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EMERGENTIST PANENTHEISM AND ORTHODOX THEOLOGY: A PRELIMINARY ENCOUNTER

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Abstract: Emergence theory addresses complexity and newness in nature, relying on discoveries in chemistry, biology, and physics. It aligns better with modern science compared to physicalism and dualism. Theology must engage with the emergence due to its connection to modern culture and science, but existing interaction models present theological challenges. This paper presents an alternative approach through three methods: analyzing emergence, comparing it to Orthodox theology, and proposing a new synthesis. Chapter one clarifies emergence, highlighting its features and real-world examples, like consciousness. It introduces the concept of dynamical depth of emergence, offering theological possibilities and noting limitations. Chapter two explores emergence's impact on theology, leading to process philosophy and panentheism. It discusses emergent Christology and identifies problematic trends in emergentist theologies. Chapter three critically evaluates emergentist theologies and Christology from an Orthodox perspective. It proposes a balanced interaction between emergence and theology by combining the concepts of dynamical depth and the logoi of beings. Emergence theory challenges and offers opportunities for theology, particularly in understanding divine action. As presented in the new proposal, a balanced approach is needed, shifting from downward causation to upward causation through divine energies.

Keywords: emergence, complexity, panentheism, divinity, process, upward causation.

1. EMERGENCE

1.1 From reductionism to emergence

In Western philosophy, physicalism and dualism are widely considered as the two main ontological options (Leidenhag, 2013). Both ontological positions constitute holistic interpretations of the world. Both are also inspired by ideological or religious motivations, without a coherent scientific basis or supported by research based on data. It could be said that philosophy and science function at different levels. In one sense, philosophy tries to provide a comprehensive account of reality by offering meaning and value and, on the other hand, science endeavors to explain and describe the natural world. However, a collaboration between philosophy and science, by exchanging insights could always be beneficial for both sides. In my perspective, it is unassailable in philosophy and theology to take into consideration the current scientific data on their endeavor to formulate holistic interpretations. The importance of this task is demonstrated by analyzing how reductionism, for instance, once the dominant philosophical ‘doctrine’ in the previous century has lost its appeal. In other words, scientific discoveries showed that reductionism is not compatible with reality. Nevertheless, it does not mean that theology needs to prioritize science considering that could be catastrophic for its content, as we shall see later.

Physicalism is closely related to reductions and logical positivism. The agenda of reductionism claims that everything in the natural world can be explained sufficiently in terms of its basic and fundamental parts and the laws of physics (Clayton, 2006, p.2). Reductionism was considered by scientists the best

methodology of analyzing the natural world and, as a result, the natural sciences were dominated by this idea. Nevertheless, during the twentieth century this program encountered many difficulties because of scientific breakthroughs. The landscape of science was diversified because while there was an optimistic feeling due to ongoing scientific discoveries, those the same scientific breakthroughs, along with others raised questions regarding the limitations and the consistency of reductionism.

Developments in physics such as Newton's law of motion and universal gravitation, Maxwell's differential equations about electromagnetism, and Einstein's theory of relativity, among other theories, offered a sense of a complete knowledge regarding natural phenomena. Additionally, in the biological sciences, there were breakthroughs like the discovery of DNA. The computational power with algorithmic methods, by collecting a huge amount of data, helped the mapping of the human genome. The list of scientific discoveries in the fields of chemistry, neuroscience or psychology could be carried on almost endlessly. All these scientific successes brought a positive outlook, that the so-called Nagelian bridge-laws would offer an overall and single theory of everything (Tabaczek, 2021, p. 26), and in this way, science would solve all the problems.

Nonetheless, apart from these indisputable achievements, scientific research also faced a series of difficulties and limitations. The principles and equations of quantum theory revealed permanent restrictions on the capacity of science to provide complete explanations and predictions. More particularly, Heisenberg's uncertainty principle demonstrated that it is impossible to predict simultaneously both the position and the speed of a particle. Furthermore, chaos theory denoted that systems with complexity make clear that the procedure of prediction regarding their formulation and evolution is unattainable. Kurt Gödel's incompleteness theorem demonstrated that the probability of mathematical theories is grievously limited. However, one of the most important problems was posed by the development of neuroscience. The so-called hard problem of consciousness, namely why human beings have experiences of qualia or conscious self-awareness posed the most difficult questions, which proved the inability of logical positivism and reductionism. The current science is completely unable to answer these questions. It seems that all the above restrictions are not related to the current technological deficiencies. All these limitations reflect our inability to access a final knowledge of the inherent indeterminacy of the very physical world. Most importantly, the philosophical program of reductionism lost its explanatory power and appeal due to these inherent and permanent limitations. The fall of reductionism coincided with the rise of emerging.

1.2 Defining the concept of emergence.

The formulation of emergence theory was supported by the developments in biology and chemistry during the nineteenth century. George Henry Lewes and John Stuart Mill observed that the explanatory framework of reductionism was not sufficient in explaining some natural procedures regarding laws of causes. The skepticism concerning the reduction was expanded by Samuel Alexander, C. Lloyd Morgan, and C. Dunbar Broad. Nonetheless, they provided concrete theories and suggestions instead of a simple critique. Samuel Alexander offered a version of weak emergence, and, on the other hand, Broad suggested a form of strong emergence. However, emergence disappeared as a notion, because British theories of emergentism received strong criticism about its importance (Clayton, 2006, pp. 14-15). In 1990 the discourse regarding emergence again became a major topic. Roger Sperry and

Michael Polanyi played a crucial role in the so-called re-emergence of emergence with their contribution (Clayton, 2006, pp. 17-25).

Defining the concept of emergence is not a simple process considering its diverse appropriations in different contexts. The term refers to the "appearance of a new property in an evolving system or entity" (Clayton, 2003, p. 256-259). The gradual and increasing complexity of a system produces new emergent properties or levels. According to Philip Clayton, there are a variety of definitions of the idea of emergence, which depend upon the usual usage of this term in everyday language, apart from the philosophical and scientific contexts. Nonetheless, the most technical definition is "that which is produced by a combination of causes but cannot be regarded as the sum of their individual effects". Philip Clayton attempts to offer a one-sentence definition of the notion: "Emergence is the theory that cosmic evolution repeatedly includes unpredictable, irreducible, and novel appearances" (Clayton, 2006, p.39). However, Clayton recognizes that it is impossible to provide one-sentence, and simultaneously sufficient, definitions about emergence, on the grounds that every definition includes subjective connotations.

El-Hani and Pereira propose that a conceptual clarification of the idea of emergence would include four fundamental features. First, ontological physicalism means that everything in the space-time world consists of recognizable particles. Second, the concept of property emergence signifies that the aggregates of recognizable particles at some point obtain a sufficient level of organizational complexity, and, in this way, a system arises with essentially novel appearances (Gilbert, Scott & Sarkar, 2000, p. 1-9) Third, these new properties are irreducible to the previous systems or phenomena from which they come from. The last and maybe the most crucial element, especially for the philosophical and theological discussion, is that of downward causation. This feature is related to the idea that higher-level entities or properties exercise a causal influence on lower-level components.

In the light of the strong opposition of emergence theory to physicalism and dualism, Clayton believes that the above elements do not express the difference between emergence and physicalism or dualism. Thus, it is necessary to elaborate and modify them to clarify more the emergence theory. The first condition of ontological physicalism as defined above does not undercut the hypothesis that physics is epistemologically the fundamental science, which explains sufficiently everything. The natural world is absolutely composed of one fundamental kind of material, notwithstanding this one basic material takes forms which physics cannot explain adequately. Therefore, emergence theory endorses monism, but not physicalism as an ontological and epistemological priority of physics.

Furthermore, the third aspect of irreducibility entails that the natural world is divided into different levels. In this vein, the world is characterized by hierarchical division and composition. However, this suggestion of hierarchical ontology could provoke detrimental effects. Emergence theory constitutes a general explanatory framework, with the capacity to explain a wide range of phenomena. Thus, saying that emergence suggests a hierarchical ontology of nature, could have ominous connotations for issues related to society and culture by justifying hierarchical systems of oppression. For that reason, this proposed insight, which is accompanied by the metaphor of a ladder, has received criticism (Jackelen, 2006). Nevertheless, the contingent limitations of emergence shall be analyzed in more detail in the following pages. Aside from this problematic ontological proposition, the concept of distinctive levels has epistemological gaps. When a new level obtains a distinctive existence is

almost completely unclear. The hard problem of consciousness occupies a crucial position here. In this vein, we are unable to define when, for example, consciousness obtains an independent existence in terms of emergent explanation. The traditional dualism makes an absolute distinction between body and mind, without considering that it is possible that there exist unimaginably more levels. On the other hand, empirical investigation and rational scrutiny are not adequate to inform us why and how the complex causal networks give birth to new distinctive properties or levels.

I argue that the holy grail of emergence is the feature of downward causation. The form of causality that downward causation proposes goes beyond the standard and modern scientific understanding, given that science in the first place does not accept the irreducibility of emergent levels. Thus, since this approach of causality is not like the classical one, this means that it needs conceptual clarification and explanation. The feature of downward causation is a logical continuation of the hierarchical ontology of the irreducibility of emergent properties. Since the emergent properties and levels are not reducible to lower levels, in the same vein the causation they exercise to lower components is irreducible. In other words, L2 affects causally on L1, but L2 comes from the L1. It is worth mentioning, that this irreducibility is not only epistemological, but at the same time ontological (Clayton, 2003) The distinct causal influence depends upon the hierarchical structure of the natural world. While the theorists of emergence attempt to substantiate more the downward causation, much work still needs to be done. The downward causation is a crucial concept for explaining divine actions.

Vladimir Archinov and Christian Fuchs render six fundamental aspects of emergence: synergism, novelty, irreducibility, unpredictability, coherence, and historicity (Archinov & Fuchs, 2003, p. 5-6). The first aspect of synergism denotes that there is a creative interaction between different physical components. This collaboration plays a crucial role in the organizational complexity of entities and in the production of new levels of matter or properties. Thus, these new levels provide the characteristic of novelty. The emergent properties or levels, speaking ontologically, constitute a new way of being without existing at a previous period. The novelty is indissolubly connected with the concept of irreducibility. A new quality is not reducible to previous stages of matter. Furthermore, another important aspect is that of unpredictability (Leidenhag, 2013). It is imponderable what kind of new form will emerge and when this production will take place. Another characteristic is that of coherence, which explains the collaborative and harmonic behavior of matter producing new properties and levels. The last feature is that of historicity offering us a general framework of looking at the procedures of nature. The time goes forward in a linear, so to speak, way. The emergent properties are the results of the complex interactions of systems of the past, having a future potential.

Philip Clayton believes that there are five different fields of appropriation of emergence (Clayton, 2006). These fields begin from a scientific context and end up gradually to a philosophical one. He describes them as follows: E1 is related to theories of emergence in particular scientific fields describing concrete physical or biological elements of the natural world. E2 applies to more general characteristics of the natural word, which presumably could be integrated into scientific theories or even establish new approaches and areas of science. E3 refers to characteristics which are identified with diverse scientific theories, transcending in this way the strict boundaries between scientific fields. For instance, the feature of complexity is used in many different contexts of theories. Therefore, this framework of usage of emergence

is more connected with the philosophy of science, and the emergent features can bind together different theories. E4 is like the previous description, notwithstanding in this case it is not just an observation regarding common features. It tries to provide explanations for why we encounter convergent features in the natural world. Thus, the E4 type of theories offer a philosophical exploration of why-questions, rather than scientific answers to how-questions. The last type of emergence appropriation, according to Philip Clayton, is the E5 which is completely related to metaphysical explanations. In other words, the general postulation of such theories is that the very being of the nature of the world is the gradual increase of complexity and creativity. These types of theories exploit the above forms of emergence as a basis. Nevertheless, the aims of the metaphysical emergence are not restricted, as it is straightforward, in explanations about how the natural world works. The main object is to offer a hypothesis which renders meaning about the world. The scope of this thesis is to engage in a theological discourse with the metaphysical version of emergence. Therefore, I shall analyze the correlations between the E5 and theology.

1.3 The origins of emergence

It is important to identify the 'pre-history' of emergence because only in this way can we understand in the next chapters the interrelations between ideas, such as entelechy and process elements in Hegel's though with the modern process theology and panentheism. While the term emergence could be found for the first time in George Henry Lewes' Problems of Life and Mind, the very concept of emergence or similar ideas could be traced in ancient philosophers, according to Philip Clayton. Aristotle conceived the idea that organisms have an internal capacity to formulate new qualities. In other words, there is a natural process of creation and growth of beings according to principles which determine this development. Therefore, Aristotle claimed that there is a potentiality within the organisms, and he used the term entelechy (*εντελέχεια*), to describe this procedure. The concepts of changeability and development were crucial for the formulation of Islamic philosophy and, by extension, for Thomas Aquinas' ideas on causality. Furthermore, it could be said that it is possible to trace the influences of Aristotelian philosophy in the biology of evolution (Clayton, 2006, pp. 7-8).

Another case of the origins of emergence theory could be found in Plotinus' theory of emanation. Plotinus, in the Enneads, suggested that the One is the source and the cause of everything. The absolute reality of One generates the universe progressively. This theory has two fundamental aspects, the first aspect allows us to notice that emanation provides a notion of downward motion and flow, from the One of the worlds. In some sense, that is like the so-called downward causation, which is a concept indissolubly connected with emergence theory, as we will examine it later. Nonetheless, the difference is that the modern emergence theory seems that might provide an ontological model, in which there is not necessarily an absolute transcendental reality which produces the universe. The starting point is the natural world, and its organizational complexity creates different emergent levels of distinctive properties or existence.

Yet, the second important dimension in Plotinus' emanation theory is that there is a sort of circular movement, given that the transcendental One causes everything, that returns upwardly again to the One. That movement has many religious and mystical connotations, offering a sense of reunification and communion with the One. Therefore, taking into consideration this description of the fundamental functions of

the procedure of emanation, it would be possible to rightly observe that this ontological model is completely opposite to a static understanding of the world. The basic concept of emanation theory is that there is a procedure of becoming. Thus, apart from the Aristotelian concept of entelechy, it might could be found influences of the emanation theory in the theory of evolution and, by extension, in process theories and theologies.

Another landmark in the formulation of emergence theory is Georg Wilhelm Friedrich Hegel's thought. He proposed that there is a dialectical relation between Being, Nothing, and Becoming. His ontological proposition begins from Being ending up to Nothing, as a process of antithesis. The synthesis comes from the concept of Becoming. Each antithesis is overcome by the process of Becoming, as a new emergent level. Hegel grounded his theory in idealism and not in physicalism. With this short summary it should be straightforward that while emergence theory becomes entrenched in the twentieth century, its roots are undoubtedly older.

1.4 Epistemological and ontological emergence

During the twentieth century the concept of emergence was divided into two categories: weak emergence and strong emergence (Clayton, 2006, pp. 9-11). Both weak and strong versions of emergence describe the degree of emergent phenomena in the universe and not their explanatory capacity and value. The fundamental postulation of weak emergence is that while new forms and properties appear the basic casual interactions stay on the level of physics. Strong emergence embraces the idea that the production of new ontological levels is an outcome of continuous evolution and preserves its distinctiveness. However, the claim which distinguishes strong from weak emergence, besides their nuances, is the downward causation. Strong emergentists espouse that the different levels of nature have their own laws and forces and, as a result, these exercises causal influence on the lower-level components (Leidenhag, 2013).

Usually, weak emergence is described as epistemological emergence and, on the contrary, strong emergence is referred as ontological emergence. The weak version is called epistemological on the grounds that the emergent properties are ultimately reducible, and they are considered as novel exclusively in terms of description. The emergent properties given their reducible character are determined by their lower-level components. Nevertheless, the so-called ontological emergence denies completely the above positions. It does not recognize that emergent properties are reducible to and determined by lower-level elements. Hence, in this vein ontological emergence suggests the concepts of irreducibility and downward causation. However, even if weak emergence does not accept these features, it theoretically promotes an opposition to traditional reductive physicalism (Leidenhag, 2013). While weak emergence has a wide acceptance by scientists and philosophers, there are a lot of voices claiming that weak emergence does not include originality and it does not offer a different perspective to physicalism.

Epistemological emergence assumes that the current human intellectual faculties combined with the limitations in our research methods provide us with an inaccurate sense that there are irreducible elements in the natural world (Tabaczek, 2021, pp. 33-34). The future human cognitive skills and the breakthroughs in technology will offer a reductionist explanation regarding the events we are considering as emergent. However, this position reminds us of quasi-physicalism since it considers emergence as a current cognitive and technological inability. If this

is the case and there is not original emergence in procedures of the natural world, then probably the theological discourse concerning emergence theory is superfluous. I hold that the reason behind this is that all this endeavor is similar, if not identical to the so-called "God of the gaps". There is no room for an essential theological discussion, if in the feature we explain the current emergent phenomena in terms of reduction.

Philip Clayton suggested three main versions of emergence: strong emergence, weak emergence and façon de parler emergence, but he currently proposes four types of the emergence (Clayton, 2006). According to his new distinction, the first version is the one of weak epistemological emergence. This version claims that there is an inherent incapacity to explain higher emergent phenomena due to the existing restrictions in our research methods. In a similar way, the strong epistemological emergence claims that this incapacity is an outcome of the inaccessible aspects of the universe. On the contrary, the weak ontological emergence suggests that in the universe the complex organisms are probably unstable. Lastly, strong ontological emergence offers certainty about the existence of such higher emergent properties or levels.

1.5 Emergent phenomena

Having presented some conceptual clarifications and approaches to the idea of emergence, by trying to define it and exploring the features and variations of emergence, I shall now provide some examples of emergent phenomena in the natural world. The natural sciences provide us with a wide range of contingency emergent cases. Terrence W. Deacon suggests a typology of classification of emergent phenomena (Leidenhag, 2021, pp. 20-21). In the so-called first-order emergence belongs phenomena such as electromagnetism considering that it takes place when a magnet interacts with a metallic item. Furthermore, a well-known example of this order is that of liquidity due to it is improbable to find it in single molecules or in their components. However, it supervenes from the complex interaction of a system of H2O molecules. Besides, the physical phenomena of surface tension of water fall into the first-order emergence. Other phenomena like friction, viscosity, elasticity, and temperature are considered as first-order emergence (Tabaczek, 2021, pp. 15-17).

Additionally, another group of phenomena which is approached as second-order emergence could be structured with geometrical shapes, like water crystals forming on glass or the case of snowflakes. Both first order and second-order emergence constitute a kind of weak version. This weakness is described as such at the level of ontology, causation, and epistemology, considering that these phenomena are completely reducible to its components. Furthermore, this lack of irreducibility of the above phenomena makes Harold J. Morowitz and William C. Wimsatt considers emergence and reduction as compatible and having, at the same time, overlap in their capacity to explain the natural world. This reducibility is related to epiphenomenalism, which usually refers to the discourse about the hard problem of consciousness. In this vein, epiphenomenalism considers that biochemical procedures of the brain produce mental events, such as consciousness which is fully reducible to these complex brain interactions.

Nevertheless, the third-order emergence backstops the irreducibility from the menace of epiphenomenalism. This order provides a strong foundation for claiming that the downward or top-down causation takes place in the natural world. The phenomena of this order are characterized by a form of collective behavior. In other words, the way in which cells behave by 'memorizing' and transmitting information

comprises the basis for an emergence in evolution. In this case, we are discussing a philosophy of biology regarding how the genetic code exercises an influence during a period in a teleological sense. Third-order emergence is also observed in swarm behaviors, such as ant and bee colonies and insects or birds which migrate.

Nonetheless, emergence transcends this classification of the three orders considering the existence of more emergent cases. Quantum theory might offer some emergent phenomena which surpass the above classification, for example quantum entanglement or wave function consist of emergent events in a different order. Going ahead and abandoning, for the moment, cases in physics, chemistry, and biology, it is observable that the degree of complexity is gradually surging. From the biological process from which supervene human mind and mental events and, consequently, these mental events cause social occurrences. Therefore, emergent phenomena could be considered also the intrinsic organization of social groups, as well as their intentions and interactions. These forms of behavior cause alterations in the economy, politics and even on the patterns of the internet and social media. Hence, we start with physics, chemistry, and biology, and we end with psychology, cognitive sciences, and sociology.

1.6 Emergence theory and philosophy of mind

The above phenomena, especially those of the first order and second-order emergence, are not controversial in any case. The fact that they are not debatable is because they are totally reducible in terms of scientific explanation and ontological existence. Thus, they do not provoke any problems for scientists. Nevertheless, once the discussion comes to the phenomena such as the mind, then the answers and solutions are not uniform at all. Speaking about emergence and mind means that we refer also to the so-called hard problem of consciousness. The correlations between mind and body remain indefinite and vague. The contingent emergence of consciousness is a controversial issue among scientists and philosophers. This controversy could be framed by the existence of two basic options; to approach the mind as a function or property of the brain without real and distinctive existence and to consider the mind as a real and independent object (Clayton, 2006, p. 111). Nevertheless, the landscape of discourse regarding the mind-body problem is more complicated, including a variety of approaches and propositions.

This wide range of theories could be categorized into two groups. The first one could be described as monastics. However, this monism is completely material and denies the independent existence of consciousness. The physicalistic monism has taken various forms and expressions; reductive physicalism, mind-body identity theory or functionalism comprise some of them. On the other hand, the school of thought of dualism is considered as the opposite tendency of physicalistic monism. Rene Descartes was one of the main figures of dualism regarding the mind-body problem, discerning man as res cogitas and res extensa. We see similar approaches such as property dualism, epiphenomenalism, and occasionalism. Therefore, emergence theory seems to be a dialectical ontological position, considering that it accepts a form of monism and, at the same time, in its strong version embraces that consciousness or mind is a different level of substance.

A lot of theologians are attracted to this appropriation of emergence theory in the philosophy of mind. The theological interest in emergence transcends the denominational boundaries. Thus, figures like Philip Clayton, Nancy Murphy, Arthur Peacocke, and Niels Henrik Gregersen, among others, have developed an interest in

emerging. According to Terrence Deacon, human consciousness is accurately the emergent phenomenon which reflects the 'logic of emergence', because it is a continuous procedure of transcending itself (Deacon, 2003, p. 306). This kind of logic epitomizes the hierarchical structure of nature. Nevertheless, accepting the position that consciousness reflects the whole logic of emergence is might a deathtrap, since it is quite possible that consciousness is after all an inexplicable phenomenon. If this is the case, then the explanatory consistency of emergence theory is not as powerful as many philosophers and theologians tend to think.

To ensure that emergence theory has the potential to offer a sufficient interpretation of consciousness we need some criteria. Tim Crane tries to do so by offering two fundamental criteria. The first one is a dependency which attributes the materialistic basis of consciousness. The second one is the distinctness by which we ascertain that mental events, such as quail and free will have their own ontological place in the natural world (Crane, 2001, p. 208). Nonetheless, Daniel Dennett rejects the independence of consciousness as a unique and new ontological substance in the natural world and he claims that phenomena such as qualia and free will are an illusion (Dennett, 1991, p. 23). In a similar vein, John Searle suggests that consciousness is just a property of the material brain, in the same way in which liquidity is a property of H2O molecules. Therefore, consciousness is a term for describing the complex functional activity of the brain (Searle, 1992, p. 14) Besides, John Searle acknowledges that there is no comprehensive and sufficient theory of mind, and it is completely vague how unconscious material components cause consciousness.

The positions which deny completely the independence of consciousness are quite problematic. The reason why they are problematic is because in that way we could entirely explain the behavior of complex entities, such as humans, if we explain the behavior of the particles (Leidenhag, 2021, p. 30). It is straightforward that it is impossible to explain the complex behavior of a human person, such as their intentions or their imagination, by explaining the behavior of the particles which provide the existence of this person. It is acknowledged that neurosciences in trying to approach and explain consciousness face tremendous barriers. Usually, the starting point of these explanations is called the neural correlates of consciousness (NCC) (Clayton, 2006, pp. 112-113). This set of methods and theories embraces the perspective that the mind is indissolubly connected with the neural functions of the brain. Over the last few years, empirical studies of NCC through scanning methods have offered valuable information and knowledge regarding awareness. Nevertheless, the major difficulty NCC encounters is the strong contradiction between first-person perspectives and the endeavor of an objective neuroscientific description of the content of conscious experience. The correlation between the brain and higher cognitive activities, like self-awareness and imagination, is unclear.

It is worth mentioning that neuroscience as a set of methods, does not mean necessarily a one-sided physicalistic enterprise excluding emergence. For instance, Roger Sperry integrated emergence into neuroscience, by explaining consciousness as an emergent phenomenon of the brain. Sperry tried to provide a coherent explanation regarding the body-mind relation, by claiming that the proper requirement of analyzing the brain is to holistically consider it. The starting point of the neuroscientific study should be the individual components, but it should pay more attention to their aggregations. Even the reductionist Daniel Dennett claims that it is commonly accepted in the field of cognitive science that it is impossible to identify

brain functions such as memory with the places of the brain (Dennett, 1991, p. 270). Nevertheless, emergence theory asserts that these brain functions constitute an outcome of the high-level complexity of the brain and not simply by the size of the region correlated.

Philip Clayton postulates that NCC approaches offer oversimplified perspectives to the discussion about consciousness (Clayton, 2006, pp. 120-121). NCC answers fail to recognize that mental functions are fundamentally different from neurological procedures. At this point, evolutionary theories support the emergent agenda considering that they indicate that higher cognitive capacities depend upon the gradual rise of the degree of brain complexity. Thus, David Chalmers has proved that the difficult endeavor of providing answers about the function of mental states, such as thoughts, imagination, volition, and abstract usage of language or beliefs frames the so-called 'hard problem of consciousness' (Chalmers, 1997, p.10). In other words, at this moment there are answers to easy questions and not to hard ones. Easy questions could be considered regarding how human beings react to environmental stimuli or the distinction between being awake or asleep. The comprehensive event of experience including qualia demands a different level of explanation. There is no answer to why human beings are conscious and self-conscious. Emergence theory has some crucial role to play in this ongoing discourse, which might reflect the insufficiency of both physicalism and dualism. Consequently, we could say that one of the main propositions of emergence theory is that consciousness is a gradual emergent level of the complex functions of the neural system. In this vein, it provides an evolutionary perspective on consciousness, which is not compatible with the traditional theological understanding of soul (ψυχή) or spirit (πνεύμα). Nevertheless, the scope of this thesis is not suitable for going any further on this topic with anthropological reflections.

1.7 Dynamical depth delineation of emergence: A new ontological proposition

The most common version of emergence is the one based upon the downward causation idea. Nevertheless, it is not the only one form of emergence theory considering the nuances between different versions. Recently, both Terrence Deacon and Spyridon Koutroufinis introduced together a new interpretation and version of emergence (Terrence & Koutroufinis, 2014). The model they proposed is called dynamical depth, and it highlights the significance of 'constraints' of natural systems, as a potentiality which is still not realized. This new ontological proposition is opposite to the classical version of emergence exploiting the concept of downward causation, to explain causal interrelations between and in complex organisms (Tabaczek, 2021, p. 47). This new model reminds us of the Aristotelian entelechy and teleology, considering the importance it gives to the internal tendencies of organisms.

The concept of dynamical depth explains how emergence works in the natural world. It constitutes a fundamental principle about the natural procedures, which leave room for emergence to take place. In that way, nature is always incomplete from the constraints prevent, at least in the first place, this potentiality to realize itself. Thus, there is within the organisms a teleological tendency which is present as a future potential. This depth is determined by a form of self-directedness which is organized biological life. The property which is currently absent determines the causal relations and interactions of the organizational procedures of a complex organism. Terrence Deacon claims that "emergent properties are not something added, but rather a reflection of something restricted and hidden via ascent in scale due to constraints

propagated from lower-level dynamical processes" (Deacon, 2012, pp. 194-195). Constraints could be defined as a set of factors which prevent the range of possibilities of the contingent states of a particular system.

Terrence Deacon, trying to interpret the transitions of emergent levels, suggests a dissociation between "orthograde" and "contra grade" modifications (Tabaczek, 2021, p. 49). The orthograde change is natural and emerges offhandedly without external influence, while on the other hand, countered grade alteration is defined as an external factor which exercises casual influence on a system. Furthermore, Terrence Deacon introduces three stages of dynamical depth, to explain its fundamental function. Homeodynamics comprises the first stage of the dynamical depth, and it refers to high-order properties of systems. Particularly, systems appear as internal inclinations to obliterate their constraints and, in that way, orthograde changes take place. Besides, these orthograde alterations override possible contra grade changes. Terrence Deacon remarks that homeodynamics offers a coherent explanation of many first-order emergent phenomena, namely viscosity or surface tension, among others.

Furthermore, morphodynamics is considered the second level of dynamical depth, offering explanations regarding the inclination of systems to increase their organization. This procedure is a consequence of the inherent constraints, which prevent external persistent constraints. Thus, the morphodynamics systems denote a spontaneous capacity for self-regulation by overriding external constraints. Examples of morphodynamics systems can be found in the second-order emergent phenomena, such as spiral phyllotaxis, laser light or the formation of snow crystals (Tabaczek, 2021, p. 51). Teleodynamics constitutes the third level of dynamical depth, and it combines both the internal tendency increase the the complexity and order of the morphodynamics systems and the control grade influence of the external environment. This 'dialectical' relation between intrinsic and extrinsic processes offers an orientation to teleodynamics, considering that all the procedures of a system are related to its extrinsic environment.

These three transitions of dynamical depth attribute a new understanding about emergence. While the classical versions claim that the gradual complexity of a system is responsible for the emergent properties, the new proposition of dynamical depth asserts that it is the dynamical depth of a system that is a crucial aspect. In this vein, Terrence Deacon and Spyridon Koutroufinis suggest that this is a criterion to differentiate mechanic entities from organic systems and computers from brains (Deacon & Koutroufinis, 2014). Hence, inorganic systems have low dynamical depth, while organic systems have high dynamical depth (Tabaczek, 2021, pp. 47-60). This distinction could be used for the debate about whether Artificial Intelligence can develop consciousness, as an outcome of the organizational complexity. More research is required for investigating the correlations between the dynamical depth approach of emergence and Artificial Intelligence. However, the scope of this thesis is not suitable for this analysis. Terrence Deacon strongly embraces the idea that dynamical depth attributes a better view of reality, rather than reductionism, materialism, and mechanism.

1.8 Limitations of emergence theory

Emergence theory has received numerous criticisms. One form of criticism is related to the importance of emergence, namely, what are the new and innovative elements this theory brings? These observations are made by scientists and philosophers regarding the gradual complexity of natural systems, probably because it does not

offer anything new or important to our understanding of the natural world. Thus, emergence theory could be considered as trivial and as a repetition of something already known (Clayton, 2003). Besides, emergentist theories exploit a more abstract and intricate language to repeat the complexity of natural systems. Additionally, there are a lot of questions about the testability of emergence. Presumably, it is quite contentious if it is possible to test a theory that asserts an extremely wide pattern occurring over the course of time in natural history. A stronger version of criticism considers emergence as an entirely false theory. Accepting the possibility of the emergence of new properties or levels in the natural world could be a kind of rejection of natural sciences. More specifically, the unquestionable success of the natural sciences in explaining natural procedures depends upon the acceptance of fundamental laws and not upon obscure emergent elements.

Most of these doubts are related to the philosophical version of emergence and not so much to the scientific emergence theories, which reflect emergent tendencies in the natural world. The sciences offer a lot of examples of emergent phenomena, which come from observations. Nevertheless, trying to exploit these concrete observations philosophically and metaphysically is a different kind of enterprise with many challenges. As Philip Clayton rightly notices, we can speak more easily about a philosophy of physics, but not about a philosophy of emergence, considering its use in multiple contexts (Clayton, 2006). Emergence theory has applications in different scientific fields and, as a result, it would not be easy to test its consistency and to coherently use all the scientific details to provide a uniform philosophy. This difficulty leads Terrence Deacon to concentrate its new interpretative proposition on physics and, more precisely, on thermodynamics.

Therefore, many scientists approach emerged as a controversial idea, considering its multiple appropriations and ambitious promises. Sometimes, emergence is described as the 'magic pill', (Jackelen, 2006) since it reflects a bewildering power governing the natural procedures of cosmic evolution. Hence, the allegedly explanatory power of emergence provokes strong reactions to scientists, who believe that emergence deals with issues that are completely under the 'jurisdiction' of sciences. Philosophers of emergence reply to these criticisms, by countering with the argument that natural sciences are not capable of explaining high-level phenomena and the whole according to its parts. In fact, the restrictions reductionism encountered could prove the interpretative accuracy of the emerging theory. Nonetheless, we need to think if emergence is, after all, an overrated idea that explains everything, from the atomic behavior and traffic jams in mind and divine intervention in the world (Jackelen, 2006). These ambitious promises need to be critically evaluated.

One of the most fundamental challenges of emergence is to prove that it is compatible with the ontological category of monism (Tabaczek, 2021, p. 41). As it is analyzed above, monism does not mean that the natural sciences can explain everything. The composition of the natural world is constituted by one basic form of material. Nevertheless, emergence claims that physics cannot explain adequately the novel forms of emergent phenomena. This postulation is problematic considering that the novel levels could take a different form of substance. Thus, emergence indirectly introduces the idea that while there is only one substance in the world, at the same time this fundamental substance takes increasingly complex forms. I will call this process 'multimonism'given that it seems to me that monism is not an accurate term to describe emergence. Probably, consciousness is the best example for claiming that

emergence introduces new substances into the natural world and, in that way, leaves room for transcendental connotations. In other words, emergence suggests an upward openness including unpredictability and radical novelty.

2. EMERGENTISTS THEOLOGY

In the previous chapter, I offered an introduction to emergence theory by analyzing its fundamental aspects. Emergence theory seems to be more compatible with modern scientific breakthroughs, rather than physicalism or dualism. Physicalism is an old-fashioned tendency which cannot explain everything in the natural world, as is obvious from modern scientific theories. Heisenberg's uncertainty principle and Gödel's incompleteness theorem, for example, clearly demonstrate the weakness of physicalism. On the other hand, dualism endorses a transcendental reality as a superior and absolute distinctive level of existence, which is the source of the universe. Nevertheless, it is quite difficult to objectively prove this claim considering that there is a lack of data regarding a transcendental reality. There is enough scholarship that deals with many variations of physicalism and dualism, from a theological point of view. However, emergence is still an ontological position which needs much more critical evaluation and engagement. Particularly, as I already mentioned above there is almost no scholarship or literature on the relations between emergence and Orthodox theology. Hence, this lack of bibliography demonstrates the crucial and urgent need for an initial endeavor to study emergence from an Orthodox theological point of view.

Thus, in this chapter, I shall analyze what are the implications of emerging on theology. Emergence touches upon theological topics, such as Trinitarian theology, cosmology, and Christology, among others. Emergence theory reveals a very subversive and alternative image of God, who is both a part and a process of the natural world and at the same time something more than that. Furthermore, it discloses a peculiar model of relations between God and the natural world, with a vague view of divine actions. Consequently, emergence theory poses challenges for theology as the coherent philosophical explanation of current scientific data and discoveries.

Philip Clayton, as I analyzed above, claims that the emergence has five distinctive fields of appropriation (Clayton, 2006, pp. 40-42). The scope of this chapter is to deal with the so-called E5 metaphysical version of emergence, by identifying how emergent theories affect theological doctrines. Emergence theory postulates that the natural world consists of levels, but the number of these levels is currently unknown. It is quite difficult to define how many emergent levels are included in the natural world. Besides, part of this challenge is that it is not straightforward when and how these levels emerge. If, for example, there are only two basic levels of emergence, then this view is identical with the dualistic one and it is superfluous to consider emergence as something essentially new. If the mind is the limitation of the levels of the emergent phenomena, then there is no difference between the dualism of Rene Descartes and the emergence theory. Hence, the mind-body relation could be a criterion for the contingent uniqueness of emergence. Emergence theory needs to claim more levels in between and beyond the recognizable particles of physics and consciousness. Otherwise, emergence just repeats the same dualistic positions in using different words.

2.1 Process Theology

Before proceeding further with the analysis of the implications of emerging on theology, it is essential to explain what is at stake with the dominant worldview which the emergent theory proposes. Overall, it could be said that emergence pays special attention to the concept of the process. The interactions and the functions of matter produce new emergent properties. Thus, cosmic evolution as a continuous process provokes new and unpredictable appearances. Emergence theory highlights the cosmic evolutionary process as the foundation of emergent phenomena. In other words, emergence renders a process image of the natural world (Tabaczek, 2019, p. 281). The complex procedures produce radical and new levels or properties.

In the first chapter - in the section on the origins of emergence - I mentioned three benchmarks of the 'prehistory' of emergence. Aristotle, Plotinus, and Hegel share a common understanding of how the natural world exists (Clayton, 2006, pp. 7-8). However, I do not claim that there is a line of influence between them starting from Aristotle and ending with Hegel. Aristotle introduced the concept of entelechy describing that organisms hold a potentiality of change and development. Hence, in this way, organisms are not from the very beginning complete and they need time to fulfill their potential. In the Aristotelian worldview, everything is under an ongoing process of becoming. Respectively, Plotinus suggested the idea that the One creates everything in an emergent way with downward causality and that the process of emanation has as an ultimate purpose to return to the One. This kind of 'movement' gives the sense that there is also a process of becoming, considering that everything is moving towards the One. Furthermore, Georg Wilhelm Friedrich Hegel, more clearly than Aristotle and Plotinus, proposed the dialectical relation between Being, Nothing, and Becoming. The two opposites of Being and Nothing are overcome by the concept of Becoming.

Alfred North Whitehead claimed that the natural world consists of fundamental processes, instead of a matter which does not change (Leindenhag, 2021, pp. 8-9). This emphasis on the idea of process in the natural world, established what is called process philosophy. The material world includes a dynamic which persistently provokes alterations. Whitehead also claimed a new approach to the relations between God and the world (Leindenhag, 2021, pp. 8-9). In his ontological model, God is not a special exception to the ontology of process, instead, God is considered as exactly the primary prototype of the natural procedures. God is an inseparable part and process of the natural world and, as a result, the divine ontological substance is naturalistic.

In this vein, there is no room for a transcendental and supernatural interpretation of God. As a logical consequence, God is not the eternal and absolute creator ex nihilo of the universe. This approach is radically different from the traditional Christian doctrines of the Trinity and creation. Moreover, Charles Hartshorne asserted that God's nature is a consequent one, namely the natural world influences the ontological status of God's nature. Consequently, God is not beyond the natural world as an abstract and remote existence, but a 'tangible' one within nature. God can be changed and be part of natural procedures, even those which include suffering and pain. Thus, God is variable and vulnerable, without having an absolute nature and will. Process theology completely rejects God as the unchanging and passionless uncaused cause of the universe (Cobb & Griffin, 1976, pp. 8-9). The reason behind this rejection is that God, as a remote, absolute, and transcendental cause, has no concrete relation with the natural world, according to philosophers of process thought. Furthermore, in process theology, God is not considered omnipotent (Epperly, 2011, pp. 5-6). God is not the

creator of the natural world, and, by extension, the uncreated divine energies cannot determine everything in the world. In a nutshell, process theology discloses an alternative image of God, by propounding a pantheistic or pantheistic interpretation of the divine.

Both Whitehead and Hartshorne believe that the classical concept of God, as an absolute and eternal creator, provokes conflicts with modern science. A supernatural God has no room in the modern scientific discourse. On the other hand, scientific materialism needs modifications considering that it rejects almost blindly the possibility of God's existence and his presence in the natural world. Therefore, process theology's purpose is to reconcile theology and modern science (Howe, 2009). Nevertheless, we need to consider whether process theology propositions will reconcile theology with science, and at the same time provoke conflicts with the traditional theological concepts regarding the Trinity and cosmology. Process theology uncritically accepts a naturalistic approach to God and endorses the idea that panentheism will solve all the theological problems and, at the same time, reconcile theology with modern science. (Leindenhag, 2021, pp. 11-12).

Before going any further, it is necessary to demonstrate what is at stake with process theology and emergence theory. Process philosophy and emergence theory have different starting-points and purposes. Process thought is exclusively a philosophical 'school of thought' having as its purpose underlining the importance of process in the natural world. On the other hand, emergence begins from scientific observations and in its philosophical form applies these observations on the metaphysical domain. Apart from these divergences, both process philosophy and emergence have similar, if not identical, consequences on theology. Both process philosophy and emergence theory, especially in Deacon's version, emphasize the aspect of the process in nature (Simpson, 2013). Therefore, having provided a short exposition of process theology and what kind of image of God it claims, I shall clarify the implications of emergence theory on theology.

2.2 Panentheism

The endeavor to apply the results of emergence theory on theological discourse, regarding God and his relations with the natural world, discloses a panentheistic image of God. Panentheism is categorized as an alternative concept of God and a differentiation from classical theism. The term panentheism derives from the Greek word πανεθεϊσμός and it means that everything (παν) is in (εν) God (θεός). In other words, panentheism could be defined as an ontological assertion which claims that all the material universe is located within God. Nevertheless, this definition is not sufficient considering that pantheism holds similarly that everything is God and God is everything. Thus, there is no distinction between God and the natural world in pantheistic terms. On the other hand, panentheism asserts a distinction between God and the cosmos. Philip Clayton defines panentheism as the claim that "the world exists within the Divine, although God is also more than the world" (Clayton, 2017). Panentheism as an alternative concept combines the immanence and transcendence of God, by asserting that the natural world is a part of God and God is not reducible to the natural world (Nikkel, 2003, pp. 641-645). Hence, the divine nature is all-encompassing, including everything in its very being. God is an omnipresent being given that his nature is everywhere present in the natural world. Therefore, God is omniscient considering that everything is part of his divine nature. However, God is

not clearly considered as an omnipotent being in panentheistic terms. This last aspect requires more discussion and reflection.

Both pantheism and panentheism were established by German Idealism. Particularly, the term panentheism was coined by Karl Krause, to describe Hegel's and Friedrich Wilhelm Joseph Schelling's different theological ideas about pantheistic approaches (Calabrese, 2014). Particularly, Schelling claimed that God almost was not at some point in the past and he is becoming progressively a real being (Clayton, 2006 p. 167). This image of God is an emergent understanding of his existence. Therefore, panentheism in its modern version is a development of the German Idealism movement. As I mentioned above, process theology also holds a form of panentheism, in that it claims a God who is part of natural procedures. Whitehead and Hartshorne, as one of the most prominent process theologians and philosophers, endorsed panentheism (Tabaczek, 2021, pp. 128-132). The idea of panentheism provides a more coherent and compatible view of God-world relation with modern science. In this vein, God is not an absolute and eternal principle with the potential to abundantly intervene in natural processes, such as classical theism claims (Nikkel, 2003, pp. 641-645). God is a temporal being like the material universe, and he does not violate natural laws. This panentheistic image of God is not considered theologically coherent and compatible with the Bible and the church tradition for most Christian theologians. Panentheism claims a God who is not eternal and omnipotent. Besides, God is not a person or better a communion of persons, such as Trinitarian theology asserts. Furthermore, God is not simple and uncrated in his ontological nature. In panentheistic terms, God has a plurality of natures considering the pluralities of the created substances. Panentheism asserts that God is something more than the natural world, however, it is not straightforward how and why God transcends the natural limitations of his nature.

This understanding of God is in some sense acceptable by scientists given it follows the scientific or more precisely the materialistic presumptions of scientists. So, it could be said that the 'panentheistic God' is compatible with science because this form of theology does not provoke problems in the scientific enterprise. Nevertheless, from the theological point of view, panentheism is a problematic and vague interpretation of the divine nature, which violates fundamental theological principles. It is worth mentioning that panentheism has a plural and various forms as a theological proposition. One of these forms interestingly holds that God is a Trinitarian and transcendental being and, at the same time, immanent in the natural world via the Holy Spirit. Philip Clayton calls this form of pantheism orthodox or cereal panentheism (Clayton, 2017). This view could be more, if not completely, compatible with traditional theology. However, more radical versions of panentheism suggest that God is almost fully natural, and it is not possible to intervene in natural processes. In this vein, God is not omnipotent, and he cannot affect and control the existing state of the order of the universe (Clayton, 2017). These radical versions remind us of the process of the theological depiction of God, as a passive being limited in the nature. I shall not continue to offer in detail all the forms of panentheism, since the above brief exposition is sufficient so that I can go further with a more focused analysis of the 'emergent image' of God.

2.3 Emergentist Theology and Cosmology

An emergent theology would describe not only how the mind or consciousness, appears over the course of the natural history, but more particularly it would ask what

emerges after the mind. In other words, the holy grail of emergentist theology is to describe the process of the emergence of God. Nevertheless, before analyzing what emergentist theology claims, it will be useful to briefly mention the principle of parsimony. This principle constitutes an epistemological and ontological demarcation of emergence theory. It suggests that we need to follow the data from sciences to describe the emergent structures and to avoid introducing more emergent levels than we need (Clayton, 2006, p. 15). This principle is an application of Occam's razor on emergence theory. Occam proposed that it is redundant to introduce more entities than are needed in terms of ontology and, by extension, it is better to choose the simplest hypotheses in terms of epistemology (Schaffer, 2015). In other words, emergence theory does not need the hypothesis of the existence of God, neither as an eternal creator nor as an emergent divinity within nature (Clayton, 2006). On the other hand, it is crucial to remark that emerges does not exclude the notion of God. Taking into consideration this principle and applying it to emergentist theological discourse, it becomes vague if metaphysical emergence could introduce the concept of God as an emergent radical phenomenon. To put it differently, could theology speak of God as an emergent form of entity? If the answer is yes, then what is the foundation of such an emergent entity? It has been already straightforward that the mind is an emergent outcome of the biological complexity of organisms. Nevertheless, it seems that it is not possible to have God as a more comprehensive and abstract level of being, as a basis for biology or chemistry. The mind has particular and concrete correlations with the biological brain, but God could not have such a relation with a biological phenomenon.

The emergentist theological hypothesis is quite different from the emergence of mind. Philip Clayton calls the assertion of the progressive emergence of God, as the emergence of deity (Clayton, 2006). He claims that God in terms of emergence is not a particular substance or level, but a quality which emerges gradually and broadly within the universe, and which affects it. Hence, God is not some concrete being or substance in the natural world, but a kind of spiritedness which progressively leads the natural world toward a cosmic thesis. This understanding might be related to the consciousness of organisms, but in this case, God is a more abstract and vague quality of the whole universe and not a simple next level of or within the natural world. Furthermore, Clayton's postulation was inspired by Samuel Alexander, who in his workspace, Time and Deity suggested an emergentist interpretation of God. Alexander proposed that God is a quality of the whole natural world, which is under a process of becoming (Leindenhag, 2021, p. 37). This means that at some point in the past, there was no God and currently God is not in his complete form. Only in the remote future will God fully emerge. As a result, God is not the absolute principle beyond the universe. God is not the creator "ex nihilo" and, by extension, divinity depends completely on the natural world. This is presumably the strongest version of emergentist theology. In a nutshell: the natural world is ontologically superior to God. This form of emergentist theism proclaims the divinization of the universe and the finalization of God. The foundation of this theological description is the proposed by emergence no reductionist physicalism (Tabaczek, 2021, p. 145). This kind of theology of emergence endorses materialism as the basis of the nature of God.

Nonetheless, Ernan McMullin suggested a weaker kind of theological emergence, which does not affect the doctrine of the Trinity. (Clayton, 2003, pp. 256-259). In other words, McMullin advocated emergence in the natural world, without introducing an emerging image and understanding of God. In this vein, the divine

nature is uncreated, immutable, and eternal. However, God participates in natural processes by causing emergent phenomena, notwithstanding this involvement does not provoke any alteration in God's nature. Thus, all the emergency procedures denote the divine providence and engagement in the history of the natural world. McMullin's theological emergence explains the role and the purpose of divine action in the universe. For instance, the emergence of life and consciousness reflects divine providence. However, we need to say that in this form of emergentist theology, the 'part' of God which gets involved with the natural world is not necessarily unchanged. So, ad intra God's side is eternal and immutable, but ad extra God's side is probably a developing one. Divine action might gradually become richer or more sophisticated provoking more complex events and levels in the world.

Discussing further regarding the God-world relation from the emergent point of view, I shall remark on a nuance about the understating of divine actions in the natural world. J. Wentzel van Huyssteen and Philip Clayton strongly disagree concerning the role of divine actions in the universe. Huyssteen holds that science cannot limit the range and the degree of God's actions, exclusively in some parts of the universe (Huyssteen, 2006). Moreover, Huyssteen asserts that God not only creates the world, but also continues to provoke modifications to the complex physical and chemical systems. As it shall become clear afterward, Orthodox theology approaches divine actions in a similar way. Nonetheless, Clayton rejects Huyssteen's understanding of God's actions in the natural world, and he calls this approach counterfactual divine action (Clayton, 2006). Clayton denies any divine intervention in natural processes after the creation of the universe.

The reason behind this rejection, according to Clayton, is not that God is not omnipotent or unable to provoke alterations to the natural systems, but that God does not choose to make it. This conclusion is supported by the dominance of evil in the natural world (Clayton, 2006). Clayton claims that if God was an active and determining factor in the natural processes, then God would also be responsible for the 'negative' aspects of the natural procedures, such as tsunamis, earthquakes, and so on. Hence, Clayton holds that the traditional understanding of divine actions is both theologically and scientifically insufficient. From the theological point of view, the traditional model of God's energies in the universe is incompatible with the problem of evil, and, by extension, this model is at war with modern science, considering that its methodology does not require an active God.

Nevertheless, the question is how emergence theory influences the way we comprehend the form and the role of divine actions within the natural world. Having as a background the dominant emergent image of God, who is simply a general emergent property in the evolutionary history of the natural world, we could approach differently the concept of divine actions (Clayton, 2006, p.187). Emergence theory allows us to reconsider God's actions, considering that the concept of downward causation leaves space for divine interventions without requiring a dualistic model of relations between God and the world. In other words, the divine actions could be explained in natural and immanent terms. God is not above or beyond the universe and, as a result, not a transcendental being. Therefore, the divine influence begins and ends within the natural framework. However, there is no confusion between natural energies and divine energies because the latter are not a result of the same natural systems (Clayton, 2006, p. 190). God is a different level or property of the universe and his divine energies act in a downward direction. Hence, God is a bottom-up emergent property and his actions are a top-down model of causation. As process

theology holds the divine nature is subsequent, similarly emergent theology endorses this ontological proposition by claiming that organizational complexity leads to the "emergence of a different sort of order", which we could call God (Davies, 1998, p. 159). Nevertheless, divine actions are also not under the 'jurisdiction' of the natural processes. Divine energies influence the natural world, while they exist within it and not beyond it.

The above account of God as a complex procedure of becoming and, by extension, his divine actions as a downward influence is seemingly closer to pantheism instead to panentheism. However, emergence theory proposes that the natural world is upwardly open. This openness is completely unpredictable, and it leaves room for speaking about levels, which are radically different from the recognizable matter. It is crucial to mention again that this openness does not prove any form of deity. Nonetheless, emergence is compatible with panentheism considering that it leaves space for claiming God is something more than nature. The classical paradigm of the natural sciences claimed that the world is a closed system, dismissing in this way dualism and panentheism. The natural world as a "closed causal nexus" (Peacocke, 2006, p. 274) is not compatible with divine actions or with the idea of a God who begins from the natural processes and, at the same time, transcends natural limitations. Additionally, it could be said that the natural world is 'within' the God, instead of God being 'in' the natural world. This approach could be the next level of panentheistic interpretation of divinity. Thus, in this way, the vague relation between God and the natural world via divine actions is overcome by the concept of panentheism and the acceptance of the 'naturalization' of divine energies. Nonetheless, as it has been already straightforward panentheism has many problematic points, which will be analyzed later.

Emergence theory holds a very special form of theistic naturalism, which is especially inspired by the concept of process and becoming (Tabaczek, 2021, p. 148). It is the ontology of the natural world, which does not require a creator. Albeit the very nature of the universe includes a dynamic, which progressively unfolds its potential and also gradually provides God with existence. This is a very subversive way of thinking about divine nature. Emergentist theology supports God's immanence naturally, although it does not exclude transcendence. Most importantly, transcendence distinguishes panentheism from pantheism. Besides, I hold that the emergentist image of God is an eschatological one. The fullness of divine nature will be unfolded and disclosed eschatologically. Now, God's nature is not yet completed, and only in the remote future will be ontologically realized. The results of the eschatological perspective of God's realization provide a form of apophatic epistemology. It is possible to apprehend and partly describe God's existence, even if it is located within the natural world. Furthermore, it is impossible to predict the development of the divine nature, given the element of the unpredictability of emergence.

Additionally, in the strong version of emergentist theology, God himself is not God given that he does not include a priori the property of divinity (Alexander & Dorothy, 1966, p. 362). The very nature of the universe possesses divinely potent. In other words, the divine nature is not uncrated but created. This ontological proposition might summarize sufficiently the emergentist panentheism. This emerging form of the divine nature, although, acts within the universe. The biophysicist Harold Morowitz asserts that the emergence and immanent God functions in the universe by establishing natural laws (Morowitz, 2002, p. 185). This postulation could answer the

question of how the progressives transcendental God interacts with the natural world. Nevertheless, I think that it is still vague as to how it could explain the initial conditions of the universe, considering that in this approach God is the 'creator' of the natural laws even in this way. In other words, natural laws and emergent phenomena are not just coincidence or deterministic manifestations, but an outcome of the immanent divine mind. However, the initial conditions which are accompanied by fine-tuning are responsible for the phenomenon of life, consciousness and, by extension, God. Thus, the critical question is how God establishes these laws since the natural laws probably 'create' God. I also consider the aspect regarding the so-called fine-tuning problematic. The universe has demonstrated the inherent capacity of being suitable for life. This inherent dynamic presumably requires an agent who had determined these special conditions beforehand.

Hence, God is not the uncrated external origin of the natural world, but the unfolding capacity of the universe itself to establish laws. In other words, it is the abstract consciousness of the natural world which determines how it will work and behave. Both Alexander and Morowitz suggest a direct application of emergence theory on the image of God (Gregersen, 2006, p. 290). I hold that this direct implication of the emergence of the divine image is analogous to the emergent explanation of consciousness. In more concrete terms, the phenomenon of consciousness transpires from the complex interactions of the biological system of the brain, and, in a similar vein, God transpires from the grading complex procedures of the universe. After all, it is crucial to consider further whether this popular strong version of an emergentist image of God constitutes a coherent counterproposal to classical theism or whether it is simply an attractive counterintuitive alternative without theological consistency. In the following pages, I shall address this issue by exploring the contingent problems of emergentist Theologies.

2.4 Emergent Christology

Even if the main scope of the thesis is the investigation of the effects of the emergence theory on the Trinity and cosmology and, especially, on the relation between God and the universe, it would not be redundant to offer an overview of what kind of Christology the emergence theory proposes. In this way, we will have a deeper understanding of the implications of emerging on theology, considering that Christology is the most fundamental Christian doctrine. Gregersen poses the question about the possible connection between emergence and Christology (Gregersen, 2006). Nevertheless, Arthur Peacocke suggests an emergent depiction of the incarnation of Christ (Leidenhag, 2021, p. 40). In other words, considering Christ as an emergent phenomenon and taking into consideration that emergence discloses a hierarchical structure of the natural world, this could mean that Christ is not the descending Logos of the Trinity. Christ is an ascending level of the natural reality. Hence, the incarnation of Christ took place through the emergent complex procedures. Peacocke holds that the incarnation is the summit of the hierarchy of the emergent levels in the natural world.

In Peacocke's Christology, the divine nature of Christ's being is an emergent property (Leidenhag, 2021, p. 40). Thus, Christ's divinity is a divine manifestation of the gradual complexity of the natural world. The source of such deity is again the natural procedures and not some transcendental principle. The phenomenon of incarnation occurred in Christ as emergent procedure. Peacocke also claims that this potential of the incarnation of divinity, exists within all human beings. Nevertheless,

the difference between human beings and Christ is that the incarnation took place fully and perfectly in Christ (Leidenhag, 2021, p. 41). In this vein, it could be possible to consider Christ as the best example of the incarnation of divinity within the natural world and to exploit this case for imitation. Furthermore, this emergent Christology excludes the pre-existence of the divine Logos. I would define this emergent depiction of Christ as a peculiar form of dynamic Monarchianism or Nestorianism. Christ is not from the very beginning the divine incarnated Logos, notwithstanding He needs time to reach some perfect or divine level.

Therefore, emergent Christology leaves space for considering that every human being can achieve this perfection or incarnation. However, this moral implication of emergent Christology is quite problematic given that emergence proposes unpredictability of emergent levels or properties. If this is the case, how could we imitate Christ's moral example? The response is unclear. By extension, I think that unpredictability could completely exclude any other incarnation. It is vague how and when one or more incarnations could occur again. Furthermore, the emergence depiction of Christ is a priori ontologically committed to proposing a low Christology. I hold that emergence theory suggests a perfect manifestation of God in the natural world and not an incarnation. The concept of incarnation requires presumably the one of transcendence, namely incarnation signifies a transcendental descending 'motion'.

2.5 Problems of the emergentist Panentheism

Having provided a short exposition of what the emergentist theology proposes, I shall offer a concise critical appraisal of its ontological postulations. It seems that emergentist panentheism be a coherent theistic position and compatible with modern science. Nevertheless, it requires a closer examination of this form of theism. Generally, it could be said that panentheism remains a vague interpretation concerning the God-world relations. The claim that the natural world is "in" God provokes more theological problems than solutions (Tabaczek, 2021, pp. 156-157). If the natural world is a continuation of God, then it is impossible to separate God from the universe. If this is the case, the question of why and how God is a different being within the natural world remains unresolved. Here again, we find the problem of emergence theory about the way it distinguishes the new levels. In other words, it is difficult to say when a new emergent level appears. By extension, if God is a new and holistic level or property of the universe, it seems hard to identify and determine it. Hence, the divine nature is present within the world in a very unclear way. Clayton offers a wide range of explanations regarding the meaning of the term "in" about the relation between God and the world. The preposition "*in*" denotes on the one hand the real location of the world and, at the same time, on the other hand, Divine experiences in the world. Besides the fact that Clayton offers a plurality of clarifications which demonstrate that the meaning of the word "in" is more than a simple metaphor, however, the spatial relations between God and the world remain unclear.

Clayton thinks that this emergentist panentheistic image of God keeps him "as close to finite things as can possibly be thought without dissolving the distinction of Creator and created altogether" (Clayton, 1999). The closeness and distinctiveness between God and the cosmos in Clayton's endeavor to clarify the word "in" is presumably not sufficient. Furthermore, Clayton's emergentist panentheism supposedly proposes a balanced theology between the extreme categories of religious naturalism and transcendental theism (Jackelen, 2006). Nonetheless, his theological claim has been criticized by both schools of thought. Antje Jackelen asserts that

religious naturalists approach Clayton's interpretation of emergence as just an expression of Thomas Aquinas's five ways of demonstrating the existence of God (Jackelen, 2006). Despite their important differences, while Aquinas highlights the notion of God as the supreme source -top-down- of the universe, Clayton advocates the bottom-up approach. In both cases, God is the top level of a ladder of substances and beings. Such an idea is not attractive or acceptable anymore in the modern theological discourse, and it has been criticized from many theologians and philosophers.

On the other hand, classical theists hold that Clayton's approach to divine transcendence is also problematic. God's existence is dissolving in the emergent levels of the world. In the case where God is an emergent 'expansion' from physics, chemistry, biology, and consciousness to deity, then God and the natural world remain indistinguishable. Jackelen believes that Clayton makes himself assailable to critique from both religious naturalists and classical theists. Nevertheless, every new endeavor of bringing together theology and science, includes risk. I consider emergentist panentheism as a fruitful way of interaction between theology and science, which seeks more understanding. Nonetheless, I would say that the fundamental handicap of Clayton's endeavor is regarding the priorities he poses. In other words. Clayton applies scientific concepts to theology without caring about the possible negative consequences of such a trial.

In my perspective, irrespective of the negative points of the most common proposed version of emergentist panentheism, the actual problem is that Clayton prioritizes science rather than theology. Emergentist panentheism could be used as a case study of a form of interaction between science and theology. I hold that the most effective way of bringing together science and theology is by respecting Christian doctrines and principles instead of uncritically applying scientific data to theology. Theology has its own way of speaking of God and the cosmos. Theological discourse cannot be based exclusively on scientific data, on the grounds that these this data can be changed. It is not possible to modify the theological doctrines after every scientific breakthrough. Hence, in the model of interaction, I propose science and theology are equal interlocutors with mutual respect and commitment that they will keep their own methodological principles. Furthermore, we need to take into consideration in which degree emergence - and by extension emergentist theology - is a science itself or a form of ideology. Thus, it is unclear whether theology can appropriate emergence as a secure basis for building a system of theology (Leidenhag, 2021, p. 35).

Notwithstanding, it is unassailable that emergence offers a new paradigm for theological discourse and a new opportunity for rethinking fundamental and traditional doctrines. Clayton claims that emergence it is not a neutral ally and interlocutor for theology (Clayton, 2006, p. 28). It brings theological connotations and perspectives concerning divine nature and action. Thus, accepting an emergence theory as a hope for solving theological problems means that it is necessary to modify some Christian doctrines. More precisely, emergence affects the doctrine of the Trinity by suggesting a God who is an emergent product of the natural processes and who loses his radical transcendence. This direct application of emergence of the doctrine of the Trinity could summarize the problematic inclinations of the emergentist theologies (Gregersen, 2006, pp. 280-302). Hence, the price of exploiting emergence in the theological discourse is greater than previously thought Leidenhag, 2021, p. 35).

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3. EMERGENTIST PANENTHEISM AND ORTHODOX THEOLOGY

In this chapter, I shall address the question of how Orthodox theology could deal with emergence theory and, by extension, panentheism. In other words, this chapter constitutes an endeavor to offer an alternative to and critique of emergentist panentheism from the Eastern Orthodox theological point of view. Considering the lack of scholarship in the discourse about emerging from the Orthodox theological point of view, this paper might comprise the first endeavor of an Orthodox theological investigation of emergent. This means that this chapter will not provide ultimate answers and solutions to the problems of emergentist theology. Nonetheless, I will creatively appropriate some fundamental principles of Orthodox theology, by bringing them into the discussion with emergence theory. Initially, I shall propose the principles regarding the distinction between essence and energy in the Trinity, referring at the same time to the distinction between uncreated and created and to the Orthodox theology of creation. These distinctions are indissolubly interconnected and lay the foundations for a critical approach to emergentist theology. Furthermore, I will explain the notion of personhood in Trinity and its relationship with the agency. Moreover, I shall try to analyze the emergence Christology in terms of Orthodox Christology. Finally, I shall offer a proposition concerning the possible affinities between the idea of the dynamical depth and the Orthodox theological concept of the logo of beings («*λόγοι των όντων*»).

3.1 Orthodox theological principles

I shall use the principles of Orthodox theology, which is commonly accepted by the Greek Church fathers. In other words, I shall base my research on the consensus of Orthodox Theology to formulate an alternative to emergentist panentheism. In the first chapter, I introduced the term multimonism to explain that emergence theory claims an ontological monism, but at the same time the fundamental substance of the natural world gradually obtains multiple forms and expressions. The increasing organizational complexity of the natural and biological systems creates new levels or new - even transcendental - substances. In this hierarchical structure of reality, God emerges from the one and fundamental substance of the natural world which progressively becomes more complex. In this case, God is fully dependent on the natural world and divine nature is composite. Considering that it is composite, this means that at the same time, it is subject to dissolution. Everything in the natural world which is a composite is dissoluble too. Emergence theory asserts that the emergent levels are irreducible to the previous levels. Could this irreducibility exclude the possibility of dissolving a natural substance? In my perspective the answer to this question is negative. Irreducibility explains the part-whole relations of a system, and it does not provide any kind of certainty that a composite system is not dissoluble.

Furthermore, emergentist panentheism discloses an image of God who is completely consubstantial with the natural world. It is just a different expression of the fundamental substance of the universe. This consubstantiality makes God immanent and more accessible to human intellectual faculties. Nonetheless, this understanding of God provokes problems regarding the distinction between God and the natural world. Orthodox Theology proposes the distinction between uncreated (άκτιστο) and created (κτιστό) (Xexakis, 2012, p. 69). Trinity constitutes the uncreated and the natural world comprises the created. In other words, it is a distinction between Creator and creation, which depends on the Orthodox doctrine of

creation. Orthodox theology uses the term creation «*ἐκ του μὴ ὄντος*». This term describes that God's essence and the world's essence are fundamentally and ontologically different. God created the universe not from his essence, but from his energies. In other words, the world is an outcome of divine energy and, by extension, of divine will. If the world came from the divine nature, it would be consubstantial with God's essence. The emergentist panentheistic consubstantiality does not leave much room for distinction between God and the world. Hence, according to Orthodox theology, God is the uncreated cause of the created universe. God and the natural world are not consubstantial in any way. Moreover, God is eternal considering that he does not have any cause. On the other hand, the natural world is temporal, and it has a concrete age.

In this vein, the uncreated is independent, autonomous, self-existent, impassible, imperishable, and unchanged. God is the ontological absolute and principle of the whole cosmos. In terms of apophatic theology, God is indescribable and inconceivable, considering that his very being is beyond any concept of existence. It is only possible to say what God is not through negotiations. This Orthodox theological approach, as it is straightforward, it is extremely opposite to the emergentist panentheism. God is not a temporal process of the natural world. God eternally has the fullness and the completeness of his existence, and he does not change. On the other hand, emergence theory discloses a God who currently is not a complete existence, and the complex procedures of the natural world will provide him with the fullness of his existence in the future. Furthermore, I hold that emergentist theologies do not explain the reason why there is this form of the ontological necessity of the natural world to produce God. Emergentist panentheism proposes a teleology and eschatology of the natural world. It looks like the world has an inherent potential of creating God's existence. If this is the case, then why does the world have this potential? Emergentist theologies do not answer this question clearly. On the other hand, if the creation of God is simply a random result of natural processes, then in this case God would be a surplus existence which could never have existed. The unpredictability of the emergence theory might endorse my assertion.

Georges Florovsky, one of the most prominent Orthodox theologians of the twentieth century, asserted that the natural world is a contingent and a surplus phenomenon (Asproulis, 2016, p. 152). In other words, the universe does not have per se any ontological necessity. Either the cosmos is a random phenomenon with an unspecified cause or the created result of divine energies, in both cases, it includes contingency and redundancy. Therefore, these properties of the natural world do not justify any potentiality of the creation of God's existence. The Orthodox perspective on this issue is that the ontological necessity as a property belongs exclusively to the divine essence. The divine essence is increased and eternal. As a logical consequence, the divine substance holds the element of being an ontological necessity itself (Xexakis, 2012, p. 114). On the other hand, the essence of the natural world requires a cause or, more broadly, an external influence since its life is temporal and contingent.

The gulf between uncreated and created is bridged by the concept of divine energies. The term essence (*ουσία*) is related to what the existence of God is (Xexakis, 2021, pp. 68-71). Trinity shares the same uncreated essence. However, at this point emerges the question about how this uncreated essence relates to the created substance of the natural world and how we can avoid the confusion between them. The Orthodox answer to these questions is summarized by the distinction between essence and energy. The uncreated essence has nothing to do with the created one.

Maximus the Confessor, among other Greek Church fathers, described the divine essence as supra-essential (*υπερούσια*) to highlight its huge difference from the created essence. Furthermore, God's essence related to the cosmos through the energies. Additionally, Vladimir Lossky claimed that this theological distinction is probably the only criterion of discerning God as a transcendental being from pantheistic models of God (Lossky, 1997, pp. 73-75). Otherwise, God and the natural world would be identical in terms of essence. Thus, it is the divine energies which allow God to act within the natural world, without confusing his uncreated nature (Loudovikos,1992, p.103). The energies are produced by the divine essence of the Trinity. We could provide a one-sentence definition that energy is the uncreated motion of God's will. In other words, it is the expression of the divine will. The divine energies are common among the Three persons of the Trinity because they are produced by the shared and common essence and not by the divine persons. If it were produced by the divine persons, then there would be three different wills and energies.

Hence, the distinction between essence and energy allows us to think about the transcendence and immanence of God in a dialectic way. The uncreated energies connect God and the world without mixing them. God acts ad extra towards the natural world, but he is not a part or a process of it (Asproulis, 2016, pp. 142-144). Furthermore, important properties of the divine essence include those of impassibility and imperishability. According to Orthodox perspectives, God's essence cannot change or be a consequence of natural procedures, as the process theology and emergentist panentheism hold. Moreover, the divine nature is fully inaccessible, and the natural world has access to divine energies. Thus, proposing the Orthodox theological understanding of the God-world relation concluded with a more balanced explanation. Apparently, the refutation of the whole system of emergentist panentheism concerning the God-world relation requires deeper analysis. Nonetheless, in the scope of this thesis, we are able only to provide the framework for future developments in this discourse.

3.2 Personhood and agency

Emergentist Theologies claim divine agency without a concrete delineation of the concept of person. Is possible to speak with an agency without an agent? Paradoxically, many emergentist theologians reply positively. As it is already clear, emergentist theologies claim a God who does not have necessarily the property of a person. The emergentist God is more a vague and general level of the natural world rather than a personal God. Nevertheless, Philip Clayton asserts that we could appropriate an emergent anthropology for claiming a personal God (Simpson, 2013). Hence, Clayton alleges that God is not a being, but at the same time he asserts that God is not less than personal (Clayton, 2008, p. 202). Clayton uses Peacocke's term "supra-personal" (Simpson, 2013). It is needed to think about God's action in the natural world, Clayton claims, not just with reference to human agency. Once we declare God as an agent, this entails that we presuppose a correlation between divine agency and human agency. In this approach, God is considered a transcendental and infinite source of agency. In this vein, emergentist panentheism proposes that God as an emergent phenomenon or a general property of the universe acts downwardly. Thus, the open upwardly universe creates God, and he acts within the natural world in a downward direction. In other words, emergentist panentheism appropriates one of the most fundamental aspects of emergence theory to explain divine agency and action.

Besides God's providence and its correlation with the downward causation, it is quite disputable whether it is possible to consider the emergent God as a person. It seems to me that emergence theory depicts a depersonalized agency. Even Clayton's proposal of a pneumatology of emergence does not meet the requirements of what a person is. Clayton argues the personal action of God in the natural world transpires through the Holy Spirit (Leindenhag, 2021, p. 43). This concept sounds relevant to the Orthodox perspective on divine energies, considering that Orthodox theology proposes a special role for the Holy Spirit regarding the God-world relation. Nonetheless, Clayton considers the Holy Spirit a temporal emergent result of the complex natural procedures (Clayton, 2004, p.110). Furthermore, the emergence delineation of divine action interprets the Holy Spirit as the personal agency and expression of God's action (Simpson, 2013). Nevertheless, the Holy Spirit is simply the next level of the hierarchical structure of the natural world. Therefore, it could be possible to consider divine causality as the superior form of causality - top-down influence - in the universe (Clayton, 2008, 198).

Despite Clayton's pneumatology of emergence, I consider that the emergentist God remains without the properties of a person. However, to discern what a person is, we need to provide some details. While the concept of person (*πρόσωπον*) is used by the Greek Church fathers, during the twentieth century the Orthodox theologians John Zizioulas and Christos Yannaras offered a more comprehensive analysis. They both claim that personhood is a concept related to communion, relationship, freedom, and identity. Thus, the existence of a person entails the above features. In the Orthodox theology, the Trinity is a communion of persons, in which their relationship determines their identity. For instance, the property (*ιδίωμα*) of Father requires that there is the Son to claim Father as Father. Hence, their relationships delineate their identity as divine persons. These properties of divine persons allow us to distinguish them. In this vein, a person is not an isolated and reclusive individual. To put it differently, the ontology of persons is an ontology of relation. Relation signifies a

communion of love and of the common will. Nevertheless, the emergentist God does not meet the above requirements for consideration as a person. Emergentist theologies might fail to fully conceive the ontology of persons. The emergentist God has agency and acts in the natural world, but it does not make his person. Personhood requires more properties than freedom or agency. It entails communion and relationship - not just with the natural world, but with other persons. Zachary Simpson also argues the fact that emergence theory does not leave space for a personality approach of high emergent levels, including God (Simpson, 2013). Therefore, emergentist panentheism does not offer a comprehensive and sufficient theology of personhood.

3.3 Refuting the emergent Christology

As I noted in the second chapter, the application of emergence theory on Christology depicts an image of Christ who is simply an emergent phenomenon. Emergent Christology rejects the pre-existence of Logos (Leidenhag 2021, p. 40), by extension, the doctrine of the Trinity. The person of Christ is not a descending divine incarnation, but an ascending property of the natural world. Hence, Christ's divinity is an emergent manifestation of the high organizational complexity of the universe. This form of Christology is completely contradictory to the high Christology of Orthodox theology, which depends on the Council of Chalcedon. In other words, the one hypostasis of Christ was perfect in both divinity and humanity. This means that the Incarnated Logos was consubstantial with God's essence and human's essence. The two natures of Christ were united inconfusedly (*ἀσυγχύτως*), unchangeably (*ἀτρέπτως*), indivisibly (*ἀδιαιρέτως*) and inseparably (*ἀχωρίστως*). The terms inconfusedly and unchangeably refer to Monophysitism and the terms indivisibly and inseparably to Nestorianism. Therefore, Orthodox theology claims that Incarnated Logos poses two perfect natures, and, in this way, it proposes the concept of perichoresis to explain the ontological unity.

The low emergent Christology violates almost all the Orthodox principles. First, it holds that there is no real incarnation of the Logos, considering it completely rejects the pre-existence of the Logos. Nevertheless, emergent Christology accepts the possibility of transcendence. This transcendence is a bottom-up emergent process although. Besides, emergence theory proposes ontological monism, namely the natural world consists of one fundamental substance. Even if this one substance takes progressively many forms, as I noted above using the term of multimonism, it remains monism. Therefore, Christ is a superior level of the substance of the natural world. In other words, emergent Christology refuses the doctrine of the two natures of Christ. This low Christology has a lot of similarities with Arianism, Dynamic Monarchianism, Nestorianism and Monophysitism. More particularly, Arianism holds that Christ was not consubstantial with God and, at the same time, his existence above the natural world. Both Dynamical Monarchianism and Nestorianism claim that the Logos was not co-eternal with God and at point of his life adopted by God. This proposition echoes the emergent depiction of Christ, who gradually obtains divinity as a property. Lastly, Monophysitism argues similarly like emergent Christology that Christ had only one nature. Furthermore, Orthodox theology highlights that Christ was impossible, since the perichoresis of the divine and human nature. On the other hand, the emergent Christ is subject to natural procedures and, consequently, Christ is not impossible. To sum up, emergent Christology is metaphysically committed to introducing a low and problematic Christology.

3.4 Dynamical depth and logoi of beings: potential affinities

So far, I have offered the Orthodox perspectives on matters, such as God-world relation, personhood, agency, and Christology. The short exposition of the above theological insights radically distinguishes Orthodoxy from emergentist panentheism, which violates the fundamental principles of traditional Orthodox theology. However, now I shall endeavor to offer a synthesis of Orthodox theology and emergence. To do so, I shall appropriate the concept of the dynamical depth, which provide a new model of how emergence works in the natural world. I shall argue that dynamical depth has a lot of similarities with the concept of the logoi of beings. Nonetheless, before proceeding any further with the potential affinities of these concepts, it is indispensable to emphasize what is at stake with the idea of dynamical depth. Considering that I introduced - in the first chapter - the concept of dynamical depth with some details, here I shall only repeat the elements of dynamical depth demonstrating relevance with the logoi of beings.

Dynamical depth emphasizes the importance of the potentiality of the natural systems. Within the natural and biological systems exist restricted and hidden dynamics (Deacon, 2012, pp. 194-195). This potentiality is responsible for emergent properties and for the self-directedness of the organisms. Thus, properties which are currently absent will gradually emerge in the future. As we can see, the idea of dynamical depth is very similar to the Aristotelian entelechy and teleology. Furthermore, especially the orthograde modifications demonstrate this capacity of systems for development and evolution (Tabaczek, 2021, p. 49). These orthograde alterations do not entail external influence from independent factors for realizing their potential. Moreover, the third level of dynamical depth of teleodynamics combines the internal inclination of organisms for the increasing complexity and development and the control gradual influence of the external environment. Terrence Deacon and Spyridon Koutroufinis hold that organic systems show high dynamical depth, in comparison with inorganic ones. This delineation of the dynamical depth discloses a family resemblance with the concept of the logoi of beings. Nevertheless, it is indispensable to provide a short overview of that concept, to identify the similarities.

The concept of the logoi of being is widely used in Greek Patristic thought and it has multiple meanings. (Bradshaw, 2020, pp. 9-22). It could be said that logoi of beings equal the eternal will of God (Knight, 2013, pp. 213-226). It is the 'blueprint' of God for the natural world. Furthermore, the logoi are the 'inner essences' of the beings and they determine the very being (*εἶναι*) of their substance. The logoi of beings comprise the existential foundation and depth of the created. Every being in the created cosmos has a concrete logo which specifies its orientation. These logoi are hidden in some sense within the organisms, and they offer to organisms a teleology. The concept of logoi of beings has at the same time cosmological and eschatological aspects. Cosmological given that they are the ultimate divine causes beyond the universe and eschatological because they provide orientation - and potential - with organisms.

The concept of the logoi of beings is one more way of approaching the relation between God and the natural world. The idea of logoi of beings is indissolubly connected to the divine uncreated energies. Inasmuch as there is this connection with uncreated energies, logoi are also uncreated. Hence, logoi are not equal to the natural laws or biological procedures.

The concept of the logoi of beings was highly developed by Maximus the Confessor. It could be said that Maximus is the most prominent exponent of the theory of the logoi of beings. Hans Urs von Balthasar claimed that Maximus' theory of logoi renders "the ultimate metaphysical grounding for existence itself" (Balthasar, 1988, p. 121). Everything exists according to the logoi of being, which pre-exists eternally. This means that the logoi are not located within space-time (Loudovikos, 1992, p. 139). The logoi include all the 'guidelines' for the very being of the created and how organisms will develop themselves. The logoi express the whole organization of the natural reality, by determining the very being of creatures. In this vein, the cosmos is a form of the 'incarnation' of the divine will. Therefore, the logoi of an object, for instance, exist both prior to the object and in the object (Bradshaw, 2020, pp. 9-22). The a priori existence of the logoi makes them uncreated (Loudovikos, 1992, p. 139). Dionysius the Areopagite describes the logoi of beings as the substance-making of the natural world and he calls them predeterminations (*προορισμούς*) and good acts of divine will (*θελήματα*) (Bradshaw, 2020, pp. 9-22). Deacon notes that constraints of complex organisms have a causal role (Simpson, 2013). These terms explain further the correlation between logoi of beings and uncreated energies.

It could be observed that both the dynamical depth and logoi of beings emphasize the fact that organisms have either a biological or an existential depth. This depth, in both cases, signifies a potentiality and a teleology. Dynamical depth holds that organic systems have an inner driving force, which leads them to development and evolution. This driving force is currently restricted and hidden by constraints. In the future, it will actualize its full potentiality. The concept of the logoi of beings also claims that organisms have a hidden dynamic with the proper guidelines for their formation and evolution. This depth constitutes the 'inner essences' of beings. Thus, the orthograde alterations are not random natural processes, but they have an entelechy. Furthermore, teleodynamics as the third stage of dynamical depth brings together the internal tendencies of organisms with the external factors of the environment. This could mean that the concepts of entelechy and teleology are expanded from the organisms to the environment. Terrence Deacon notes that "all intentional phenomena operate under the persistent absence of that-which-is-not-yet-achieved" (Simpson, 2013). In other words, it seems that natural procedures do not propose randomness, but that they have a purpose. Therefore, teleodynamics offers more possibilities for affinities between the dynamical depth and the logoi of beings, considering that the logoi of beings have an eschatological perspective.

As I noted above, the theory of the logoi of beings includes multiple and diverse meanings. Thus, the logoi are not only the 'inner essences' of organisms, but at the same time they are the ontological foundation of the natural world (Knight, 2013, pp. 213-226). The logoi are the predeterminations and the substance-making of the universe. They express the whole organization of the natural world. This delineation is close to teleodynamics aspect of dynamical depth, considering that it includes the external causal influence. The logoi of beings also exercise causal influence externally and not exclusively as the inner dynamic of beings. Hence, I argue that these affinities allow us to reflect differently on the uncreated divine energies. In other words, God's actions in the natural world could work not only downwardly, but also upwardly. The concept of downward causation is not the only way to think about divine activity. According to my proposal, God can also act in the natural world upwardly. This upward causation discloses a subversive approach to divine actions. The logoi of

beings come from the depth of creation as a profound existential dynamic, which exercises causal influence on the natural world. Some emergentist theologians claim that God's action equals the natural laws. However, the logoi of beings are not created laws or processes (Knight, 2013, pp. 213-226). Therefore, I offer an alternative to the way of thinking about God's energies, and I suggest a balanced interaction between emergence theory and theology. We do not need to change the fundamental theological principles, to bring together emergence and theology. My proposal respects the Orthodox theological principles and, at the same time, the emergence theory.

CONCLUSION

A comprehensive analysis and a close examination of the concept of emergence demonstrates that it comprises a powerful explanatory framework for a wide range of phenomena in the natural world. Emergence theory claims that it is possible to observe new properties in complex evolving systems. These new properties or levels exercise downward causal influence on the part from which they come from. Strong emergence asserts that these new properties or levels are irreducible ontologically. Third-order emergence supports the strong version of emergence theory. These third-order phenomena along with the emergent theory of consciousness offer to theology a new paradigm of thinking about fundamental theological issues. However, according to the principle of parsimony, emergence theory does not require the idea of God. Nevertheless, emergence does not exclude at the same time God. Emergentist theologies propose a God who is an outcome of the complex natural procedures of the universe. It could be said that - strong - emergentist theologies suggest a divinization of the universe and the finalization of divine essence. The emerging idea of God is compatible with modern science considering that it excludes a transcendental divine agent and person who creates the universe. Nonetheless, emergentist theologies cannot explain why and how the universe includes the potential to create the existence of God.

A close examination of emergentist theologies from the Orthodox theological point of view demonstrate even better, their problematic tendencies. The Orthodox theological principles of the distinction between essence and energy and, by extension, uncreated and created show clearly the problems of the emergentist theological approaches. The divine nature belongs to the uncreated and the natural world to the created. The only way of interaction between uncreated and created is via the divine energies. The concept of the divine energies combines the immanence and the transcendence of God in a balanced way. Moreover, emergentist theologies fail to meet the requirements of the personhood of God. While these theologies claim divine agency, at the same time they do not make any mention to a communion or a relationship between persons. Furthermore, examining the emergent Christology from the Orthodox point of view, it became clear that the emergent Christ shows similarities with some of the Christological heresies, such as Dynamical Monarchianism or Arianism. Finally, the proposal of the connection between the dynamical depth and the logoi of beings offers a model of upward divine causation, which is currently absent in the scholarship of emergentist theologies. Besides, it is a balanced way of interacting between emergence theory and theology.

Taking into consideration the above remarks it is quite straightforward that some of the most fundamental principles of Orthodox theology could be useful for substantiating the theological problems of emergentist panentheism. Most

importantly, the above principles serve for constructing a coherent counterproposal to emergence theory and, mostly, to emergentist panentheism. The distinctions between uncreated and created and, also, between essence and energy clarify sufficiently the God-world relations. Furthermore, rejecting emergentist panentheism does not mean that emergence has nothing to do with theology. Considering that the downward causation is the 'holy grail' of emergence, and, at the same time, it entails the concept of emergence of properties, it seems that we need to compromise theology with these ideas. My proposal demonstrates that it is not necessary to blindly adapt these ideas without caring about the theological principles. The dynamical depth concept offers a new paradigm for emergence and, also, for emergentist theologies. In other words, we do not need to approach God as an emergent level or property of the natural world to explain his divine action downwardly. It is possible to approach God as an uncreated agent who acts in different ways. One of these models of divine actions is relevant to the theory of the logoi of the being. Therefore, explaining the affinities between the dynamical depth of emergence and the logoi of beings, I offer a new way of considering divine action in the natural world.

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