

THOUGHT EXPERIMENT AS A FORM OF INITIATING AND SUPPORTING INNOVATION RESEARCH

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According to Karl Barth, theologians have no choice but to speak about God, but at the same time theologians are human, and therefore unable to say anything about God (Galli, 2019).

Purpose: The article is an attempt to demonstrate the author's unconventional way of presenting a method of generating innovative ideas. Thus, the previous patterns of research procedure were replaced with various literary forms in order to activate the intellectual capital of the people taking part in the study. In addition, the authors presented ways of using a thought experiment as a form of creating innovative solutions in various fields of science.

Methodology/approach: the authors, wishing to go beyond the boundaries set by well-known quantitative and qualitative research methods, propose their own approach to generating innovative ideas.

Limitations: Aware of the fact that divagation and deliberation create abstractions, they took the trouble to structure them through a series of short intellectual narratives, accompanied by a rational commentary.

Implications: The article explicitly identifies roles: that of the scientist, whose opinion appears at the beginning and end of each divagation and deliberation, and the role of the intellectual who articulates these divagations and deliberations.

Value: As will be seen in the examples, a thought experiment is not a compact monolith concerning the essence of the issue, but a rather free-flowing presentation of loosely related issues. It is an attempt to encourage: students, managers or educators to freely articulate: abstract, original and therefore non-standard considerations, which can stimulate generating all kinds of ideas: in private life, in companies, and in the sciences, humanities and social sciences.

Keywords: divagation, deliberation, innovation, emergence, information, thought experiment.

Introduction

The authors of this article presented a novel form of creating innovation which can be applied and used in various fields of science. When using it, one should take into account that the research process *consists of a number of procedures which admittedly do not guarantee solutions but significantly help to achieve them. It can also be said that the choice of heuristic method implies the value of new ideas that can influence the development of a company or the explanation of the processes and phenomena occurring in it* (Czakoń, 2014 pp. 134-147). The assumption is that in order to lead to the development of unconventional solutions, it is necessary to reach for ways beyond the known patterns of action. It is often mistakenly assumed that creativity is an innate human trait, yet in many cases it can be developed, provided that one knows how to use intellectual potential – their own and other people's. Thought experiments, as the new form of research is called, can be used where it is difficult to carry out the experiment in physical form (Mach, 1976). Its advantage is that it only proposes hypothetical solutions to problems (Tondera, 2017) and, despite its many flaws, it has proven to be a good research tool used in: sociology, physics, mathematics (Kolak, 1993) and philosophy (Parafit, 1984), and can therefore be applied in other scientific fields. In order to make the content addressed to a wide audience more attractive, this presentation of the procedure algorithm took the form of rather abstract statements that do not take place in the real world, but only in the mind of the researcher (Brown, 2001). It is here that, using the "lever of imagination" (Dennet, 2015), an individual articulates different action scenarios which were difficult to identify in a schematic way of thinking (Norton, 2004). Presenting the essence of a thought experiment, it is illustrated by means of rather loose divagations and deliberations which are presented in the form of short texts designed to inspire participants in various types of focus groups to think abstractly.

They concern the differences in the perception of: phenomena, problems and events from the perspective of intellectuals and scientists, where the former create abstract theories which find their way into the rational thinking of the latter, thus becoming an inspiration to expand knowledge in various fields.

A thought experiment should be seen as a new form of inspiration which focuses mainly on generating innovative ideas, not only where *the mechanical application of methods produces mundane data and routine reports* (Charmaz, 2009, p. 25) but also where *a keen eye, an open mind, a trained ear, and a steady hand can bring a researcher closer to the subject and are more important than developing methodological tools* (Charmaz, 2009, p. 25). The method presented is a tool to see ways of solving problems, not only on the basis of preconceived axioms and assumptions, but primarily on the basis of abstract forms of reasoning, since *researchers, disappointed by the results obtained from quantitative methods, are looking for new ways to observe and analyse social and organisational reality* (Charmaz, 2009, p. 25).

In addition, its application makes it possible to search for an discover, already during the research phase, phenomena that no one had previously realised existed.

A thought experiment is a modification of the "grounded theory" method, whose creators *treat theory building as a process, it is not the verification of pre-constructed hypotheses on the basis of subsequently collected data* (Konecki, 2000, p. 27). As a result, it can be regarded as *a thought process in which vague, inexact notions (concepts) are clarified and strictly defined* (Stobiecka, 2010, p. 42). Precisely these concepts are supposed to contribute to the creation of unconventional ideas related mainly to innovation. A research space prepared in this way gives the researcher a large degree of freedom with regard to choosing the place, time and circumstances of data collection and allows the researcher to take up topics that go beyond that which is *objective and measurable, which makes it possible to address issues related to judgements, values, experiences, i.e. that which is individual* (Plich, Bauman, 2001, p. 277). This unconventional approach is justified when it comes to identifying a *specific cause as an explanation of a phenomenon, which simply means subsuming it under some universal law or set of such laws* (Blaug, 1955, p. 39). Considerations are treated here as derivatives of empirical analyses, and the concepts built upon them are constantly being modified and revised, as a thought experiment *is an attempt to oppose the traditional academic methods (from a desk) of theory building* (Konecki, 2000, p. 26).

Constructing a unified research paradigm that would enable the practical use of the thought experiment method is practically unfeasible, as the process of incubating innovative ideas occurs differently in each individual. Therefore, the authors have chosen to present different ways of generating innovative ideas through a variety of literary forms. These include short: stories, essays and even the abstract considerations of those taking part in the study, and they are meant to inspire others to creative work. Thanks to such measures, the place and time of the thought experiments will not be precisely defined, while the content will be given a storyline to make them understandable. Extensive sections of the thought experiments are highlighted in the text using enlarged paragraphs and reduced spacing in order to differentiate them.

Essence of a thought experiment

The main research tool in the thought experiment will be the intellect of each individual who contributes to the articulation of an innovative idea (Andrzejewski, 2012). It is related to various issues of material and immaterial nature (Grabarczyk, 2009) that do not take place in the real world but in the imagination of the researcher (Brown, 2001). The results are then only certain imagined states of affairs which have never occurred or cannot occur in nature (Norton, 2004). Some scientists inspired by the effects of using thought experiments in the field of

mathematical and natural sciences¹ (Kolak, 1993) began to use them to multiply knowledge, making them an important methodological tool in areas such as physics, philosophy or analytical ontology (Parfit, 1993). The use of thought experiments is also justified because the scope of performing typical experiments is: time-consuming, severely limited, and involves various costs, while the results obtained may already be out of date even after a short period of time. Thought experiments can be an important determinant of creating innovation in various fields of science and spheres of social life by giving them a dimension of logical reasoning that takes into account the meaning of the considerations carried out (Peirce, 2007).

Furthermore, a thought experiment should be treated as philosophical considerations underpinning the creation of a new perception of the surrounding: phenomena, objects and processes. They are exercises in recognising different types of deficiencies in theoretical studies, which will have to be applied in practice. This is an essential skill for using analogies in the process of identifying the similarities and differences between the studied: objects, events and processes.

Thought experiments are primarily concerned with philosophical considerations that gave rise to all sciences. In this study, their form in many cases refers to biblical texts, as these have for centuries been the source of inspiration for all: discussions, disputes and polemics – thereby contributing to the civilisational development of our planet. Proceeding in a similar manner, the authors thus wish to signal a method of analysing phenomena that do not have a reflection in the real world, but occur only in people's imaginations. The numerous references to Old and New Testament texts are merely an inspiration for further research. In addition, they provide a convenient context for a comprehensive consideration, stemming from the fact that they are familiar to the majority of the public.

Example 1.

We live in flats, but we do not always know who designed and built them, and the same goes for cars, whose makers we do not know. This ignorance of historical facts does not prevent us from unreflectively operating all sorts of objects, and today no sensible person would say that there were no builders and constructors of these things. In general, we can say that we live in a world of objects whose creation we do not question because we are guided by: common sense, the opinion of authorities and our senses. The situation changes dramatically in relation to the existence of God. Earth dwellers, knowing very little about Him, increasingly conclude that their planet and the universe as a whole are not His creation, despite tangible evidence in the form of perceived flora and fauna. It can be assumed that one of the reasons for this is the

¹ Boolean algebra originated in the 15th century and functioned as a curiosity for years until the 20th century when it became the basis for the development of a data storage system for computers.

mythologisation of the essence of God that has been going on for centuries. For He was portrayed as a persona akin to a human being, using the following words *Then God said: Let us make mankind in our image, in our likeness* (Gen. 1:26-27). *So God created mankind in his own image, in the image of God he created them;* (Gen. 1:26-27). This message empowered many people to see Him through the prism of their own: merits, demerits and emotions, which became less and less credible as civilisation developed. The second reason for indifference or even hostility towards God is probably the ideologisation of his person by various bodies which gain benefits such as power, privileges, prestige or money from this fact.

To de-mythologise and de-ideologise God, should be to stop comparing Him to man and giving Him the attributes of: kings, chiefs, judges or victors. On the other hand, recognising the existence of a Higher Form of Intelligence allows us to call Him the Alpha and Omega, which makes it possible to find His phenomenon even in the theory of evolution, where by leaps and bounds:

- from nothingness, matter is formed, consisting of more than 110 elements which, united by intra-atomic forces, form its various forms,
- from the matter arises flora, i.e. organisms rooted in the soil that are able to reproduce their structure within a certain period of time,
- from the flora emerges the fauna, and it will be a world of creatures moving through time and space,
- from the fauna emerges *homo sapiens* endowed with the consciousness of their existence, who, by virtue of the intelligence they possess, realise the importance of the phenomena around them and, in time, by making use of them and valuing them, are consequently able to direct them and, by changing them, adapt them to changing needs.

This example shows how numerous inaccuracies can be seen in the proposed: theories, concepts or reasonings, which will force those taking part in the study to re-examine the content of their ideas in order to avoid numerous misunderstandings.

Example 2. Exponential image of evolution

The exponential image of evolution can be related by analogy to information, which has been perceived differently at each stage of evolution. Thus, it can be seen that information in the world:

- of flora – focuses only on the response of organisms to stimuli such as light, water and temperature,

- of fauna – is attributed to individuals who, using instinct, to varying degrees manage only to: read, create and transmit it,
- of people – is subject to constant: processing; storing transmitting, summarising, condensing, compiling, updating, filtering, selecting, interpreting, substantiating, exchanging, buying, selling and transferring in time and space.

This manipulation and relativisation of information has resulted in it becoming an isolated structure (see: artificial intelligence) whose existence becomes independent of humans. "The power of information lies in the fact that it is an indispensable instrument for the discovery and construction of knowledge" (Materska, 2007, p. 45). In such a context, analysing the successive phenomena described in the Bible, it can be seen that information was most often created by people using the name of God by means of numerous: messages, commands and prohibitions that had to be obeyed in order to gain His (hypothetical) favour. The process of de-mythologising and de-ideologising the essence of God has "lost somewhere along the way" His essence and inspired scientists to continue research in the field of: physics, sociology and psychology, with the aim of expanding the use of information, the final form of which is artificial intelligence.

The changes taking place in the modern world can no longer be explained using only: Old Testament, historical and inadequate examples. Thus, the biblical account, from the point of view of modern knowledge, has become unreliable, while the concept of the spontaneous creation of the world has become suspect over time. Such a situation could happen again today if decision-makers fail to take into account the turbulent changes taking place in their environment.

This stalemate can be attempted to be resolved by adding to the process of the appearance/creation of the world, the well-known concept of creating additional information, and that is "emergence", i.e. an unknown, undiscovered and unexplored driving force. Believers recognise it as a manifestation of God's intervention in the history of the world, while for atheists it is the phenomenon of the spontaneous emergence of new constructs from existing structures (Dworak, Kretek, 2021)².

² The term "emergence" was introduced into the language in the second half of the 19th century by George Henry Lewes, and the word itself is derived from the Latin term "*emergeo, emergere*", meaning "to egress", i.e. the emergence of qualitatively new characteristics, configurations and behaviours interacting with each other in a given set. Analysis of this phenomenon resulted in the observation that the same causes do not always produce the same results. John Stewart Mill, understood emergence as the impossibility of assessing the effects of the combined action of several factors when the effects of each factor separately are known. For this reason, he sought an answer to the question – what is the combined effect of several additive causes acting together, i.e. causes that can be added to each other, and multiplicative causes – comparable to a synergistic effect. In effect, he showed the impossibility of determining consequences when causes are known only on the basis of the principle of assembling given quantities, and he called this condition an emergent phenomenon. See: J. Dworak, H.A. Kretek, *Determinanty przesyłania informacji. (Etno-emergenting)*, [in:] „EUNOMIA. Rozwój Zrównoważony – Sustainable Development”, (ed) H.A. Kretek, Publisher of the State Higher Vocational School in Racibórz, Racibórz 2021, No. 2(101) 2021, p.123.

This example shows that it is expedient to introduce a third form of reasoning into any consideration using the thought experiment method. In this case, this is emergence which shows that in many cases solutions to problems should be sought not only by applying already known concepts but also by applying other ways of interpreting unfamiliar events.

Example 3. Social exploration

In the past, the scope of research has been defined, delineating the area of political discourse and exchange of views in modern society. It contains every: topic, opinion and assumption that resonates with the public. It is characterised by the fact that: in this discourse, any differences arising from the social status of the interlocutors are suspended for a certain time; it has a uniform character; it is adapted to the requirements of local communities; it excludes private problems and will address the common good; and, finally, it makes a clear distinction between the problems of state and society. It is important to remember that the public sphere is riddled with conflicts that can be resolved through: discussions, debates and compromises.

In the thought experiment, considerations in the public sphere are illustrated by the following text:

This time we sat in the café, somewhat discouraged by the lack of further topics for intellectual discourse, as the autumn weather did not favour vigorous polemics. Slowly, however, we began to look for problems that many have pondered so far, but cannot find enough arguments to give a comprehensive answer to the following question – *Is there any Being in the universe that can be called a Higher Intelligence, Providence or God.* The search for explanations was going rather sluggishly until a friend of mine turned the problem around and proposed a discussion on – *how would the fate of our civilisation have been shaped had someone not "invented" God?* Immediately there was a flurry of responses from the participators, which will be quoted verbatim:

- civilisation would never have come into being, because it was the first abstract concept that later generated the foundations for the emergence of philosophy,
- without this abstract Notion, there would be no society, because it would be impossible to organise a system: governance; organisation and hierarchy, where anointed persons are subject to subjects,
- individual members of society would not be told that something is good and something is bad, i.e. they would not be able to distinguish between positive and negative behaviour,
- people acting in His name since the dawn of time would have had no chance to define the framework of mentality of the tribal groups, states and nations (in the sense proposed by Samuel Huntington (Huntington, 1997)),

- it is the worship of God that has contributed to the creation of a holistic; integrated and unified society with its own identity. It was His presence that manifested itself in the successive centuries,
- societies would have no chance to: create, cultivate and change customs, rituals and traditions,
- there would be no basis for:
 - passing on to the next generation a value system that makes it possible to organise sustainable social structures,
 - communicating through symbols,
 - development of standards, model rules and ways to control compliance with the law.

After a few hours, we concluded the discussion by claiming that civilisations such as Western, Latin American, Orthodox, Byzantine, African, Islamic, Hindu, Buddhist, and Chinese are spaces where society creates abstract beings so that it can evolve.

The foregoing divagations and deliberations relating to the social sphere warrant the conclusion that replacing the question *does something exist or not?* with its inverted form – *what reality would look like if the studied phenomenon had not occurred?* often results in quite different conclusions.

Example 4. Philosophic exploration

Philosophical conversations, debates, deliberations and divagations aim to explain the causes of phenomena occurring in the modern world. Einstein's (?) dialogue with an atheist professor (2015)³. Discourse is about what we want to: accept, transform or reject. For example, a medical practitioner who does not think philosophically has little chance of giving an accurate diagnosis to a patient; the same will be true of an educator who will probably never understand pupils and students; and even of a priest who will not encourage the faithful to pray. Scientists are able to discover many regularities in nature, but without the philosophical sphere they would probably not be able to explain the meaning of human behaviour in different situations.

³ An excerpt from a certain dialogue became the inspiration for the philosophising: "It is possible to have a lot of heat, more heat, little heat or no heat, but we have nothing that we could call cold. You can cool substances down to minus 273.15 degrees Celsius, which is what the absence of heat means. There is no such thing as cold, otherwise we would be able to cool substances below absolute zero. Cold is not the opposite of heat, cold is the absence of heat. Darkness is not something, darkness is the absence of something. You can have little light, normal light, bright light, flashing light, but if that light is missing, then there is nothing and that is what we call darkness. In reality, darkness does not exist. If it existed, people could make it even darker. Evil does not exist, or rather does not exist as a phenomenon in itself. Evil is simply the absence of God. It is like darkness and cold, occurring as a man-made word to describe the absence of God. God did not create evil. Evil occurs when man does not have God in his heart. Evil is like cold, which is the result of a lack of heat, and like darkness, which is the result of a lack of light", <https://www.fronda.pl/a/dialog-einsteina-z-niewierzacy-m-profesorem-przeczytaj-koniecznie,42977.html> [accessed on 6 January 2022].

The ideas on which new forms of scientific perceptions of processes in the social environment are built stem from the fact that "the facts we find >in the field< never speak for themselves, but are imbued with our assumptions" (Silverman, 2007). Philosophising aims to inspire interlocutors to generate innovative ways of thinking, the result of which may be a more surprising conclusion than that of previous reflections.

Considerations in the philosophical sphere in the thought experiment method are illustrated by the following text:

As a result of heated debates, we jointly came to the conclusion that the very idea articulating the existence of a Higher Power opened the way for man to originate and develop civilisation, which can also be expressed by the following sentence: *Religion is the basic determinant of the emergence of civilisations and was the prototype for the emergence of many diverse ideas*. On this basis, it is possible to articulate a following thesis – *civilisation grew out of an abstract Being, whose existence has not been proven by anyone for millennia*. Here another question arose: what happens if people stop believing in this Fiction, and will our civilisation then survive? This question would be difficult, if not impossible, to answer.

Moving slightly away from the fundamental topic and based on facts, it can be concluded that everything has a beginning and an end. Also having a beginning, a civilisation which, like all previous civilisations, will probably end one day, no matter what Fiction people come up with. On the other hand, solely on the basis of theological truths, this conclusion must be abandoned, and the thesis adopted *that all things, and man in particular, can last forever – first in a "latent" form, up to the moment of birth, then taking on a real form to re-enter the infinite phase after transformations*.

Continuing the debate on the previously stated theme, it was assumed that everything has a beginning, which consequently led to the conclusion that God must also have had one, and this raises the question that has been posed for centuries – what came before Him? It also posed the question: *are there objects without a beginning, and were there entities with only an end to existence?* It might seem that these are trivial questions devoid of rational possibilities to find evidence and give satisfactory answers, but this is the abstraction that has been going on for millennia, compels intense thinking, and being the result of considerations about: God, eternity and existence, it is the quintessence of human consciousness giving meaning to the search for solutions beyond the realities of reality.

During the innovation work, participants in many studies asked for a clarification of the concept of abstract thinking, which was difficult to illustrate. For this reason, this example was used to illustrate the problem. Exposed to a range of considerations by asking questions and not expecting answers to those questions – as they simply do not exist – the participants are "forced" to think creatively. For often a question becomes the inspiration for: formulating hypotheses, defining the purpose of research or the problem to be solved, and articulating proposals for the application of research methods.

Example 5. Scientific exploration

For many, the search for God in the world of science will prove to be an unfeasible task, as no procedures can be applied here to pursue claims, discoveries or inventions, and to verify and control them in accordance with the accepted methodology of the discipline (Kryszewski, 1997-2022). But scientific research is conducted using proven methods: observation, measurement, experimentation, analysis of historical sources, theoretical considerations, inductive and deductive reasoning, and hypothesis formulation – and all this to develop a theory. Research methods are interrelated, creating an ever-evolving social system of knowledge. Basic scientific research is undertaken without a practical purpose, but only to explain phenomena yet to be investigated. Extended or applied research aims to develop innovative ideas, and implementation research involves putting research results into practice. It can therefore be assumed that there is no room for abstractions in scientific research, as those involved in it seek to apply the results in a practical way to the fields they are currently dealing with. This perception of science will change radically once we articulate a definition that identifies the intellectual and the scientist. The first is a person who focuses on basic research, i.e. on developing theoretical ideas about an issue, while the second is a person who implements and puts new ideas into practice.

To illustrate the definition of scientist and intellectual thus proposed, we can use the following text as an example:

It was only at a certain stage of science that intellectuals introduced the zero "0" into mathematics. With the concept ready, scientists were able to carry out typical mathematical operations ~~only~~ on the number zero "0", resulting in the tumultuous development of algebra and, in turn, all fields based on counting (Wszystko o liczbie zero w matematyce!, 2020)⁴. Further efforts of intellectuals are illustrated by the following example: using the equation $5 = 5$, which means that $0 = (+5) + (-5)$. However, this simple notation carries philosophical implications, namely that it shows that zero, which is synonymous with nothingness, can be divided into a material object, that is (+5), and an abstract object, which is (-5). Thus, using the theory of mathematical operations, it is possible to accept that there are real and unreal spaces, and from there it is only a step away from accepting the view that there is a world that people perceive with their senses and an abstract world about which they know little or nothing. A similar analysis can be made by grappling with the notion of infinity " ∞ ", which intellectuals have treated as a boundless space, unlimited speed or a sequence of endless numbers. Bringing this reasoning down to the material world, however, scientists have noted that: the universe is

⁴ The ancient Greeks believed that anything less than one was impossible to write, so it did not exist. The Arabs accepted zero as a number treating it as emptiness, as well as infinity. In Europe, '0' appears with mathematics, and the Arabic zero does not appear until the 12th century, causing controversy arising from the possibility of writing something that signifies emptiness, nothingness or infinity. <https://www.superprof.pl/blog/zero-matematyka> [accessed on 6 January 2022].

limited; the highest velocity that can be encountered is approx. 300,000 km/s; numbers representing great distances can be represented as light years. Expanding on their reflections, intellectuals have also reached here to confirm the hypothetical theological theories that arise from the fact that there may be an "Unknown Force" that moves at infinite speed and is therefore everywhere in the universe at the same time. It may be utopian, but it is well known that many utopian concepts have been confirmed over time, such as Albert Einstein's theory of space-time (Ashtekar, Lewandowski, 2002).

So the difference between an intellectual and a scientist lies in the perception of how to solve a problem. The first, using abstract divagations and deliberations, creates non-standard, abstract and even unrealistic ideas, where even completely random problems, rather than those arising from the substance of the issue, are recognised. They seek to extend the scope of knowledge based on known theory by means of a logical argument. And it can be said of scientists that, while being faithful to their methods and focusing on one issue, they are reluctant to consider other aspects of the application and use of the data, information or knowledge they have, with the consequence that they will be cut off from other ways of interpreting established research results. In practice, this means that in a given period of time, the researcher focuses on one issue and aims only to put it into practice. On the other hand, the intellectual in his considerations will take into account additional aspects that are caused by not taking into account some fact that, when carefully analysed, would dramatically change the way they perceive a given issue. The efforts of intellectuals have resulted in the ability to transform the political system several times in a single generation, changing governments, national borders, the rights of citizens and even the customs of religious communities several times. Therefore, in carrying out all innovation-related activities, it is necessary to divide the participants into intellectuals who are able to invent something new, and scientists who are able to adapt these, sometimes abstract, solutions to practice.

Example 6. Futurological exploration

Looking from a historical perspective at events such as the creation of the wheel, the discovery of how to light a fire; the invention of writing, the steam engine, the development of the Internet, etc., it would be fair to say that these objects or phenomena these objects or phenomena came about by leaps and bounds, i.e. they had no prototype to modify. The same applies to: concrete, bread, plastic or the car, where the individual elements only become structured after being processed and appear as a whole.

Today, the invention of artificial intelligence, a way of organising a set of data through and into a self-learning "machine", can be considered a similar phenomenon. *Artificial Intelligence* results in autonomous: cars, secretaries or robots that perform repetitive work by themselves,

replacing humans. In fact, it could be said that the further development of this technology is focused on relieving people of monotonous tasks. Looking prospectively at artificial intelligence in the context of the use of emergent phenomena, it would be expected that from a collection of homogeneous data, information on how to solve problems far removed from the substance of the issue would emerge (Takeda, Terada, Kawamura, 2002).

Using a thought experiment, the search can be illustrated in the realm of futurology, as the following divagation and deliberation will illustrate:

Nowadays, by analysing the grades of students, it is possible to create a variety of summaries that provide parents with knowledge about their: academic progress, ranking among peers or learning ability. These qualities can be called material qualities because they can be examined and assessed by means of: grades in individual learning subjects, text analysis or tests and quizzes. Unfortunately, little will be learned from these rankings about the student's innate personality, latent dysfunctions and acquired emotions that will determine their behaviour in the future. However, this is a feasible task when grades in various subjects are entered into the artificial intelligence in chronological order and specialists in the fields of pedagogy, sociology or psychology develop an algorithm on this basis to diagnose their personality traits. Similarly, algorithms can be developed for autonomous taxis which, by recognising passers-by and obstacles in the street, will write a guide entitled "A tour of the city's tourist attractions" tailored to the nationality and mentality of the tourist.

This example is not just a fantasy, but a hint or even a clue to help harness the power of artificial intelligence. In the process of generating innovation, there must first be fantastic visions from people called visionaries, which will be treated as literary fiction. But as history has shown, it is only technological developments that, after a few years, will allow these abstractions to be realised.

Example 7. Sphere of loose reflection

Intellectual divigations and deliberations can go well beyond the usual templates of deduction, and the results of such reflections, often inspire the creation of non-standard, original and surprising studies. And so, by reading the Old Testament texts, which reduce God to doing similar things, specific only to man, such as: fighting pagans, creating moral rules, and imagining the afterlife, one can propose one's own vision of the future life by going beyond the barriers limited by a rational perception of reality.

Here is another example of a thought experiment:

After a long break, we decided to organise the expedition of a lifetime, that is, we went on a journey to a place somewhere between Mars and Venus. It was a land somewhat reminiscent of the ocean, and the *quasi*-people living there did not have to bother getting food, as no one

here was ever hungry or thirsty. As we noted, there were no gravitational forces here and no one knew the concept of time. In principle, everyone was happy because prosperity was guaranteed, even though the concept of work was unknown. We didn't notice anyone learning here, after all, exploring any subject was unnecessary because everything had already been discovered and invented. We also did not see people who were sick, old or disabled, while anyone could speak on any issue, but for lack of interest from anyone and any topic, this opportunity was not used. As we traversed further through this rather strange space, a beautiful landscape caught our attention. These were mountains half covered with lush vegetation, while above lay snow untainted by any signs of civilisation. In the distance, we could see lakes full of fish, forests with a variety of friendly animals and foaming waterfalls. At a certain point, it got to us that there was no temperature, which we could not imagine, but we had to accept this discovery as dogma. To our surprise, we did not see anyone using the phone here, nor did anyone make any contacts, as everyone thought and felt the same way. Talks were no longer held either, as everything had been said a very long time ago. After a few days we wanted to leave this beautiful country, but suddenly a rather unexpected episode occurred. The reality around us began to resemble moments spent on Earth and we had the ability to enter it at any time by changing its course. By knowing the past, we could change it at will, by correcting those mistakes which, seen from this earthly perspective, prevented us from achieving the happiness we dreamed of. We took immediate advantage of this opportunity and our clones entered other relationships, avoided persecution, won the lottery, or boarded trains that took them to other countries where they had amazing adventures. As time did not flow here we had the opportunity to ask them on their return about their impressions, to which they replied that they had entered reality at the wrong time and had to repeat the whole operation. We agreed to this, but each time, they came back dissatisfied, so that eventually we all joined the other residents to enjoy the space as they did. In the meantime, we have noticed that we can impersonate any historical figure: a leader, a president, a traveller, a knight or even a serf. This was a lot of fun for us, but this kind of 'fun' ended as soon as we had lived through all possible situations, collecting their experiences. As it later turned out, all residents acting in this way knew everything about each other. One day we were shown a button which, when switched on, allowed us to create reality according to our own ideas. We made immediate use of this and so entered an unknown area for us, creating new dimensions of it. When we returned, we shared our impressions, but to our general surprise, our achievements were unlike any other, as we each created our own time and our own space where we could plan our lives from scratch. One of my friends (a scientist) created matter and then suddenly, under some impulse, brought it to life, only to give it consciousness after a while. Another one, in turn, created the wheel, fire and some strange creatures with long necks. After this experiment, we continued walking along the sunny promenade and had the impression that half an eternity had passed when we noticed that there were clearances under our feet through which quasi-people could also be seen. They were content with their position because, for ideological reasons, they believed that

no changes would be made in their lives. They did not want to give up their beliefs, but persisted with the truths that someone had implemented for them. Consequently, they could not get higher.

After a while, we began to wonder what we were going to do for the next half an eternity, when a gate appeared in our path with the inscription - *here is what no eye has seen, and no ear has heard*. We hesitated for a long time whether to enter there, but curiosity was stronger and after a while we entered an unknown world. Our previous knowledge became useless here, yet we hurriedly searched in our memory for similar experiences and facts, but no one could make any association between what we saw and what they knew from the past. In our haste, we only completed the sentence we had read when entering this mysterious place with the following - *nor are there any words to describe it*. One of us, disregarding the difficulties, attempted to describe what he had noticed - it was more or less as follows: *I see nothingness as darkness and zero as infinity and many other objects that I cannot name. The lack of dimensions meant that I only perceived phenomena intertwined in various places, to which I can only give a completely inadequate name - sparkles. These are spots where something appeared that wasn't there before, and took different forms that I had never seen*. Further on we noticed that our impressions were similar, but we still found it difficult to get used to the fact that space and time did not exist here, but that was just a detail, as my friend said.

In the above text, attention should be drawn to the positive aspects of the divagations and deliberations carried out by intellectuals. They are the answer to the numerous publications concerning parallel worlds and to the conjectures of representatives of certain religions. Such reflections do not lead to any constructive conclusions and scientists cannot verify them in practice. Facts do not exist here; instead, one's own conception of truth, abstraction and fiction plays an outstanding role, which has contributed to the creation of: literature, art and culture. To the question - whether it is worthwhile to discuss and deliberate, the answer is only one - yes, because this is one of the ways that can lead us all to a different perception: of the world; of professional and family situations and problems that seem impossible to solve at the moment. It is also worth mentioning that such and similar deliberations have been given to people by the Bible, which makes it possible to express almost infinite possibilities for interpreting the contents it contains.

Conclusions

It can be assumed with a high degree of probability that one of the first abstract concepts in the history of mankind is a phenomenon - a figure called: God, Providence, Creator. Leaving aside whether it is invented or the result of a revelation, the authors used it to develop the thought experiment method. In outlining the research paradigm using this method,

they introduced numerous examples, hoping that they will serve as an inspiration to implement this method in: companies, institutions, or even private life. Indeed, in the early days of his existence, man had no research instruments apart from his intellect. It was through the emergence of Something in their mind, which required thinking and aroused reflection, that consequently led to the emergence of science. It is this ability expressed as a thought experiment that, even today, can serve as a way of generating innovation without any: tools, instruments or specialised equipment.

The examples presented should also be an inspiration for researchers in scientific fields, because it is they who, knowing the specifics of their own organisation, should adapt (implement) this scheme to their own needs. The authors are also aware that this form of research can be controversial in various ways, but they decided to publish it as has found favour with many people running their own companies.

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