

MANAGEMENT IN SOCIETY 5.0. CASE STUDY

Ryszard BOROWIECKI^{1*}, Zbigniew OLESIŃSKI²

¹ WSB Academy in Dąbrowa Górnicza; borowier@uek.krakow.pl, ORCID: 0000-0002-2513-9450

² Vistula Academy of Finance and Business in Warsaw; zbigniew_olesinski@op.pl,

ORCID: 0000-0001-8682-4315

* Correspondence author

Purpose: The purpose of this article is to attempt to demonstrate the role of Integral Theory in explaining the upcoming managerial processes in Society 5.0.

Design/methodology/approach: The explanatory procedure includes both a deterministic and indeterministic approach. The authors of this paper analyze currently conducted empirical research on the functioning of organizational structures in Poland and abroad in production, services and public organizations, including the so-called third sector.

Findings: Research clearly indicates the slow, but systematic evolution of the organizational structures and the principles of their functioning. The so-called self-managing employee teams are increasingly being formed.

Research limitations/implications: Research seems to purposefully monitor the functioning of the organizations systems.

Practical implications: By constructing and anticipating social and economic processes we have attempted to identify managerial tools that are helpful in improving managerial activities to meet the requirement of the organization due to changing external conditions.

Social implications: Such a test is the concept of a teal organization as a new type of organization, appropriate for the emerging age of Society 5.0.

Originality/value: The research results indicate relatively fast changes in the functioning of enterprises in the field of inter-organizational cooperation.

Keywords: Society 5.0, integral theory, teal organization, inter-organizational cooperation.

Introduction

The rapid economic growth in the recent years allows for an optimistic forecast of the future, assuming the possibility of overcoming such difficulties as water scarcity, the greenhouse effect, environmental destruction, diseases and armed conflicts. Society of the coming era is described similarly to terms found in IT terminology as Society 5.0.

It seems purposeful to attempt to identify managerial mechanisms useful in monitoring and stimulating development processes.

The main hypothesis in this paper is an indication that, in the course of their development and at its present stage, the number of types of organizations will increase, and the development of inter-organizational networks – in which these organizations operate – will follow, leading to the development of the social structure towards an increase in the number of services.

The first auxiliary hypothesis is an indication of the need to increase the agility of emerging organizations, as well as the need to increase the role and importance of innovation. The second auxiliary hypothesis is the increase in the role and importance of soft factors in the course of the development of inter-organizational relationships. The third auxiliary hypothesis is the likelihood of the emergence of teal organizations under the conditions indicated above.

1. Attempts to explain the world

The outbreak of coronavirus and, therefore, the slowdown in globalization processes and the expected slowdown in economic growth, pose questions about the course of social processes, including social changes, in the coming years. Forecasts have appeared that promise serious international perturbations. These forecasts are in line with the reservations previously raised by scholars about the possibilities of social and economic development in the coming years. One of the texts containing the remarks mentioned above is the second volume of reflections on the future by Y.N. Harari *Homo Deus* – “... it could happen that we would achieve full victory in the old battlefields just to be surprised on completely new fronts (...), development alone will destabilize the ecological balance of the planet in countless ways (...) and despite all noise around environmental pollution, global warming and climate change, most countries have not yet made any serious economic or political sacrifices” (Harari, 2019, p. 30).

The analysis of managerial processes leads to case conceptualization of managerial instruments that will be better adapted to meet contemporary challenges than the existing ones. Of course, the lockdowns imposed on society in connection with the pandemic create certain opportunities, however, the global economy has faced similar challenges, such as the AIDS or Ebola epidemics, for many years. They cause a certain distress. However, it seems that, by maintaining proper discipline, it is possible to overcome them. K. Schwab, in his book *The Fourth Industrial Revolution* (Schwab, 2018), points to such factors affecting social processes as scientific progress, commercialization or the spread of innovation: “our societies are formed of many interwoven components, so a significant part of new solutions are co-created by these societies. For most societies, a great challenge will be (...) assimilating the new modernity, while maintaining and strengthening (...) traditional value systems” (Laloux, 2015). The Integral Theory already mentioned is a method of explaining the social and

economic processes taking place, assuming the possibility of integrating deterministic (modernism) and indeterministic (postmodernism) mechanisms in the process of explaining (Laloux, 2015, p. 117).

J.F. Lyotard was first to define the philosophy of postmodernism (Lyotard, 1997). The spiritual climate of postmodernism is characterized by an aversion to all global philosophical projects and a rejection of the myth of one reality. We are dealing with radical pluralism, a multitude of images of reality, a multitude of laws. Postmodernism emphasizes the critical revision of modern thought as imposed by Cartesianism.

Nowadays, the works of K. Wilber (Wilber, 2008) and J. Wade (Wade, 1996) give the possibility of integrating modernist ideas derived from Descartes with postmodernism and the acceptance of other, earlier theories. This theory has been termed “Integral” and it is a premise for creating organizational structures, the so-called teal structures, which open completely new possibilities for human activity in Society 5.0.

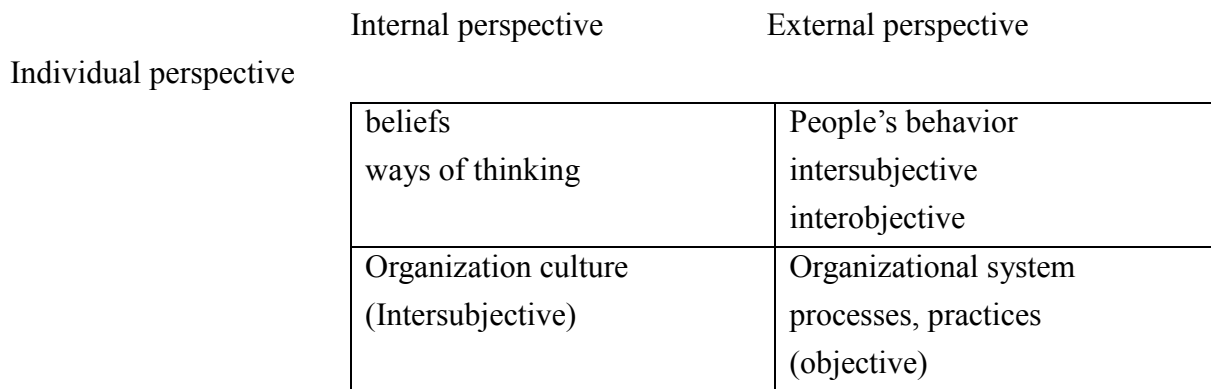


Figure. 1. Diagram of Integral Theory. Source: F. Laloux, *Pracować inaczej*, p. 273.

The integral concept combines the main currents of the philosophy of modernism with its rationality, objectivity, determinism, as well as with postmodernism and its subjectivity, indeterminism, as well as rationality with post-postmodernism.

Employee surveys have the value of an external, intersubjective perspective. By correlating survey results with the organization’s system, in which respondents operate, we can try to consider the relationship of mutual perspectives – individual, external (people’s behavior) with a collective, external perspective.

Relations are mutual – on the one hand, people operating in a given organization exert a certain influence on it, which can be seen in continuous (to some extent) modifications of the organization’s system without the participation of management. On the other hand, a formal organization system shaped by the knowledge and approval of management exerts an influence on employees to some extent. Thus, shaping inter-organizational relationships is both formal (in accordance with the adopted procedure) and informal (appropriate to the quasi-spontaneous behavior of employees).

Enriching our considerations with an internal perspective, we ought to consider the subjective influence – or more precisely, the attempt to influence – exerted by individual employees, who may seem to be acting in a certain way (for example, communicatively, which research may not confirm), so it has no impact on the organization's system.

Finally, the organizational culture (collective perspective, internal perspective) impacts the organization's system to a certain extent. It also affects people's behavior, as well as employee thinking, and vice versa.

In the course of surveys, there is some modification of employees' ways of thinking, and their transformation into people's behaviors, which – in turn – modify their ways of thinking.

The development of inter-organizational relations causes the modification of all fields of Integral Theory. The initiative to establish relationships comes from a specific employee of the organization, who follows the organization's norm or is against it. Establishing a relationship with an employee of another organization modifies the employee's way of thinking, which is reflected in a certain modification of people's behavior (external perspective, although still individual), in a certain modification of the organizational culture (collective perspective, but still internal), and in the modification of the organization's system, the result of the employee's way of thinking, people's behavior and organizational culture influenced by establishing a given relationship.

Of course, management may try to counteract attempts at such modifications by setting rules for the functioning of the organization's system, which can lead to breaking relationships or, on the contrary, lead to modification of the organization's system.

The use of the above explanation procedure leads to the concept of teal organization, i.e. an organization that meets the requirements of modern times. The emergence of this type of organization is conducive to the cooperation of such emerging teal organizations with other innovative organizations, which generates soft management factors, such as knowledge, human capital, social capital, trust etc.

The changes taking place in the organization require meeting agility requirements.

The process of shaping self-managing employee teams, inter-organizational cooperation, the creation of soft management factors, and shaping agility, all lead to an increase in innovation conducive to accelerating the process of shaping the organization's teal (see Figure 1).

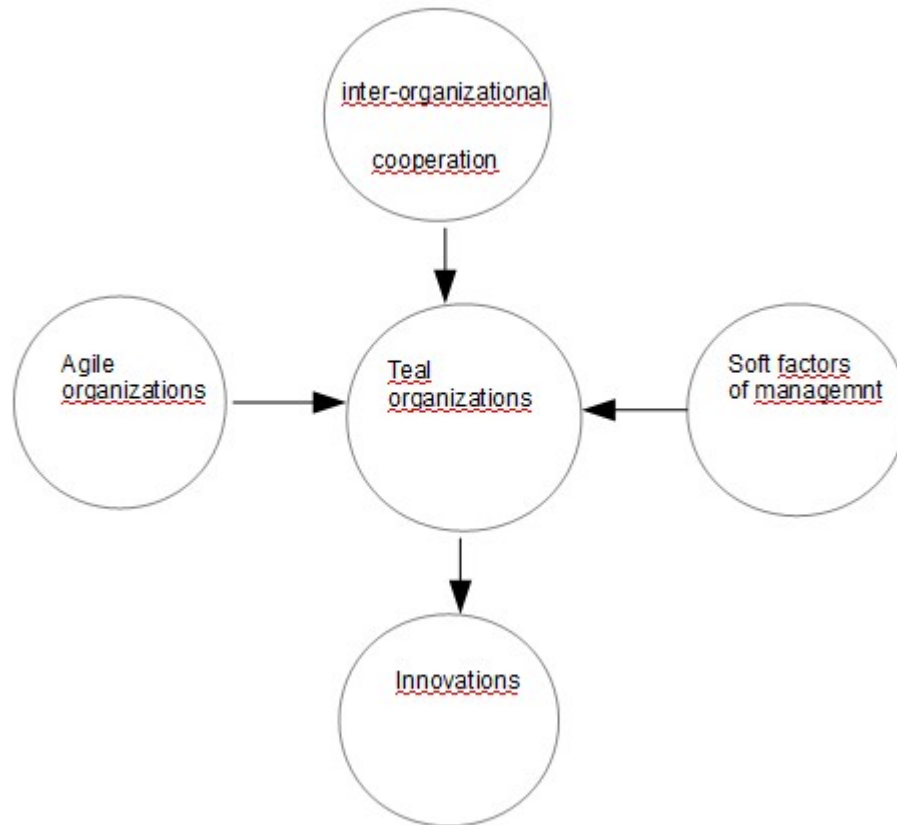


Figure. 2. Determinants of teal organization formation. Source: own study.

2. Inter-organizational cooperation

As mentioned in the introduction about the role and importance of inter-organizational cooperation (see also Fig. 20), Niall Ferguson indicates in *The Square and the Tower: Networks and Power, from the Freemasons to Facebook* (Ferguson, 2020) that the concept of a network came into general use only at the end of the 20th century. In Poland, the phenomenon of the institutionalization of inter-organizational relations has been studied in the management and quality sciences since the 1990s (in the course of research on clusters), and as a network at the beginning of the 21st century in the works of J. Stachowicz. Today, we can finally use a relatively extensive body of empirical research.

Table 1.*Characteristics of cooperation due to the use of assistance in performing a task*

Frequency of cooperation Organi- zation type	Very often (daily)	Often (a few times a week)	Sometimes (once a month)	Rarely (once per quarter)	Occasionally (once a year)	No answer provided	Total
Municipality self-government	5	28	13	10	4	230	290
County self-government	2	31	13	11	6	227	290
Voivodeship self-government	2	18	3	16	9	242	290
Voivodeship Office	5	23	8	15	9	230	290
Marshal's Office	4	20	8	8	7	243	290
Town Office	8	26	19	3	4	230	290
Local self-government	3	24	8	8	8	230	290
Agency for Restructuring and Modernization of Agriculture	2	1	3	9	5	270	290
Fundacja Promocji	5	12	3	12	4	254	290
Business incubator	6	12	9	10	0	253	290
Media	16	24	10	15	4	223	290
Schools	13	21	7	11	7	231	290
Banks	35	26	5	4	0	220	290
Enterprises	44	32	4	7	2	201	290

Source: Olesiński, 2005, p. 88.

Long-term surveys indicate the growing role and significance of inter-organizational cooperation on social changes leading to development. As an example, compare the results of the survey on inter-organizational cooperation from 2002-2003 with the research carried out in 2017. In the first ones, surveys were carried out in 290 enterprises from the Świętokrzyskie Voivodeship. As can be seen in Table 1, a significant proportion of respondents did not answer the question about the cooperation of their own organization with the entities from their environment. On average, approx. 230 people did not answer, i.e. over 80% of all respondents.

In 2017, A. Rzepka and A. Olak conducted a survey of 202 enterprises of the Podkarpackie Voivodeship. When asked about cooperation (Table 2), approx. 40% of respondents replied that they did not cooperate, and approx. 60% undertook such cooperation.

Table 2.

Knowledge of the company's employees about cooperation with other organizations and institutions to exchange knowledge and information (N = 202, in %)

Frequency of contact Organi- zation type	Never 1	Once every several years 2	Several times a year 3	Several times a quarter	Several times a month 4	Several times a week 5	Once a week P
Enterprises	24.8	5.4	21.8	12.9	15.3	3.9	5.9
Consulting company	24.7	5.4	27.7	11.4	13.4	4.5	3.0
Scientific center	67.3	4.0	15.3	5.9	5.0	1.5	1.0
Municipality	36.1	7.9	19.8	10.9	11.4	9.9	4.0
County	40.1	10.9	21.8	12.4	6.9	5.0	3.0
Voivodeship	56.9	11.9	18.8	5.0	3.5	2.5	1.5
Government Agency	78.2	6.4			2.5	2.0	0.5

Source: Rzepka, Olak, 2017.

One cannot directly compare the results presented in Table 1 with the results from Table 2, but it should be noted that a significant change is observable over a dozen years.

Multiple empirical research indicates a close relationship between the development of inter-organizational cooperation and the creation of the so-called soft management factors, such as knowledge, human capital, social capital and others (Olesiński, Rzepka, Olak, 2017; Olesiński, Rzepka, Sabat, 2016). Based on the research, the formulation of the view on the increase in the creation of soft factors, along with the increase in the cooperation network, seems legitimate (Borowiecki, Rojek, 2015, 2012, 2011).

3. Agility

Agility is the company's ability to respond correctly and rapidly to emerging changes, as well as the ability to survive in unpredictable market conditions by producing the right response to emerging turbulence in a market environment. P. T. Kidd is considered a pioneer of research in this area (Kidd, 1994, Appelo 2016).

In the already cited studies, questions about agility were sent to 202 enterprises in the Podkarpackie Voivodeship (Rzepka, Olak, 2017). Table 4 presents the answers to one of the questions. The results seem optimistic for about 20% of the respondents as an adjustment to new conditions is not burdensome.

Table 3.*Degree of ease in adapting to new conditions (N = 202), in %*

	Very easily	Easily	Hard to tell	Difficult	Very difficult
Adapting to the requirements of new equipment	28.2	49.2	7.9	12.4	2
Adapting to work with a team practicing other work methods	19.8	53.5	10.9	14.9	1
Simultaneous work on several projects	10.9	47.5	20.3	17.3	4
Adapting to new work procedures	15.3	51	16.3	14.4	3
Good relations with people from various activities	33.7	43.6	8.4	9.9	4.5

Source: Rzepka, Olak, 2017.

It can be assumed that, if organizational structures are modified, the aforementioned 20% of respondents will easily adapt to the working conditions typical of a teal organization.

In the model analyzed in the article (see Fig. 2) we correlated agility with innovation. It seems that an assessment can be made, that at least a dozen or so of the 202 surveyed enterprises are mentally prepared for implementing innovations.

By analyzing Tables 2 and 3 in the previous chapter, as well as the observation of a significant positive change towards establishing cooperation, it can be stated that, within a few to several years, several dozen percent of the surveyed enterprises will be willing to implement innovations and modify team work rules in accordance with the teal requirements revolution.

The COVID-19 pandemic took entrepreneurs by surprise and forced them to adapt quickly to changing conditions. Many companies in almost all sectors had to find themselves, whether they wanted to or not, in a new reality.

In April 2020, Livespace conducted a survey using an online questionnaire. 80 respondents took part in the survey – mainly people working in companies selling in a business-to-business relationship (82.5%) and with the Polish majority capital (91.25%). 50% of the respondents were company owners or managers, another 50% were heads of sales departments. 31.25% of respondents worked in companies with less than 10 employees, while 48.75% worked in organizations with 11-50 employees. People from companies with more than 51 employees made up 20% of the respondents.

The survey found that 65% of respondents reported a decline in sales caused by the COVID-19 pandemic. Only 7.5% of the respondents indicated that the pandemic had a positive impact on their business. For 50% of the respondents, the biggest challenge was the need to change their plans and strategies.

According to the report, 65% of the surveyed companies were negatively affected by the coronavirus pandemic, which led to a drop in sales.

4. Service society

In the era of hyperautomation growth, it is certain that employment in the production process and agriculture will be reduced. It seems, however, that thanks to the increase in the standard of living, it will be possible to create more and more new services, allowing to creatively spend time and constructively plan life and life paths of personal and group development. An example of such a development of a new type of service is the development of medical tourism, which includes carrying out medical procedures to improve well-being (e.g. improvement of facial features) and comfort of life (removal of ailments arising during life or as a result of injuries, such as skin folds, scars etc.).

A. Wiśniewska conducted research on 214 medical tourism enterprises from the following voivodeships: Małopolskie, Śląskie, Mazowieckie, and Zachodniopomorskie. 96 of the surveyed enterprises had a regional range of activity, 90 nationwide, 18 local and 8 international. 96 surveyed companies have been operating on the market for 8 or more years, 80 of them from 4 to 7 years and 24 of them from 1 to 3 years. Of the 214 enterprises surveyed, 108 employed 10 or more employees (small enterprises), and 106 employed up to 9 employees (micro enterprises). 190 enterprises operated in towns, while 14 operated in the countryside. There were 182 enterprises with Polish capital and 24 with foreign capital. The vast majority of enterprises were managed by women – 184, and only 26 by men. The CEOs in 72 cases were born in 1971-80, in 68 cases in 1981-90, in 38 cases in 1961-70, in 24 cases in 1991-2000 and in 10 cases before 1960. 118 people had secondary education and 92 higher education (Wiśniewska, 2020).

Table 4.

Motivation for using treatments and the profile of respondents (in %)

Respondent profile		N	Competitive price	Discretion	High Quality	Inaccessibility at other locations
Sex	Female	184	91.2	48.4	64.8	56
	Male	26	100	53.8	92.3	76.9
Date of birth	pre 1960	10	100	25	75	25
	1961-1970	38	89.5	52.6	89.5	68.4
	1971-1980	72	94.4	50	63.9	55.6
	1981-1990	68	91.2	47.1	58.8	61.8
	1991-2000	24	91.7	66.7	75	58.3
Education	Secondary, vocational	118	93.1	50	62.1	51.7
	Higher	92	93.5	52.2	78.3	67.4
Location	Poland	182	92.2	50	70	56.7
	abroad	24	91.7	50	75	75
Location of business operation	Town or city	190	91.5	54.3	67	61.7
	countryside	14	100	28.6	85.7	14.3
Number of employees	0-9	106	90.6	39.6	66	52.8
	10 or more	108	94.3	60.4	71.7	64.2

Cont. table 4.

Period of operation on the market	1-3 years	24	100	41.7	58.3	41.7
	4-7 years	80	90	50	62.5	57.5
	8 years or more	96	91.5	51.1	78.7	63.8
Range of business activity	Local	18	100	33.3	66.7	33.3
	Regional	96	89.6	47.9	64.6	45.8
	Nationwide	90	93.2	56.8	72.7	79.5
	International	8	100	50	100	50
Range of business activity	Małopolskie	42	90.5	47.6	76.2	66.7
	Śląskie	70	85.7	57.1	68.6	48.6
	Mazowieckie	60	96.7	40	63.3	63.3
	Zachodnio-pomorskie	28	100	50	78.6	50
Total		214	92.5	50	68.9	58.5

Source: own study based on research.

The above table presents the reasons for using individual treatments, broken down into the profile of the respondents. As can be seen, the respondents conducting their activity in the Zachodnio-pomorskie Voivodeship significantly more often indicated a competitive price. Representatives of companies employing at least 10 employees were relatively more inclined to ensure discretion. Men born in 1961-1970, having a university degree and working in companies operating on the market for at least 8 years, were more likely to opt for high quality.

In addition to that, inaccessibility at other locations was significantly more often indicated by men, people with higher education, city dwellers and people working in nationwide companies. Other motives were relatively more often mentioned by those born before 1960, those with higher education, foreigners, residents of rural areas and those employed in companies operating on the market for over 3 years.

The aforementioned study shows a degree of openness or enthusiasm for taking on new challenges. Of course, in the event of recession or other difficulties, such as natural disasters or illness, this enthusiasm will diminish, but even in such conditions it provides capital for constructive action in the event of new opportunities.

Innovation and modern technological solutions for the industry were the subject of the “Innowacje 4.0 – Przyszłość Tworzenia” Autodesk conference, which took place on June 4, 2019, in Warsaw, Poland. It was attended by 200 managers of all levels from the industrial sector. The participants were asked about the opportunities that Industry 4.0 could offer their companies. Almost two thirds of the respondents expected “rapid changes” and more than half expected “flexibility in production”. The introduction of solutions that were in line with the Fourth Industrial Revolution could also result in the possibility of sales growth (36.6%). Almost one in three respondents expected greater customer satisfaction and an increase in the profitability of their company. The most important factors determining competitive advantage were innovation (69.3%), customer satisfaction (63.4%), product development (45.5%) and production flexibility (42.6%) (Innowacje 4.0 – Przyszłość Tworzenia / Autodesk, 2020).

As the above study shows, the digitization of industrial and business processes is inevitable. Polish industrial companies are facing the opportunity to make their business more dynamic. It seems that managers are aware of the importance of speed and flexibility for Polish industrial companies.

5. Summary

By constructing the anticipated development of social and economic processes, we have attempted to identify managerial tools that are helpful in improving managerial activities to meet the requirements of the organization due to changing external conditions.

Such a test is the concept of a teal organization as a new type of organization, appropriate for the emerging age of Society 5.0.

A teal organization is characterized by a flat organizational structure and self-managing employee teams functioning within it. Both F. Laloux (Laloux, 2015) and A. Blikle (Blikle, 2017) point to examples of teal organizations. It is estimated that around 10-15% of all organizations will be teal-type in a few to several years. The authors of this text formulate the hypothesis that acceleration of the process of creating a teal organization (which is a process beneficial to social and economic development) can occur when a group of factors is present. The authors point to the role and significance of the agility phenomenon described by Kidd (Kidd, 1994) and in Poland by A. Olak (Rzepka, Olak, 2017) and correlated with the agility factor of innovation.

In the first auxiliary hypothesis, the authors pay attention to the role and importance of inter-organizational cooperation and to the creation of soft management factors correlated with cooperation, such as knowledge, human capital, social capital and trust.

The correctness of auxiliary hypotheses 1-3 allows to acknowledge the validity of the thesis of the article about the direction of changes in organizational structures in the course of shaping Society 5.0 towards the development of structures helpful in the development of the service sector.

6. Recommendations for practical application

The quoted research results indicate an increased level of activity and creativity in newly established enterprises. An increasing number of emerging enterprises operate in the service sector.

1. The research results indicate relatively fast changes in the functioning of enterprises in the field of inter-organizational cooperation. Hence, it seems purposeful to monitor the functioning of the organization's systems, which makes it easier to make adjustments to their operating rules on an ongoing basis towards flat structures with self-managing teams.
2. The quoted research results on employee attitudes towards agility indicate a varying degree of tolerance for change. Hence, proper selection of employees requires considerable experience.
3. It seems purposeful to gradually implement new solutions in the face of constant IT innovations, as well as to promote the need to make changes, while being assured by the management of the organization that they will make changes successively, taking into account the possibilities of older employees to adapt to changes.
4. Popularization of hyperautomation and further rapid development of information technology, allowing the widespread application of Artificial Intelligence in automation, raises concerns that AI may get out of control under certain conditions. A closer look at the qualities of the human mind indicates, however, much greater properties than just intelligence. K. Wilber draws attention to the occurrence of developmental lines in the human mind, such as cognitive, emotional and moral values, as well as needs and spirituality. It seems, however, that the problem is even more complex and more of such lines can be identified, including those that do not currently attract much interest. It can be predicted that a human being is able to constantly control the creation, development and functioning of automated machines, so that they will not interfere with human life against ones will.

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