

Adam Świeżyński

Is chance an 'element' of miracle? In search for common aspect of miraculous and chance events

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ADAM ŚWIEŻYŃSKI
Instytut Filozofii UKSW, Warszawa

IS CHANCE AN ‘ELEMENT’ OF MIRACLE? IN SEARCH FOR COMMON ASPECT OF MIRACULOUS AND CHANCE EVENTS

1. Introduction. 2. Chance event. 3. Miraculous event. 4. Chance as the empirical aspect of miraculous event. 5. Conclusion.

1. INTRODUCTION

Each and every one of us has our personal secrets, secrets which we do not disclose to outsiders. If we do decide to let an outsider into those secrets, we want to be certain that they will be properly understood and respected. Revealing our secrets to someone else is also normally preceded by a long acquaintanceship, which serves to create an atmosphere of trust.

If we accept that nature, understood as the entire physical reality of the universe, contains within itself secrets regarding its origins, functioning and ulterior development, then the study of these secrets is only possible for beings such as ourselves, equipped with consciousness, sensory tools and intellect. In this context, the history of humanity’s demands for rational knowledge of the world can be considered as a period of time like the aforementioned, embodying an ever-closer conversance, or acquaintanceship, with nature. The corollaries for this are scientific discoveries and theories explaining the functioning of the universe on both the macrocosmic and microcosmic scale. All of these achievements make up a picture of reality, which, despite a continually improved conversance, informs us of the existence of mysteries, global in nature, encompassing nature in its entirety, and encompassing us as well. Among them, a specific place is occupied by questions regarding chance and miracle. These mysteries go beyond the field of study

covered by the natural sciences and demand the involvement of philosophical and theological cognisance. Human striving to comprehend these mysteries is a natural desire for a broader and more thorough study of the perspectives revealed by contemporary natural history. Although it is only an endeavour, not claiming for itself the aspiration to make a mystery of something completely comprehensible, nonetheless it cannot be bereft of philosophical reflections undertaken on the theme of nature.

Philosophical attempts to answer the question as to what chance is and the question as to the possible existence of the miracle are ineluctably bound up with the problem of the concept and structure of the laws of nature. It thus appears that the most competent area of philosophical deliberation, within the framework of which one might seek the answer to the questions posed, is the philosophy of nature, rooted within the contemporary natural sciences. Its domains of study are, first and foremost, the essential properties of material bodies, their changeability and the principles governing the course of natural phenomena¹.

2. CHANCE EVENT

In everyday life, very often we face events that we define as fate or chance, such as accidents, games of chance, and so forth. In common parlance, the word ‘chance’ means an event or occurrence, unexpected and unlooked-for, which we are unable to predict on the basis of either known laws of nature or experience. However, chance has more than one name. It is sometimes called ‘coincidence’, ‘a twist of fate’, or ‘a stroke of luck’. The problem of chance is extraordinarily intriguing because it touches upon events, which, many a time, have a significant effect upon human life.

Long ago, Leucippus posited that nothing happens by chance, but everything arises from a cause and inevitability, while the continuator of his thinking, Democritus of Abdera, believed that humans devise an illusory image of chance for themselves as a cover for their powerlessness. Epicurus introduced the concept of chance as the third element

¹ Cf. *Philosophy of Nature Today*, ed. A. Świeżyński, Wydawnictwo UKSW, Warszawa 2010.

shaping the world. He understood chance as a sudden, spontaneous swerve or relative deviation from the straight-line movement of atoms (*parenclisis, clinamen*), which led to the collision of atom with atom. And it was exactly thus that the world came into being. This perspective on the beginning of the world, known as 'chance monism', understood chance, and chance alone, as the element leading to the world's coming into being. Epicurus thus introduced the notion of chance into the science of nature, but he did so on the grounds of necessity, as nature's complement².

In subsequent times, the common understanding of chance was as the materialization of an event unintended by causative factors either due to their inherent nature or by conscious design. Boetius held chance to be an unforeseen outcome of coinciding causes in those things which, for some reason, happen. Thomas Aquinas gave a brief definition of chance as a causative factor acting beyond its intention³.

Baruch Spinoza, similarly to Thomas Hobbes, understood chance to be that which eludes our knowledge. He held an opinion that, in nature, nothing occurs by chance; everything, of nature's divine necessity, is determined with a particular way of existing and acting. An object or phenomena is referred to as random for no other reason than that our knowledge is wanting. Many a person believes, for instance, that natural calamities are the matter of chance. They believe so for no other reason than that they know nothing of laws governing these matters. If they were to become familiar with those laws, if they were therefore to learn, that such-and such a calamity is determined by such-and-such previous event, on the strength of the laws of nature, they would no longer hold that calamity to be the matter of chance⁴.

David Hume also believed that nothing of the ilk of chance exists in the world, but that mere ignorance of the real causes of certain events affects our understanding and creates a line of judgement and think-

² G. Reale, *Historia filozofii starożytnej*, vol. 3: *Systemy epoki hellenistycznej*, transl. by E. I. Zieliński, RW KUL, Lublin 1999, 219-223.

³ Tomasz z Akwinu, *Summa contra gentiles. Prawda wiary chrześcijańskiej w dyskusji z poganami, innowiercami i błędzącymi*, vol. 2, transl. by Z. Włodek, W. Zega, Wydawnictwo „W drodze” – Klub Książki Katolickiej, Poznań 2007, q. 74.

⁴ B. Spinoza B., *Dziela*, vol. 1: *Etyka*, transl. by I. Halpern, Warszawa 1914, 35-40.

ing which assumes that chance does exist. In reality, chance events are events belonging to a set of equally probable events. An occurrence of attribute *A* within the ambit of a certain category of events is deemed as being chance when, and only when, it is one of several, mutually exclusive eventualities, the occurrence of which is equally probable⁵.

A possibility that chance of a relative nature exists was maintained by, i.e., Arthur Schopenhauer and John Stuart Mill. Schopenhauer contended that everything, which is considered random, is, in fact, only relatively random. Every event is inevitable with regard to its cause. However, it is random with regard to everything else with which it eventually comes into contact in time and space. In turn, Mill believed that it is wrong to say that a phenomenon is the work of chance. What we can, however, say, is that two or more phenomena converge by chance; in other words, they coexist or follow one upon the other only by chance. Consequently, in asserting a random temporal coincidence for two or a greater number of events, what we want to say is that neither does a cause–effect relationship exist between these events, nor are they the effects of either the same, single cause or of multiple causes linked to each other by the law of coexistence⁶.

According to Ernest Nagel, chance comes into play in situations when something unexpected happens, something, which is not an outcome of a purposeful action. An event is considered random when we have no knowledge of the conditions determining it, or if it occurs where two independent chains of causality intersect⁷.

Jean Guitton held that there is no chance in the universe, but only differing degrees of order, the hierarchy of which needs decoding. That which we name chance is no more than our inability to comprehend a highly organised order⁸.

⁵ D. Hume, *An Enquiry Concerning Human Understanding*, Dovner Publications, Mineola 2004, 35-37.

⁶ J. S. Mill, *A System of Logic, Ratiocinative and Inductive: being a connected view of the principles of evidence and the methods of scientific investigation*, Obscure Press 2008, 344-350.

⁷ E. Nagel, *Struktura nauki*, transl. by J. Giedymin, B. Rassalski, H. Eilstein, PWN, Warszawa 1961, 285.

⁸ J. Guitton, G. Bogdanov, I. Bogdanov, *Gott und die Wissenschaft. Auf dem Weg zum Metarealismus*, Artemis Verlag, München 1992, 67.

From the overview of standpoints presented in the foregoing, it is evident that, to date, no single understanding of the notion of chance has been developed. It is most frequently defined as:

1. the resultant of the operation of multiple causative factors, which are disorderly and operate independently; in such an understanding, chance does not possess its own essential cause, leading directly to its appearance, but, rather, has multiple, specific causes, unrelated to one another in their operation;
2. an event which arises from a well-defined, cause-effect relationship, but its causes are too multiple and diverse to allow proper analysis;
3. an event without cause; in this instance, chance is an event which has no cause within a given frame of reference, or which has no cause within any frame of reference;
4. an event which is inexplicable; that is to say, there is no law of science which, in conjunction with sentences stating the emergence of certain preliminary conditions, results in a sentence stating the emergence of the said event;
5. something absolutely independent of other laws.

It is evident from the definitions given that, by and large, chance may be understood as either absolute or relative. Absolute chance would occur when no determined causative relationships existed. Thus, absolute chance is differentiated by a complete absence of causality. If chance such as this were to occur, it would mean that the world is strictly factual. The existence of chance understood in this way seems improbable, since both experience and the philosophical principle of sufficient reason run to the contrary. A strictly factual world would be a world wherein nothing would be assumed and nothing would be recognized. Such a thesis could only hold up in a world deprived of sense and meaning. Relative chance, however, signifies events for which, admittedly, we are unable to define the cause, but we do recognise that it must exist within some kind of frame of reference, not necessarily a physical one.

A more systematic concept of chance comprises chance understood as 'an absence of cause/a lack of knowledge regarding the cause', or as 'an additional effect/an absence of prior knowledge regarding the effect' of specific events arising in reality. In both the foregoing un-

derstandings, a distinction can be made between chance from the ontological perspective and chance from the epistemological perspective.

It might be that the term ‘accident’ should be reserved for chance understood as ‘an additional effect/an absence of prior knowledge about the effect’⁹. For instance, if, when putting a book on a shelf, I inadvertently cut my hand, that is this ‘accident’; it arose as an additional effect of my action, an effect that was neither planned nor wished for, although its cause can be established; for example, I caught my hand on a sharp edge. It was possible to foresee this event but, in actual fact, it was not foreseen. So, when I say that “I cut my hand by accident”, what I have in mind is that I had no wish to do it and that it was neither my intention, nor the purpose of my action. However, if I have put the aforementioned book on a table and it opens, as the result of a breeze, on the very page containing an extract for which I am searching, and at the very moment when I was thinking of it, then I deem this to be chance, since I perceive no causal relationship between my thoughts on a given topic and a breeze blowing at that same moment. Why the book opened at a specific place at that moment, and not at another, that is something I do not know. No currently known law of nature explains the foregoing correlation. It might also be that an accident will be related to chance; that is to say, that the ensuing effect is unintended and, at one and the same time, its cause cannot be established. For instance, while out for a walk, I suddenly lose consciousness and, after coming round, I am examined by a doctor who is unable to give the reason for my having fainted, since he has found no visible symptoms of illness. Thus, all I can do is speculate as to the possible cause of the foregoing event, thinking that some kind of cause must exist, in accordance with the principle whereby nothing happens without cause.

In order to clarify the understanding of the notion of chance with more precision, the thesis proposed by Sir Arthur Eddington, in which he made a distinction between Nature, or the law of Nature, and natural and scientific laws, may be applied¹⁰. The law of Nature is an objective law, in other words, one that actually does occur in nature.

⁹ D. W. Theobald, *Accident and Chance*, *Philosophy* 45(1970)172, 106-113.

¹⁰ A. Eddington, *Philosophy of Physical Science*, University of Michigan Press, Michigan 1958, 66-69.

However, the natural laws are laws posited by the natural sciences; in other words, the scientific description of reality, including the regularities of phenomena, revealed under scientific scrutiny, formulated in the form of theorems and formalised in the language of mathematics.

The said distinction has its application in the question of chance under discussion. Confining our deliberations solely to the notion of chance as the absence of cause/the lack of knowledge regarding the cause, it should be emphasised that such an understanding of the notion of chance can be considered on an ontological plane (the existence of reality), with reference to the laws of Nature, and on the epistemological plane (cognisance of reality), with reference to the natural laws. In addition, within the epistemological plane, two further types of chance can be distinguished, momentary chance and constant chance.

Within the ontological plane (the absence of cause), chance would denote an event, which has no cause within any existing frame of reference (an absolute absence of cause). However, if we confine the scope of our scrutinies solely to empirically discernible physical causes, and this is what should be done in the case of the natural sciences, then the aforementioned absence of cause will denote the absence of a physical cause and that alone, with no determination of the possible existence of any cause beyond the physical frame of reference.

In turn, within the epistemological plane (the lack of knowledge regarding the cause), it would be necessary to designate as chance an event where the physical cause does not, and, possibly, will not, naturally, yield itself to cognition, owing, for instance, to insurmountable barriers to human knowledge, although its objective existence must be assumed. Momentary chance would denote the impossibility of establishing the physical cause of a given event, but only such impossibility as might, under certain conditions, be surmounted, for example, as a result of scientific development.

An essential characteristic of chance emphasised by some authors is its inscrutability; in other words, they recognise chance solely in the epistemological sense. This reduces chance to an absolute lack of cognisance. Ordinarily, chance negates a schema of order, either conceived, or where we are convinced of its operativeness. This does not in the least attest to the lack of cause here, but only to the failure to

take a given factor into account. Chance is thus an unforeseen event, which does not mean that it is not foreseeable at all. The person who says, "I met a friend by chance" has not filed the meeting under the system of his or her ultimate intentions, in relation to which, it appears to be fortuitous. Within the framework of those ultimate intentions, the meeting was not foreseen and hence could not be logically deduced. However, if the friend's original intentions are taken into account, the aforementioned meeting might then prove not to be fortuitous, since, in principle, it is possible to know that both had planned their day so that they would be able to be in the same place. Hence, Hans-Dieter Mutschler observed that "(...) a question regarding chance is relative to the frames of understanding. It might be that something within one frame of understanding is chance, yet within another, is not"¹¹.

It should thus be noted that chance can appear or disappear as soon as the perspective from which we view a given event changes. Kazimierz Kloskowski considers that two types of events exist; that determined by circumstances, which we are not always able to define, and the miracle, understood as phenomena which elude the laws of nature, phenomena that we fail to understand, and the role of which is an affirmation of God. Thus, since under Kloskowski's classification, we encounter two types of chance event; relative, for which the cause can be found beyond a given frame of reference, and absolute, namely, the miracle, then the chance event, *sensu stricto*, does not, in fact, exist¹².

With some understandings of chance, the occurrence of chance events neither excludes determinism, nor does it belie the principle of causality, such as, for instance, a branch which falls on an passing car during a gale. However, with the absolute understanding of chance, we have to discard strict determinism in favour of a form of indeterminism. Thus, in nature, we encounter neither absolute necessity (full determinism), nor absolute chance. These events can be considered as extreme, critical situations. Ordinarily, what we are dealing with are phenomena, the likelihood of which is contained between extreme val-

¹¹ H.-D. Mutschler, *Fizyka i religia. Perspektywy oraz granice dialogu*, transl. by J. Bremer, WAM, Kraków 2007, 313.

¹² K. Kloskowski, *Zagadnienie determinizmu ewolucyjnego. Studium biofizologiczne*, Stella Maris, Gdańsk 1990, 140.

ues. What we are therefore dealing with is the concurrence of chance and necessity, a chance event with an inevitable event.

Chance understood as the crossing of two, independent, causal lines 'is transformed into necessity', since its consequences are causally determined by both coinciding factors. The effect of this intersection is inevitable if both lines are considered in conjunction, although when they are considered separately, it is chance. This can be seen, in particular, at the level of animated nature. What we are dealing with here is at least two distinct points where chance played a part; during the emergence of the first living organisms and during the process of evolution, in the emergence of new species. An analysis of the processes which led to the emergence of living organisms reveals that one of the decisive factors in the process was chance. Chance was able to act at various stages in the prebiotic evolutionary process; the linking of simple molecules into a longer chain, the chance creation of proteins and nucleic acids, the emergence of genes and protocells. However, the action of chance was restricted by the interaction occurring between these structures. In turn, chance events were able to play a decisive role in the evolutionary process during mutations and recombinations which form the source of hereditary variability. Chance fluctuations in gene frequency could eliminate a particular gene, or increase its occurrence. Chance environmental changes, in turn, are able to act on adaptation. During the process of adaptation, characteristics of no adaptive significance are also able to become established by chance, as a result of genetic drift. Chance therefore plays a critical role at various evolutionary levels; mutation, selection and environmental change.

This way of thinking allows biological evolution to be deemed as necessary and chancy at the same time. We can observe that if a sufficient length of time is taken, allowing or, likewise, enabling, the cumulation of minute transitional changes and the mechanism controlling every step in a determined direction, what we get is an explanation, nature-wise, of the emergence of something new. Here, there can be no reference to absolute chance. Chance itself, indeed, appears as an event without cause, but with the capability of being the cause of other events. Evolution depends on natural necessity and on chance events. It is therefore subject to determinist and probabilistic laws. Chance can

be considered as the cause of evolutionary changes when one relates it to natural necessities. In this approach, chance and necessity are considered as a complementary unity. The mechanisms of evolution are chance events; the process of evolution itself, however, is subject to deterministic laws.

In common perception, chance appears to be opposed to order in nature; on closer scrutiny, however, it transpires that it fulfils a completely different role in nature. More precisely, it points to that basic characteristic of nature which is randomness. It is also worthwhile noting the beneficial role of chance thus understood. An indispensable element of creative capability is, in actual fact, chance, understood as random thinking. Unexpected and unlooked-for events are the milestones along the road toward intellectual development, which leads to an ever more complete cognisance of the reality within which we exist. Some scholars are even of the opinion that if we had to speak of any rational natural principle at all, it could only be chance, because chance, acting in conjunction with selection, creates nature's 'reasoning'. Evolution and development would be impossible without it¹³.

The scenario for the development of the universe, as currently established by the natural sciences, suggests that we have extraordinary cosmic coincidence to thank for life. It transpires that a determined scenario was essential to the universe's development, as was a determined duration thereof, in order for human beings to appear. Further reflection on the matter of the relationships linking humans with the universe surrounding them leads to the conviction that, at the moment of the universe's birth, what was essential were strictly defined characteristics of nature which were not in the least a matter of chance. It was these characteristics which, billions of years later, led to the emergence of people capable of asking questions regarding the world and their own existence and of responding to them with answers which were themselves no matter of chance. Thus, chance, present in the area of action, may become a medium for conveying meaning. If chance events therefore exist, it is certain that they should not be considered as

¹³ M. Lubański, *Ewolucja a przypadek*, in: *Stwarzanie i ewolucja*, ed. J. Buczkowska, A. Lemańska, Wydawnictwo UKSW, Warszawa 2002, 96-108.

'blind', moving in arbitrarily selected directions and gropingly seeking a path in absolute darkness.

3. MIRACULOUS EVENT

The notion of miracle is variously perceived in the literature. By way of example, mention might be made of the following definitions:

1. "(...) an unusual occurrence (...) by means of which God gives humankind a sign, through which they are filled with wonderment"¹⁴;
2. "an event caused specifically by God's intervention, stepping beyond the normal law of nature and bringing with it a religious message for the people of today and later times"¹⁵;
3. "A marvel wrought by God, who as a Creator is able to interrupt the operation of ordinary natural laws. In popular speech a miracle is an event in the physical world that cannot be explained by the known laws of nature"¹⁶;
4. "an event of an extraordinary kind, brought about by god, and of religious significance"¹⁷;
5. "a miracle is God's intercession in the natural order of things"¹⁸;
6. "a special or immediate act of God, as opposed to God's continuous work of creating and sustaining the world. The result of this act will be beneficial and religiously significant"¹⁹.

The definitions of miracle cited here indicate the presence within it of a supernatural element in the form of divine causality, serving the manifestation of God, and of an empirical element, finding expression in the form of an unusual occurrence observed; they also endeavor

¹⁴ X. Léon-Dufou, *Słownik Nowego Testamentu*, transl. by K. Romaniuk, Księgarnia św. Wojciecha, Poznań 1986, 201.

¹⁵ G. O'Collins, E. G. Farrugia, *A Concise Dictionary of Theology*, Paulist Press, Mahwah 1991, 55.

¹⁶ *New Standard Encyclopedia*, vol. 11, Standard Education Corporation, Chicago 1998, 402.

¹⁷ R. Swinburne, *The Concept of Miracle*, St. Martin's Press, New York 1970, 1.

¹⁸ J. Kellenberger, *Facts, Brute Facts, and Miracles*, *Sophia* 7(1968), 19.

¹⁹ M. Corner, *Signs of God. Miracles and their Interpretation*, Ashgate, Aldershot-Burlington 2005, 15.

our to define the nature of God's intervention in relation to the existing laws of nature²⁰. The manifestation of the variously placed emphases in these formulations of a definition of miracle demonstrate that, amongst theologians, the notion has long been, and continues to be, the subject of unresolved debate²¹. Analysing the development of notions of miraculous events from a historical standpoint, a more detailed presentation of three concepts seems justified, concepts which have significantly influenced contemporary solutions to the problem under discussion. What is of particular interest is the aspect of comprehension of the relationship between natural processes emerging in nature and God's intervention in their course.

The author of the first of the aforementioned concepts is St. Augustine²². He emphasised the psycho-religious dimension of the miracle as an awe-inspiring motif, turning the attention of humanity toward God and summoning humankind to faith. For Augustine, the whole of nature is one, great miracle, the total miracle of nature, but humankind, accustomed to nature, needs specific signs and it is thence that God's intervention in the 'ordinary-extraordinary' course of things springs.

When striving for a correct reading of the Augustinian concept of miracle, the concept should be shown within the context of his perceptions in their entirety. The Bishop of Hippo distinguished two kinds of phenomena in nature; the first being natural phenomena, which manifest the unceasing, immanent working of God upon nature through na-

²⁰ Within the problem of miracles, it is therefore necessary to distinguish the supernatural, theological plane, because the miracle is a matter, first and foremost, of faith, and the empirical plane, since it is faith in search of understanding.

²¹ E. Keller, M.-L. Keller, *Miracles in Dispute. A Continuing Debate*, SCM Press, London 1969; T. C. Williams, *The Idea of the Miraculous*, St. Martin's Press, New York 1991; *Questions of Miracle*, ed. R. A. Larmer, McGill-Queen's University Press, Montreal – Kingston – London – Buffalo 1996; *In Defense of Miracles. A Comprehensive Case for God's Action in History*, ed. D. Geivet, G. R. Habermas, Inter Varsity Press, Downers Grove 1997; A. Case-Winters, *Reconstructing Christian Theology of Nature. Down to Earth*, Ashgate, Aldershot – Burlington 2007.

²² Cf. J. Houston, *Reported Miracles. A Critique of Hume*, Cambridge University Press, Cambridge 1994, 8-20.

ture's regularities; the second is extraordinary phenomena, which are manifestations of God's irregular, direct interventions in nature.

The self-evident character and generality of the first kind of phenomena mean that their occurrences awaken no wonderment or deeper reflection in the average observer. There do occur among them events both rare and wonderful, such as an eclipse of the sun, the appearance of comets and so forth, which inspire wonderment as a result of their unknown causes. These, however, are known to those who make a study of nature and, with the passing of time, are less astounding, since they are seen with greater insight. An enormous number of natural phenomena have been encoded in particular *semina* (seeds), which gradually develop, in accordance with the internal mechanism conditioning the processes of nature, and with no express intervention on the part of God, although He watches, providential, over their accomplishment. *Rationes seminales* contain within themselves every potentiality arising from the conditions determined in the act of accomplishment²³.

Alongside *rationes seminales* there also exist *semina seminalia* (the seminal *semina*) which, being antecedent, condition the initial stage of the normal seminal activity. They are primaeval and mysterious forces, becoming a reality at the Creator's direct command and giving a beginning to extraordinary events. Amongst these *semina seminalia*, the 'seeds of miracles' (*semina miraculorum*) are found.

Semina seminalia take no active part in the birth of a miracle. Miracles are virtual in nature, in the sense that they form a part of creation but, in point of fact, they belong to the particular, supernatural order of which the direct Maker is God Himself. It is not that the Creator placed 'the seed of miracles' within things, but that he endowed them with the gift of being an object of divine action. And thus God is not determined by the potentialities making up nature and may step beyond the course of natural processes by virtue of the husbandry of redemption that He has accomplished. If the miracle appears to be in opposition to nature, then all it is in opposition to is our experience of nature, in other words, our conversance with it. Anything that occurs with the will of God does not occur in opposition to nature, since

²³ *Evolution and Creation*, ed. E. McMullin, University of Notre Dame Press, Notre Dame 1985, 35-43.

the will of God is sustained in the existence of all that He created. It may thus be stated that St. Augustine distinguishes two types of miracle; the first is the global miracle of nature in its entirety, by which is understood the fact of creation and its sustainment in the perpetual workings of the world; and the second, which comprises physical miracles that arise 'from time to time' and, on account of their rarity and extraordinariness, elicit a particular psychological reaction in humankind. In the ontological notion of the miracle, the first type is decidedly the greater, since nature in its entirety is a miracle greater than individual, physical miracles. However, from the psychological standpoint, it is physical miracles which appear to be of more significance. Both the miracles of nature and physical miracles are the work of God, who is their Maker and Steward. Both types of miracle have their significance within the history of redemption. And thus, the miracle according to St. Augustine is not a fact arising as a result of the natural developmental processes of *rationes seminales* or *semina miraculorum*, but a supernatural phenomenon and an act of God which is manifested in the empirical reality of the world and which accomplishes God's eternal, redemptive plan²⁴.

The second concept of the miracle, which should be mentioned by virtue of the significant influence it has on contemporary views of the synergy between God and nature, is the notion proposed by St. Thomas Aquinas²⁵. Thomas laid stress upon the aspect of the phenomenal miracle and its physical transcendence. In his opinion, a miracle is an empirical fact, standing out amongst other phenomena through its extraordinariness, going beyond the forces of all nature created, the Maker of which is God. As such, a miracle cannot be accomplished by natural causes; its cause is, by nature, transcendental in comparison with existing reality as experienced through the senses and intellectually perceived by humanity. Thomas Aquinas' perception, whereby the direct Maker of the miracle is God, does not rule out the action of instrumental causes as tools which God may use to accomplish a miracle. These can be physical and biological forces at work in nature, as well

²⁴ E. Nourry, *Le miracle d'après saint Augustin*, Annales des Philosophie Chrétienne 3(1903), 380-385.

²⁵ Cf. J. Houston, *op. cit.*, 21-32.

as psychological and spiritual forces. On this basis, he distinguished three types of miracles; the first are miracles which transcend, in an absolute way, and in their entire substance, the natural order, and which nature, as such, would never accomplish (*supra naturam*), for instance, the transformation of water into wine; the second are miracles which transcend the established order of nature created, not on account of the substance of the occurrence, but on account of the subject wherein they occur (*contra naturam*), for instance, the raising of the dead; and the third are the miracles which cross beyond the bounds of the natural order on account of the way in which they come about (*praeter naturam*), for instance, a cure which could also have been accomplished by means of normal treatment. According to St. Thomas, miracle should not be understood as being God's correction of the action of natural forces, but as a result of His wisdom and immutable Will, which, when creating the world, foresaw His intervention therein. The concept of the miracle proposed by Thomas Aquinas is the consequence of his way of perceiving the nature of being and the nature of the natural laws. In this approach, the way that a being acts is determined by its mode of existence. Every material being has a defined essence and an existence adapted to it. The effect of this is determined in its internal structure, which defines the determined course of a phenomenon. The action of beings takes place in accordance with the eternal law that is the plan of God's wisdom, which directs all actions. The course of change within nature is the consequence of that plan's accomplishment in respect of material beings. The Utmost Being alone is the innermost cause and the all-supreme causal Being. If we contend that these beings are the causes of the emergence of new things, properties and changes, then we deem them to be secondary causes, preserving that which has been called into being by the Creator. The Utmost Being sustains causal beings in their existence, nurturing their natural autonomy of action, action which accords with the metaphysical structure of bodies²⁶.

Some of subsequent endeavours to define the miracle and the possibility of its existence within the context of the natural laws took the direction of demonstrating that the immutability of the laws of nature

²⁶ Cf. C. Brown, *Miracles and the Critical Mind*, William B. Eerdmans Publishing Company – The Paternoster Press, Grand Rapids – Exeter 1984, 11-13.

is symbolic in character and arises from scientific generalisation and not from the actual action of natural forces. The natural laws are not absolute by nature, they are relative. Moreover, nature and the miracle are, indeed, in opposition to each other, but they are not contradictory. Natural and supernatural purposes create a harmonious unity, since the supernatural appears as a complement to the natural order²⁷.

Contemporarily, the miracle is most widely perceived in terms of God's sign acting within the world, and motivated by the redemption of humanity. This sign marks the manifestation of God in history; it does not occur autonomously, but is accompanied by the elucidatory Word²⁸. The miracle considered as a sign, in other words, as something more than a mere astounding event transcending nature, reflects a personalistic concept of the manifestation of God and faith as humankind's response to it. It has a Sender, content (which may be called the 'substance' of the miracle) and the recipient of that content. Thus, bearing in mind the structure of the sign, it should be noted that this notion of the miracle is not confined to a foreseeable element, material and empirical. Discussing an application of the concept of the sign to the understanding of the miracle, we can distinguish two pairs of structural elements of the miracle thus perceived. The first of these comprises the medium, or material element, and the message, or content. The second pair of the sign's structural elements consists of the Creator (Maker) of the sign and its recipient. In the instance of the miracle perceived as a sign, both the medium and the message must originate with God, as the Maker of miracles. The empirical element of the miracle-as-sign must stand out among other phenomena in its extraordinariness, diverging from the normal course of things and, at the same time, in some measure, signalling that the given phenomenon can fulfil the role of the sign. However, from the material aspect, a miracle, although extraordinary, must be solemn and sober, because it is a conse-

²⁷ E. Müller, *Natur und Wunder, ihr Gegensatz und ihre Harmonie. Ein apologetischer Versuch*, Herder, Freiburg im Br. 1892; H. Poincaré, *Dernières pensées*, Flammarion, Paris 1926, 5-32.

²⁸ F. Taymans, *Le miracle signe du surnaturel*, Nouvelle Revue Théologique 77(1955), 225-245; E. Masure, *Le miracle comme signe*, Revue des Sciences Philosophiques et Théologiques 53(1959), 273-282.

quence of either God's action or of His choice. A characteristic feature of the miracle-as-sign is that God either creates it directly, or, as more frequently occurs, He chooses a given thing or phenomenon, though, most often, a person, in order to bestow upon the miracle the character of a sign by endowing it with a particular significance²⁹.

And thus the medium, the empirical element of the miracle, need not be contradictory to the laws of nature, since it is sufficient that it transcends their action to a certain extent, for example, by accelerating their action, intensifying a process, refining, and so forth. The essence of the miracle-as-sign is embedded in the signified element, the content, and not in the signifying element, the medium, although without the latter, it would be impossible to speak of a sign. Therefore, the empirical element need not necessarily transcend the action of the forces of nature. It is sufficient to be aware, from another source, that it was endowed with a particular meaning by God and chosen to have the character of God's sign bestowed upon it, with the purpose of imparting it to humankind. It is only when two elements, the medium and the substance, are united and appear simultaneously that what can be spoken of is a sign of God's works, in other words, the miracle understood as a sign. In consequence, therefore, scholars of natural science and philosophy can help to establish whether the signifying element, the medium, transcends natural phenomena, but they are unable to pre-judge the actual existence of the miracle, since they cannot observe the substance of the message within the miracle-as-sign³⁰.

The conclusion that can be drawn from the foregoing notion of miraculous events as the miracle-as-sign and the miracle-as-symbol is

²⁹ F. Taymans, op. cit., 232.

³⁰ A similar intuition prompted Arthur Peacocke when he proposed that the world be seen as a symbol through which God expresses His eternal nature to those who want to perceive Him, in other words, demonstrating His existence in the symbol (A. Peacocke, *Drogi nauki do Boga. Kres wszelkich poszukiwań*, transl. by J. Gilewicz, Zysk i S-ka, Poznań 2004). However, the problem of whether the medium for the miracle-as-sign should be natural or arbitrary by nature remains open. When discussing the arbitrariness of the relationship between the elements of the miracle considered as a sign, it should not, as a result, be understood as absolute freedom on the part of God, since it endows sense upon the sign appropriately, i.e. proportionally to the type of empirical element of the miracle.

that, with miracles, God acts in two ways; ‘from without’, through an empirically confirmed, extraordinary fact, inexplicable in the light of the known laws of nature, this being the medium; and ‘from within’, through grace, which is to say, by granting humanity the gift of recognising His presence. Thus, in the miracle, the working of God, unverifiable by scientific methods, comes into play, as do objectively verified events existing within the course of the processes of nature³¹.

The study of, and the endeavour to explain, the element of the ‘medium’ for an extraordinary event reputed to be miraculous has been embraced within the framework of competence of history, the natural sciences and philosophy. Their fundamental task it to ascertain whether or not it is possible to explain it in natural terms by citing causative reasons that have been discerned empirically. The ultimate determination of a given event as a miracle lies strictly within the competence of the theological sciences.

The natural sciences, remaining within the areas of competences resulting from the research methods they employ, are able to state that the event being studied remains inexplicable within the framework of the current state of knowledge and cognisance of the laws of nature. This finding does not relate to the absolutely inexplicable, the transcendent. Such a verdict would mean that individual scientific disciplines had overstepped the boundaries of their competence.

If it proves impossible to ascertain, in the light of scientific research, that an extraordinary fact being scrutinised is explicable in the light of the natural laws known at the time, then, wishing to establish its cause, it is necessary to refer to heterogeneous causality, in other words, external causality, as opposed to immanent causes at work within the world of nature. This conclusion arises from the fundamental methodological principles of philosophy, which are the principles of proportional causality and sufficient reason. Further detailed deliberation on an explanation of an extraordinary fact may be conducted within the methodological scope of the natural sciences, the philosophy of science and the natural philosophy³².

³¹ D. Corner, *The Philosophy of Miracles*, Continuum, London – New York 2007, 127-138.

³² There are some who confine the philosophical analysis of extraordinary events and endeavours to explain them to a superficial discussion of the following matters:

It is not for natural philosophy to decide either the question as to whether a miracle has occurred or the question as to the methods which should be used in order to state its existence. What may constitute an object of interest for natural philosophy is an attempt to answer the question as to whether nature permits the possibility of intervention within its sphere on the part of non-empiric elements. Generally speaking, it can be stated that the relationship of the aforementioned intervention to the laws of nature may be an opposing one, or it may accord with them. In the first instance, a miracle would constitute an exception to the physical laws, while in the latter, it would be a new phenomenon 'added' to those already in existence³³.

On the basis of the foregoing overview of standpoints regarding the problems of defining the miracle, an attempt may be made to systematise them. A division by concept of the miracle would appear to be justified, giving the subjective, the objective and the sign-symbol concepts. In all of them, the notion of the miracle features the discernment of an external aspect, namely, the empirical, and an internal aspect, in other words, beyond the empirical. It can thus be asked what capabilities natural philosophy possesses in respect of the analysis of the empirical element in each of the concepts distinguished in the foregoing.

The subjective understanding of the miracle emphasises its internal, religious aspect. What the empirical element comes down to is an internal experience. It can be said that the miracle, in essence, is an individual, existential event, experienced by a specific person. With this

the problem of unknown forces at work in nature, chance, indeterminism and the development of science, which, in the future, is to explain everything that at present seems to be insoluble. It appears that the aforementioned matters might be reduced to one, fundamental problem, namely, an extraordinary event as chance, in the assumption that the notion of chance is perceived on two planes, the ontological and the epistemological.

³³ This seems feasible, considering the evolutionary character of nature that currently enjoys wide acceptance within the natural sciences and which admits of the inflow of new biological phenomena. In the course of the very lengthy evolution process of material reality, new phenomena can appear, forming the basis for the formulation of new natural laws. It is an open question as to whether an event which at present is considered to be an exception to the laws of nature but, in the future, proves to be in accord with them, can be deemed to be an empirical element of a miracle.

interpretation of the miracle, a reference to the natural sciences in the matter of explaining it is redundant, since there is no possibility of an intersubjective verification of a given event. The miracle occurs for a believer and this is why different, extraordinary events, worthy of wonderment, are visited upon different people, opening their eyes to the presence of God and his works³⁴.

With the objective interpretation of the miracle, a reference to the natural laws leads to the affirmation of an exception to them and of their having been transgressed, or of their force having been suspended in a specific instance. As an event which is extraordinary within the natural order, the miracle differs fundamentally from the occurrence of other phenomena in nature. It constitutes an object of sensory cognisance and is apprehended empirically, even though, in the causal sphere, it also goes beyond causes inherent in the natural order. It is thus generally understood as the intervention of a factor transcending natural reality³⁵. The philosophical aspect of the said concept of the miracle focuses on affirming the possibility of its existence and cognitive perception, in other words, its discernibility. The task of the natural sciences consists of affirming a given fact's inexplicability from the standpoint of those sciences. This inexplicability is relative in nature, since it refers solely to the laws of nature known at the time and not to every regularity in existence.

Three fundamental elements can be isolated within the structure of the concept of the miracle as sign/symbol; the mediative, the substantive and the nature of the relationship between them. The mediative element is an empirical one and it has the trait of extraordinariness, while the substantive element is bound up with the supernatural. The first of these elements, possessed of an extraordinary nature, can constitute a subject of scientific cognisance, natural within the context of the question as to whether it yields to explanation by means of natural causes. Possible inexplicability, on the natural plane, of the extraordinary fact that has arisen leads to the undertaking of philosophical

³⁴ It follows that every human being can see his or her own miracle, because miracles are 'inside' humankind.

³⁵ Within theological perception, this means God's intervention in the natural order.

reflection on the determination of its cause and the nature of the relationship occurring between immanent and transcendent causality in the miraculous event.

The empirical aspect of a miraculous event can be a subject for natural philosophy only within the objective and sign–symbol concepts of the miracle, since it is only with these that it is sufficiently recognized³⁶. Considered within the framework of the natural philosophy, the problem of an extraordinary event is relativised into separate topics within that discipline, in particular, the laws of nature and the theories within which they appear, the representations of the world which they imply and the ways of perceiving the relationships between the natural sciences and theology. Other questions touch upon the type of laws to which the problem of miraculous events is relativised and the question of specific details of the definition of these events as perceived at the time.

4. CHANCE AS THE EMPIRICAL ASPECT OF MIRACULOUS EVENT

An extraordinary event, one which we are unable to incorporate into the regularities of nature as we know them, may be such on account of its ontic structure, or on account of the observer's limited cognitive capabilities. What emerges here is a convergence between empirical elements of a miraculous event and an event which we described as a chance event, in the sense of there being an absence of cause/a lack of knowledge regarding the cause.

And thus, the empirical element of the miracle may be considered as a chance event, which is to say, one where we are either unable to determine the physical cause at the present time, or where we are generally unable to do so, this being the epistemological level, namely, momentary chance or constant chance; it may also be an event where the physical cause does not, in fact exist, this being the ontological level.

Thus understood, within the concept of the miracle–as–sign/miracle–as–symbol, the empirical element of a miraculous event can be rec-

³⁶ A threefold relationship operates within these concepts of the miraculous event, namely, God – humankind – nature.

ognised as the material medium for the essential substance. However, within the objective concept of the miracle, the perception of the empirical element of a miraculous event as chance can only apply to the chance event considered, on the ontological plane, as having no physical cause.

Taking the foregoing differences into account, the following classification of miraculous events can be posited:

1. the miracle in the wide sense, the 'relative miracle', where the empirical element can be considered as epistemological, momentary chance;
2. the miracle in the strict sense, the 'absolute miracle', the empirical element of which can be defined as epistemological, constant chance, or as ontological chance.

However, it is only possible to accept this classification within the sign–symbol concept of the miracle, which, as it appears, is accepted as the medium for the substance of a miraculous event and as an empirical, extraordinary fact that, with the passing of time may prove to be an ordinary event, explained on the basis of natural science. Within the objective concept of the miracle, only the miracle in the strict sense, in other words, the 'absolute miracle' may be accepted.

Consequently, the empirical element in the 'relative miracle' could, potentially, lose its value of extraordinariness; for example, as a result of the development of the natural sciences, given phenomena, formerly incomprehensible, would be explained and incorporated into the framework of natural regularities. This would not, however, mean that the event ceased to be a miracle. At most, it would cease to be recognised as extraordinary, as chance. However, with the 'absolute miracle', the empirical element never loses its nature as an extraordinary event, since the physical cause cannot be established, either as the result of insurmountable cognitive barriers, or as the consequence of its effective absence.

Some thought should also be given to the problem of events which, from the moment of their arising, do not have the quality of extraordinariness from the standpoint of the natural sciences, inasmuch as the scientist perceives in them neither anomaly nor anything which would go beyond the bounds of the scientific description of the world with

which he is familiar. And yet, they seemed extraordinary to those upon whom they are visited. Whether or not they could be classified as miracles depends upon the assertion as to whether the substance contained within them holds, or held, a redemptive significance for the person to whom it was addressed. For instance, a person involved in a car accident walks away from a smashed car without a scratch. This fact can be explained by referring to known regularities and, after thorough scrutiny, by pointing to the natural causes of the 'miraculous' escape. Nonetheless, for the person involved, the event might well hold a particular significance and become an element motivating them to adopt a specific outlook on life³⁷. It appears that recognising as miraculous an event thus defined is only possible within the framework of the subjective concept of the miracle. In the remaining two concepts, namely the objective and the sign-symbol, the extraordinariness of the empiric element must be confirmed intersubjectively from the standpoint of natural science at the given stage of its development and cognisance of the world at the time when the event under consideration, and laying claim to the designation of miracle, occurs.

In the context of the physical scrutiny of a miracle's medium, what can also be asked is whether the empirical element of the miraculous event might be an event within which a physical evil appears, i.e. the absence of the perfection required by the physical order³⁸. Some of the extraordinary events described in the Bible might indicate that the empirical element of the miracle may feasibly bring with it the occurrence of a physical evil³⁹. At the level of the medium, therefore, the miracle does not necessarily have to be associated purely with a positive event, though the very miracle itself, by virtue of its redemptive substance, is always the work of God for the good of humankind.

³⁷ God can also manifest his workings in the ordinary circumstances of life, which, despite the fact that they accord completely with scientific description may, from the standpoint of faith, carry a particular meaning for the faithful (see: J. Houghton, *The Search for God. Can Science Help?*, Lion Publ., London 1995, 180).

³⁸ Physical evil is a being which does not possess that which its nature requires; for example, a chair with no legs is a physical evil.

³⁹ Cf., for instance, Numbers 12, 1-10; Matthew 21, 18-22; and Acts 5, 1-11.

The effect of the classification of miraculous events posited here also clearly brings into relief the fact that God, as the Creator of nature, can accomplish his synergy with it, and his presence within its processes, by means of a diversity of scenarios. God is present in both the ordinary actualisation of the laws and in their curtailment. This image of God's activity in nature is present in the standpoint of natural studies, which supports the evolutionary vision of the world. God can act in both the 'butterfly effect' symptomatic in chaos theory and in the bifurcations which bring unpredictability to the human system of knowledge. A simplification which is impossible to justify is the current model within which God works upon the world only through extraordinary interventions which suspend the known laws of physics. However, as an alternative, a thesis has emerged wherein the entire diversity of the natural laws, profoundly differentiated in status, articulates Divine immanence in nature.

5. CONCLUSION

The American cosmologist, Carl Sagan, expressed an opinion that he likes a universe that includes much that is unknown and, at the same time, much that is knowable. In his opinion, a universe in which everything is known would be static and dull, as boring as the heaven of some weak-minded theologians. And, further, that, a universe that is unknowable is no fit place for a thinking being. The ideal universe for us is one very much like the universe we inhabit. And I would guess that this is not really much of a coincidence⁴⁰. If we were to treat an individual human as a separate 'cosmos', the search for understanding of his or her complexity would lead us to reflect upon the sense of human existence. Everyone, even the less sensitive, will, in the face of their life's experience, one day ask themselves the question, "Why am I here?" It is the ultimate question, and the most crucial, engaging the asker directly and giving voice to humankind's fundamental need as regards the search for the sense of one's own existence. The response that we give to the question thus framed is a synthesis of our person-

⁴⁰ C. Sagan, *Czy możemy poznać Wszechświat?*, transl. by M. Appelt, in: *Wielkie eseje w nauce*, ed. M. Gardner, Prószyński i S-ka, Warszawa 1998, 109.

al experience, gained within the ambit of a specific cultural environment. And because no human being exists in isolation from the world surrounding them, be it other people or be it material reality, this question needs to be placed within the context of humankind's activity in the field of scientific study and the famous question posed by Leibniz, "Why does something exist, rather than nothing?"

From the deliberations presented in the foregoing, it follows that God's intervention in natural processes is possible for the purpose of bringing about miraculous events without transgressing either the laws of nature or the principle of causality⁴¹. However, the question remains as to how this intervention may be recognised and distinguished from chance events. It is a question which forms the inspiration to seek further and to construct models depicting God's way of working in the nature which He created. Just the very possibility of creating such models endows a sense of fascination in the universe, even if they are, and, perhaps, ever will be, highly approximate and extremely schematic imitations of reality. This fascination is an experience close to the religious, which is why some erudite scholars, experiencing the mystery of the universe, will sometimes identify that experience outright with the religious. "Finally, we want to say that we feel no compulsion to perceive the violation of the laws of nature in miracles, but even though we are scientists, we are free to believe that some of them might be manifestations of a divine reality, outside that which we know"⁴². In studying the world with a sense of freedom, it is easier to comprehend who its

⁴¹ In the case of a miraculous event, what appears is not a contrast between nature and God's extraordinary intervention in that nature, but one between God's normal workings, which consist of sustaining nature, and a particular act on His part. Thus, when God makes a miracle, He is not carrying out a sudden incursion into the created order within which He is not ordinarily present. He is acting, at that moment, in a particular way within the framework of the natural order, which He sustains unceasingly and within which He is perpetually present (C. S. Evans, *Why Believe? Reason and Mystery as Pointers of God*, Eerdmans Evans, Grand Rapids 1996, 88).

⁴² *Uczony i wiara. Wyznania ludzi nauki*, ed. J. Delumeau, transl. by J. Grosfeld, Oficyna Wydawnicza „Volumen”, Warszawa 1998, 99. "Our justifications of knowledge claims about miracle will depend on our metaphysical views about determinism and indeterminism. If the universe is open to radical chance or to unique actions of God, we should be opened to the possibility of encountering what appear to us

Maker is. And when it is understood who God is, the puzzling matters of chance and miracle cease to be problems, although it is certain that they will never cease to be a mystery to us.

CZY PRZYPADEK JEST „CZĘŚCIĄ” CUDU? W POSZUKIWANIU WSPÓLNYCH CECH ZDARZEŃ CUDOWNYCH I PRZYPADKOWYCH

Streszczenie

Filozoficzne próby odpowiedzi na pytanie czym jest przypadek oraz na pytanie o możliwość zaistnienia cudu, nieuchronnie nawiązują do zagadnienia koncepcji i struktury praw przyrody. Wydaje się więc, że najbardziej kompetentną dziedziną rozważań filozoficznych, w ramach której można poszukiwać odpowiedzi na wskazane pytania, jest filozofia przyrody zakotwiczona we współczesnych naukach przyrodniczych. Zdarzenie niezwykle, którego nie umiemy wkomponować w znane nam prawidłowości przyrody może być takim ze względu na swoją strukturę ontyczną, albo ze względu na ograniczone możliwości poznawcze obserwatora. Zarysowuje się w tym miejscu zbieżność między elementem empirycznym zdarzenia cudownego a zdarzeniem, które określamy jako zdarzenie przypadkowe w sensie braku przyczyny lub braku wiedzy o przyczynie.

as *sui generis* events” (W. E. Stempsey, *Miracles and Limits of Medical Knowledge, Medicine, Health Care and Philosophy* 5(2002), 8).