned barriers and threats, the chances and possibilities of overcoming them by members of the organization, their state of acceptance for the organizational status quo and the critical attitude to individual aspects of the organization's life, the scale of involvement in changes in the organization.

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