
HOW TO RECONCILE THEOLOGY AND SCIENCE

A METAPHYSICAL APPROACH

Rafal Szopa*

Wroclaw University of Science and Technology, Faculty of Management, Department of Humanities and Social Sciences, ul. Ignacego Lukaszewicza 5, Wroclaw, 50-371, Poland

(Received 23 March 2022 revised 14 May 2022)

Abstract

The conflict between Science and religion is deeply rooted in Western culture. Its origin is explained by the history of mutual relations between Theology and Natural sciences. Contemporary discourse on the relationship between Theology and Science shows how to build a bridge between these fields. It seems that Metaphysics should be a common ground for understanding. The article shows that the theory explicitly formulated by Aquinas about the real distinction between essence and existence is the foundation for understanding the sources of the conflict between Science and Theology and how to overcome it. The 'agere sequitur esse in actu' formula also plays an important role in agreeing on the relationship between Science and Theology. The action of the world relates directly to its existence and only indirectly to God. Appealing to the theory of the real distinction between the essence and existence is a new approach to the problem of the relationship between Theology and Science, allowing to delineate the framework of their mutual functioning without overlapping.

Keywords: religion, theology, metaphysics, conflict, coexistence

1. Introduction

Reconciling Science and Theology has been an insurmountable problem since at least the time of Charles Darwin. In this paper, I will show the historical background of this conflict as well as its metaphysical foundations to solve the problem. The conflict is played out between Theology and Science, but its background is rooted in the relationship between religion and Science. Theology expresses religion in a scientific way, and therefore it is difficult to talk about the conflict between Theology and Science without reference to the historical relationship between religion and Science. In a sense, one thing results from the other, so by resolving the conflict on the scientific plane, we can show the relationship between religion and Science in a new light. I will start with the metaphysical foundations in order to emphasize the importance of the theory about the real distinction between essence and existence and the theory of participation of being in this conflict. Then I will focus on presenting examples

*E-mail: rafal.szopa@pwr.edu.pl

of not applying the theory of real distinction in modern Natural science and in theological thought. In the last part of the paper, I will propose a solution to the difficulties of mutual relations between Science and Theology. A metaphysical approach based on ontic compounds will be used, especially the contingency of essence and existence, which separates the two sides of being, marking the boundary between different research areas which, when overlapping, create a conflict that is not metaphysically necessary.

2. Contemporary discourse between Science and Theology

The contemporary discourse between Science and religion over the last several decades shows that the dialogue between these disciplines leads to their mutual valuable interactions. Ian Barbour is among the most influential scientists on the subject of the relationship between religion and Science. He introduced the concept of *critical realism*, thus opening the door to common dialogue. He wrote: “*Critical realism* acknowledges of reference *and* the realistic intent of language as used in the scientific community... some constructs agree with observations better than others only because events have an objective pattern” [1]. This approach showed a common ground for Science and religion, as both areas discuss invisible reality [2]. Barbour presents four possibilities of the relationship between Science and religion: conflict, independence, dialogue, integration [3]. While Barbour was in favour of integration, in this article I want to show that integration is impossible and conflict is not necessary. I believe that independence and dialogue are at the heart of the interplay between Science and religion.

Ted Peters identified eight possible relationships between Theology and Science: scientism, scientific imperialism, ecclesiastical authoritarianism, scientific creationism, the two-language theory, hypothetical consonance, ethical overlap, new age spirituality [4]. I believe that for the position presented in this article, the closest is a combination of the two-language theory and hypothetical consonance. The two-language theory and hypothetical consonance seem to be contradictory, as the first approach represents an antagonism insurmountable by Theology and Natural sciences, while the second approach gives hope for reconciliation. In my opinion, this contradiction can be resolved through Metaphysics. Metaphysics is the meeting place of Theology and Natural sciences. They still remain separate (hence the lack of integration), but they have a common foundation - a really existing being. Without Metaphysics, Theology and the Natural sciences will either be very distant or overlap. They can also supervise each other - as Peters shows - but they will not be able to talk to each other about the same reality that exists.

Why do Theology and Science so often overlap? It is worth asking the question from today's point of view. Robert J. Russell points to the existence of an epistemic hierarchy [5]. In the case of the sciences, the epistemic hierarchy means „in essence, the idea is that Physics, for example, places constraints on Biology: no biological theory should contradict Physics, and so on up through

the other sciences and Humanities. On the other hand, the processes, properties, and laws of Biology cannot be reduced without remainder to those of Physics, and again on up through the other sciences and Humanities.” [5] An epistemic hierarchy in the case of Theology and Science would mean that constraints should be found beyond Theology and Science would not go beyond and at the same time would not create a contradiction between these domains. However, methodological naturalism in the Natural sciences can be taken as the assumption that what has been unexplained by Science will one day be explained. This assumption works well. It means that perhaps Theology is a ‘mental shortcut’ and it is only a matter of time until everything, including religion, is explained by Science. In such an approach to the Theology-Science relationship, it is necessary to draw a real demarcation line between them, not only the assumptions. As Alvin Plantinga points out when writing about methodological naturalism, modern science excludes the existence of God: “the scientific evidence base, the evidence base from which current science is conducted does not include the belief that there is such a person as God” [6]. This position can be understood in the light of Plantinga’s approach to naturalism in relation to evolutionism. For example, he claims that the evolutionary account of man’s origins is consistent with the Christian faith, “but if naturalism is true, there is no God, and hence no God (or anyone else) overseeing our development and orchestrating the course of our evolution” [A. Plantinga, *Naturalism Defeated*, <https://www.scribd.com/document/143800935/Naturalism-Defeated-Alvin-Plantinga>, 19.03.2022, 3]. This would mean that the combination of God’s oversight role over Evolution and our understanding of God’s work in Evolution should be consistent with the Theory of evolution itself. Hence the idea that evolutionism contradicts naturalism. Plantinga claims that “ordinary naturalism is self-defeating” [7]. The author does not exclude evolutionism, but assumes that since our cognitive powers require us to see a purpose in Evolution, and theism and faith in God tell us that God directs Evolution, excluding this option on the basis of naturalism contradicts naturalism, not Evolution. Thus, naturalism undermines human reason and the ability to obtain knowledge, as Plantinga writes: “so rejection of theistic belief doesn’t automatically produce scepticism: many who don’t believe in God know much. But that is only because they don’t accurately think through the consequences of this rejection. Once they do, they will lose their knowledge; here, therefore, is another of those cases where, by learning more, one comes to know less.” [7, p. 198]

This reasoning is embedded in the epistemological plane, which causes the difference between ontological and methodological naturalism to blur. The approach that I propose in this article is in line with Plantinga’s overall approach, but differs from the starting point. While Plantinga assesses the essential side of reality and sees a rational direction in it, the metaphysical approach (guided by the theory of the real distinction) focuses on the creative relationship between God and the world, from which it follows that God as the Creator influences the functioning of the world, but through the direct act of

creating *esse* of beings as the sources of their *essence*, which the Natural sciences describe. In other words, the metaphysical approach states the fact: since natural processes created man through Evolution, this is what God wanted, but since God influences directly the existence of things and indirectly their essence (through existence - *agere sequitur esse*), we do not directly see God's action in reality (except miracles), because for this we would have to know (define) what existence, and therefore God himself, is. Hence, methodological naturalism marks a certain line between what we know and can know and what is unknowable for us, leaving the freedom to believe and interpret. Contrary to Planting's claims, (methodological) naturalism does not undermine the cognitive abilities of man, but orders the cognitive planes of essence and existence, thus appreciating reason.

It is worth noting that some modern thinkers see the Renaissance as a source of antagonism between religion and Science. Seyyed Hossein Nasr is one of them. The Renaissance overestimated the role of reason [8]. The key to resolving the dispute between Theology and the Natural sciences can be Metaphysics. Nasr argues that „infinite Reality is at the heart of Metaphysics” [9], while everything except God is as if non-existent because it is variable and has ontological poverty [9]. Highlighting the nature of the ultimate Reality and our reality indicates the need for the participation of this ‘earthly’ reality in that divine reality [10]. I believe that seeing Metaphysics as a platform for dialogue is extremely important. Nasr, however, dismisses the Theory of evolution from this metaphysical perspective saying that is an example of modernism and with its collapse, the Theory of evolution would also collapse and is therefore not a science but an ideology [11]. It seems to me that Metaphysics does not contradict the Theory of evolution as long as we refer to the doctrine of the real distinction between essence and existence. This doctrine is constantly neglected, while it should constitute the most important foundation for the understanding of Theology and Science. This article is intended to fill this gap.

3. Metaphysical foundations of religion and Science's antagonisms

Ontological and methodological naturalism impose certain limitations on the conduct of scientific research, which should essentially end the dispute between Science and religion. Ontological naturalism states that „Nature is a closed system of natural causes and effects, and nothing exists outside of it, and even if it exists, it does not affect them” [12]. The exclusion of Transcendence from the field of scientific research could be a demarcation line in which Science simply does not deal with the domain of religion in the sense of falsifying or verifying the doctrine of faith. However, the dispute between religion and Science continues and does not seem to end. One of the reasons is the starting point of Science and religion: an existing being knowable by our senses. The metaphysical structure of being explains - in my opinion - both the sources of the conflict between religion and Science as well as its constant duration. I believe that the greatest breakthrough in the understanding of being was the real

distinction between existence and essence made by Saint Thomas Aquinas [13]. The breakthrough is that showing the division of being into essence and existence sets two separate research traditions, two different research methods, and thus is a fundamental reference for the relationship between Theology and Science. What connects essence with existence is action - *agere*, according to the formula: *agere sequitur ad esse in actu* [14]. These three issues: existence, essence and action point to the sources of the problem of the relationship between Science and religion, which I will try to explain later in the article.

If we assume that Aquinas made the greatest contribution to the theory of real distinction, then his thought will be crucial for understanding the science-religion relationship. The real distinction between essence and existence shows that in no being apart from God is essence the same as existence. Therefore, every being had to be created and constantly being created by God. Thomas wrote: „God is in all things; not, indeed, as part of their essence, nor as an accident, but as an agent is present to that upon which it works. For an agent must be joined to that wherein it acts immediately and touch it by its power; hence it is proved in Phys. VII that the thing moved and the mover must be joined together. Now since God is very being by His own essence, created being must be His proper effect; as to ignite is the proper effect of fire. Now God causes this effect in things not only when they first begin to be, but as long as they are preserved in being; as light is caused in the air by the sun as long as the air remains illuminated. Therefore as long as a thing has being, God must be present to it, according to its mode of being. But being is inner most in each thing and most fundamentally inherent in all things since it is formal in respect of everything found in a thing, as was shown above. Hence it must be that God is in all things, and innermost.” [Thomas Aquinas, *Summa Theologiae* I, q. 8., a.1]. We observe a being that is the same for the sciences, Theology and Philosophy. According to the above quote, God is in all things, so scientists should easily discover the existence of God by examining reality at every turn. However, Science does not deal with the existence of God, and if it does, it denies His existence in the name of ontological naturalism. Why is this happening?

I believe that the answer comes from the description of the metaphysical structure of being, as we find in the theory of real distinction and the theory of participation of being. Every being has two components: existence and essence. Since only God exists of Himself, everything else needs to be constantly created by God, which is *creatio continua*. Hence, the affirmation that God must be present in all things. Aquinas was not a pantheist, therefore the existence of beings is not the existence of God (which would be tantamount to substantial presence), but their own existence. Without a definition of existence, the problem of the relation between essence and existence cannot be understood. However, we can describe these relationships and draw conclusions. Therefore, God creates a being with its own existence and keeps this created being in existence. If we know a being, it is because we see its essence, which we can conceptualize. According to the principle of *agere sequitur ad esse in actu*, the

essence runs its action from existence. By observing any thing, we see its operation, the immediate basis of which is the existence of that particular thing, although we know that the very existence of that thing must be constantly created by God. However, we do not see God's action directly. Hence, there is no direct transition from being to the existence of God. The theory of the participation of being describes these relationships in more detail.

The creator of the theory is Plato, who, discovering the existence of the extrasensory world, tried to describe the relationship between material reality and ideal reality. To show this relationship, Plato used the term μέθεξις [Plato, *Phaedo*, 100 c] (methexis) from the verb μέτεχειν, which expresses participation and comes from the cluster ἔχω (eho) - I have, I possess, I receive and μετά – together [15]. Besides, there are other terms used by Plato to describe the relationship between ideas and our reality, such as [15, p. 23]:

- κοινῶ (koinoo), κοινῶνία (koinonia) - community, community, relationship, connection;
- μεταλαμβάνω (metalaubano) - 'receiving your part from someone, accepting something for something';
- μετάσχεσις (metashesis) - 'participating in the nature of something';
- μετάληψις (metalepsis) - to share in something, agree with something;
- σύνειμι (syneimi) - connect, associate;
- πρᾶειναι (praeinai) - 'to be near something, to be present';
- παραγίγνομαι (paragignoomai) - to be beside, to participate in something;
- εἰκαστικός (eikastikos) - similar to something;
- μίμησις (mimesis) - imitation, image, reconstruction, likeness;
- μετεῖναι (meteinai) - 'to belong to someone, to follow the same footsteps, to be amongst something'.

All these terms indicate participation as an exemplary and purposeful cause, but not the cause of things. Ancient thought did not need efficient causation in terms of existence, since the material world was considered to be eternal. Plato's theory of participation thus showed how matter reflects imperfectly in ideas. In this sense, participation meant that material things conformed to the idea as far as possible. Material beings strive for what is 'above' because there is their pattern by which we know them. This approach to participation was Christianized in the first centuries of the Church with the adoption of Plato's philosophy to clarify theological issues. From this perspective, we can read these words of Saint Paul: "For from the first making of the world, those things of God which the eye is unable to see, that is, His eternal power and existence, are fully made clear, He having given the knowledge of them through the things which He has made, so that men have no reason for wrongdoing" (Romans 1.20). If we substitute God for an idea, then Plato's theory of participation describes the model relationship between God and the world. The things of this world reflect God's qualities and thus become visible to our reason. Human reason can even become certain about the existence of God. This certainty can also be moral and is well illustrated by the Bible.

Christianity added an extremely important element to Plato's theory of participation: the doctrine of Creation. Probably Philo of Alexandria was the first thinker to use the Bible to explain the doctrine of Creation. What was happening in the history of creationism at that time was an attempt to combine the theory of Creation with a philosophy for which the concept did not exist. The difficulty of combining such two different systems of thought - biblical and Greek philosophy - initially resulted in a reluctance to Philosophy by most of apologists of the second century. Justin Martyr, however, is an exception who, using Philosophy (under the influence of Platonism and Stoicism), claimed that only God is unchanging and only Him is the cause of other things [16] while created things are destructible: „For he means that what things soever are after God, or ever will be, have a corruptible nature, and can disappear and be no more. For God alone is unbegotten and incorrupt, and is for this reason God, but all else after Him is begotten and corruptible” [16]. Tertullian and Tatian, however, were opposed to Philosophy, although they did contribute to the doctrine of Creation [Tertullian, *Prescription against Heretics*, 7, <https://www.newadvent.org/fathers/0311.htm>, accessed on 09.02.2022; 17]. If we say that Tertullian and Tatian were theologians, not philosophers/scientists, and that the term ‘philosophy’ encompassed all sciences until the nineteenth century, then there was a dispute under the Church Fathers over the possibility of combining Science and faith. As we see, it was not obvious that such a combination was possible, but in the end the ‘option’ to connect won. The theory of creationism was taken from the Holy Scriptures, so I believe that in Christian antiquity it functioned as a religious concept, not a scientific concept, especially if we consider that the term ‘theory’ belongs to Science, not religion. In this sense, speaking of the theory of *creatio ex nihilo* requires a reference to Philosophy, not religion. Due to the lack of methodological rigor, creationism was used for philosophical/scientific explanations. As a consequence, religion imposed on Science solutions that did not yet exist in Science, and which, in the framework of Science, were beyond explanation until the development of the philosophical theory of creationism. The combination of Science and religion in antiquity raised problems that were nevertheless inspiring to Philosophy. One of them is the relationship between the world and God.

Boethius, Avicenna, and the author of *Liber de causis* were key authors who contributed to the development of the theory of participation and the doctrine of the real distinction between essence and existence. Boethius initiated the problem by asking: how to reconcile the goodness of created beings with their dependence on God? The whole work of *De hebdomadibus* was devoted to Boethius to answer this question [18]. Boethius developed a terminology that was later used by Saint Thomas to develop a theory of the real distinction between essence and existence [19]. Boethius himself claimed: “Being and that which is are different” [Boethius, *De hebdomadibus*, II, 28, <http://www.logicmuseum.com/authors/boethius/dehebdomadibus.htm>, accessed on 08.01.2022]. However, Aquinas argued that Boethius did not write about real distinction, but

about intentional one [20]. This statement sheds light on Thomas' awareness that his understanding of reality was different to the same problem.

Avicenna can be regarded as a co-discoverer of the doctrine of the real distinction between essence and existence. The distinction between him and Thomas lies in the 'plane': Avicenna showed this doctrine on the epistemological plane, and Aquinas on the metaphysical plane [21]. Undoubtedly, Aquinas was also inspired by the *Book of Causes*. For the author of this work claims that the First Cause is more the cause of the existence of a thing than the subsequent causes following the First. This theorem is fundamental to the existential aspect of the theory of participation and largely explains the misunderstandings between religion and Science. Summing up, it can be said that the history of the problem, which somehow concerned the problem of real distinction, goes back at least to Boethius, and each of the authors mentioned above brought a new aspect to this problem. Aquinas took advantage of the achievements of his predecessors and contributed most to emphasizing the existential aspect of being and finally articulating the theory of the real distinction between essence and existence, and to reforming Plato's theory of participation towards the metaphysics of existence.

We come now to the point where this historical perspective must be applied to the religion-Science relationship. As mentioned above, three issues are most essential: existence, essence and action. The action is expressed in the formula *agere sequitur ad esse in actu*. The cognitive process is as follows: we look at being and intuitively recognize its existence, see what it is and what it does. Action follows from existence, which means that existence determines the expression of the being. Aquinas revolutionized our perception of the issue of existence in the sense that he showed that each being has its own existence. This approach completely changes the approach to the problem of the relationship between God and the world and, in a sense, marks the boundaries between religion and Science, and Theology and Science. In the Platonic version of the theory of participation, all the properties of beings and their operation were dependent on participation in ideas. Existence was not, as it was considered eternal. Thomas turned that picture of the world upside down. What changed? Here are the most important points (Table 1).

Table 1. Plato's theory of participation and its Thomas' interpretation.

Plato's theory of participation	Thomas' interpretation of the theory of participation
Ideas are a participated being	God is a participated being
Beings ,by themselves' tend to participate in ideas on the basis of becoming similar to them	Beings do not act on their own, but God himself is in the place of existence of being and constantly creates them
Participation is the activity of beings themselves, bottom-up	Participation is the passive acceptance of existence by created beings, top-down
The features of beings result from their similarity to ideas	The characteristics of beings result from their own created existence

I want to show one more distinction between Plato and Thomas' theory of participation. If we consider that this theory is the most general theory (it covers every existing being), then its interpretation in a more essential or more existential aspect not only allows us to show the God-world relationship, but also the way God and the world act towards each other. In retrospect, it can be seen that the essential interpretation allows one to think of participation as a 'sequence of causes' together with indirect causes. Existential interpretation basically excludes indirect causes as to the relationship between God and the world, and not between created beings. The specific thing should not be separated from God by any intermediate causes in terms of existence. One may ask, does this mean that each thing is directly created by God? I.e. does a car, for example, exist because God created it? Two research traditions are intertwined in trying to answer this question. It is not necessary, because it is enough that God created Nature and still creates every part of it. Man processes the world making a different arrangement of pre-existing contents. In this sense, God created everything that exists, but does not have to 'create' a specific system of the contents of things. It is very easy to confuse these two orders of the emergence of beings. As we can see, the existential order is temporally prior to the essential one. The latter requires a 'series of causes', the entire process of processing the arrangement of the contents of things that leads to a specific result, such as a car. The processing of the world is preceded by its existence and is being made possible by its constant creating by God. That is the formula *agere sequitur ad esse in actu*. First there is *esse*, then *agere*. *Esse* is created and sustained, *agere* has a series of causes.

We have a situation, therefore, that if we interpret the theory of participation in an essential way, then starting from what we see, we arrive at cause by cause, to a participated being, which is the ultimate form (or forms in the case of ideas) and the model for participating beings. We assume that the participating entities simply exist. In the case of existential interpretation, a participated being must constantly 'supply' existence for participating beings, because only he (God) can create. God cannot share His creative power with other beings, so no other being can mediate a creative cause. Hence, God must be directly present in his creative power at the place of existence of being. Indirect causes appear only in the sphere of action, *agere*, which is influenced by other beings. The above considerations bring us closer to identifying the source of antagonisms between religion and Science.

Let us ask the question, what conditions would have to be met in order for Science and religion not to be in opposition to each other? A demarcation line should be drawn between the domains of Science and religion. This line is real and lies in being itself. It is determined by the distinction between essence and existence. Assuming that the Natural sciences do not deal with the problem of existence as existence, we can say that these sciences investigate the essential side of being. By examining the essential side of reality, it is possible to show its causal functioning, series of causes. The implicit assumption is made here that the things studied exist, or at least may be presumed to exist. Existence is taken

for granted here. On the other hand, monotheistic religions show, first of all, that God is the Creator and therefore the existential side of being is emphasized. Reality needs the Creator to exist and last. In second place, religion refers to what the created world is like. If Science and religion were concerned with the essential and existential side of being, respectively, then where the possibilities of religion end, Science would begin. Science and religion could complement each other without overlapping. Such coexistence, however, occurs very rarely or not at all. We observe antagonisms rather than cooperation. This is how we see it today, although it must be said that in modern times the meaning of religion and Science was different and were even related to each other [22]. It is also worth noting that the term 'science' referred to the essential side of reality [22, p. 92]. In the 17th century, doubts arose as to whether the Natural sciences could achieve cognitive certainty, and in order to overcome this crisis, they began to resort to observation [22, p. 92]. Essential tradition in Science began to be certain of the doubts in the existence of God and thus to undermine the sense of Theology. However, no reference was made to the existential aspect of things in the context of the mutual relations between Science and Theology. Why?

4. The source of the conflict between Science and religion

Here are the most important sources of this conflict:

1. In the entire *Corpus Thomisticum* there is not one place where Aquinas would explain the real distinction between essence and existence in a way that we would expect someone to discover something new for the first time. Instead, we have many places where this theory is present. One possible explanation is that of Larry Laudan: „a scientist can often be working alternately in two different, and even mutually inconsistent, research traditions. Particularly during periods of ‘scientific revolutions’.” [23] The days of Thomas were a scientific revolution made by himself. It therefore seems possible that Aquinas worked in two different traditions (Platonism, metaphysical existentialism, i.e. the essential and existential tradition respectively). This also explains the emergence of various types of Thomism, such as existential and phenomenological Thomism. I would not insist on one correct interpretation of Thomas' works, but rather on a pluralism of interpretations.
2. The possible reason why Thomas did not devote a separate place to the real distinction, for example, as he did in the case of *quinque viae*, is the context of discovering the real distinction. This context is the relationship between God and the world described by the theory of participation. The influence of Plato as the creator of the theory of participation is intertwined in Aquinas with the discovery of the existential aspect of being. Thomas used this aspect for Plato's theory, which was perhaps difficult to distinguish by contemporaries of Thomas and his commentators.
3. It seems that Thomas' discovery of the real distinction was such a breakthrough that it was too difficult for philosophers after Thomas to see

its importance, as evidenced by an essentially non-continuation of his thought.

4. The twentieth-century assessment of the theory of participation in Aquinas is also ambiguous. Louis Geiger and Cornelio Fabro, who have the greatest merits in the interpretation of this theory in Aquinas, pointed to the Platonic features of this theory in Thomas and the originality of Aquinas in terms of giving it an existential meaning. Geiger argued - like Fabro - that there are two kinds of participation in Thomas' works: by composition and by similarity/formal constraint. Both types of participation can be understood as a Platonising approach. For Geiger, participation by composition does not necessarily mean existential contingency, but „(...) participation by composition implies, in principle, the identity between logical and real order, in the sense that it should usually begin with logic and then move on to Cosmology (...) which is established as an aid to the formal laws of cognition. (...) participation affects the reality of the real logical order, i.e. primarily the logic of concepts and their mental order.” [24]. On the other hand, participation by similarity is defined as follows: „Participation expresses a reduced, detailed, and in this sense participatory state, the essence of which is not always realized in the absolute fullness of its formal content” [24, p. 29]. Essence, then, is the key to understanding participation in Aquinas' writings. However, Fabro emphasized the existential aspect of participation as being appropriate for Thomas. He also distinguished two types of participation according to Thomas. Predicamental participation is concerned with the relationship between things and general concepts [25]. And while Fabro points out that human thought does not have to deal directly with reality in recognizing the relationship of predicamental participation [25, p. 153], the situation is different in the case of transcendental participation. Fabro writes: „Participation is not only a conceptual or conditional relationship of intelligibility, but a real relationship of threefold causality: exemplary, efficient, and purposeful - according to the total dependence of creation on the Creator” [25, p. 194]. Distinguishing four types of participation from different traditions - essential and existential - in one author may mean that Aquinas worked in two research traditions: the Platonic one and the one he initiated himself.

I believe that the above-mentioned issues largely contributed to the failure to apply (in Philosophy, Theology and Natural sciences) the theory of the real distinction underlying the existential version of the theory of participation. When the Natural sciences began to develop, there was no *de facto* demarcation line between them and Theology. Or, in other words, it existed, but was unnoticed and constantly transcended from Theology and the Natural sciences' side. It so happened that instead of deriving *agere* from *esse* of being and observing its operation through essence, philosophers, theologians and naturalists after Thomas derived *agere* from essence as if existence did not play a major role. This led to the action becoming 'insight' into the existence of God. If a being 'lost' its *esse*, which resulted in a quantified action, God was directly responsible

for the action of being. Aquinas made it possible to think in the opposite direction: God creates a being directly with its own existence, and the action of being results from the existence of that being. However, this existential direction was not continued and the interpretation of the action of being led directly to God as the one who directs it. The essential side of being has triumphed over the existential one when it comes to interpreting the relationship between God and the world. This victory also opened the way for the mutual overlapping of science and religion and their confrontation.

First, I will show this process from the Natural sciences side. Naturalists did not reject God, but saw in nature an imprint of his actions. This was the case of Isaac Newton and Robert Boyle. The first of them claimed: "I see nothing extraordinary in the inclination of the {Earths}axis for proving a Deity" [I. Newton, *Original letter from Isaac Newton to Richard Bentley, dated 10 December 1692*, <http://www.newtonproject.ox.ac.uk/view/texts/normalized/TH-EM00254>, accessed on 26.09.2021]. It is highly probable that Newton in *Philosophiae naturalis principia mathematica* was referring to the concept of natural theology, although only one directly refers to God in the first edition of the work [26]. Newton writes: "God therefore set the planets at different distances from the sun so each one might, according to the degrees of its density, enjoy a greater or smaller amount of heat from the Sun" [27]. We can see that Newton does not refer to God to explain the existence of the world, but to justify its functioning. The argument is also similar in the case of Boyle. The British chemist believed that the design argument was the most effective way to convince open-minded people to the existence of God [28]. However, this argument may "convince those who were knowledgeable about nature, who knew enough about the *details* of the world to be impressed by the intricacy of the presumed workmanship" [28]. We also see here that Boyle was thinking in 'essentialist', not existential, terms.

Perhaps the most expressive debate on the relationship between religion and Science took place in the nineteenth century. Some thinkers have tried to prove the existence of God in the same way as Newton and Boyle. One of the most famous is William Paley. Paley wrote in his famous book as follows: „Were there no example in the world of contrivance except that of the eye, it would be alone sufficient to support the conclusion which we draw from it, as to the necessity of an intelligent Creator" [29]. The eye is one of the more frequently cited examples of the complexity and adaptation of nature to the goal set by the Watchmaker. Elsewhere, Paley says the idea of God is deduced from the observation of Nature [29, p. 475]. The analogy with The Watchmaker, with which Paley's book is associated, was later used by antagonists of reasoning, advocated by Paley. Once again, we see how thinking within the essential tradition opens up the possibility of negating conclusions. Steven Pinker put it like this: „Biologists today do not disagree with Paley's laying out of the problem. They disagree only with his solution." [30]

Charles Darwin showed how to deal without God in explaining the mysteries of the world. In the existential tradition, this would not mean the negation of God, but filling the explanatory gap concerning the essential side of being. However, because the essential tradition has displaced the existential one from the 'horizon of events', the clarification of the issues that once required a reference to God caused that God automatically ceased to be needed. Pierre-Simon Laplace was to express this thought to Napoleon with these words: „Sire, I had no need of that hypothesis” [31]. I would like to refer to two of Darwin's texts showing his views on the existence of God. The first is a letter dated May 22, 1860: „With respect to the theological view of the question; this is always painful to me. I am bewildered. I had no intention to write atheistically. But I own that I cannot see, as plainly as others do, & as I sh^d wish to do, evidence of design & beneficence on all sides of us. There seems to me too much misery in the world. I cannot persuade myself that a beneficent & omnipotent God would have designedly created the *Ichneumonidæ* with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play with mice. Not believing this, I see no necessity in the belief that the eye was expressly designed. On the other hand I cannot anyhow be contented to view this wonderful universe & especially the nature of man, & to conclude that everything is the result of brute force. I am inclined to look at everything as resulting from designed laws, with the details, whether good or bad, left to the working out of what we may call chance. Not that this notion at all satisfies me. I feel most deeply that the whole subject is too profound for the human intellect. A dog might as well speculate on the mind of Newton. - Let each man hope & believe what he can.” [C. Darwin, *Darwin Correspondence Project*, 1860, <https://www.darwinproject.ac.uk/letter/DCP-LETT-2814.xml#mark-2814.f8>, accessed on 01.10.2020]. As we can see, Darwin rejected thinking of God as interfering with the origin of a particular species, but admitted that he tends to think that the laws of Nature can be designed.

So Darwin was against what we call, 'God of the gaps'. In his *Autobiography*, he admitted that while writing *On the Origin of Species*, he was convinced of the correctness of the design argument, but later acquired doubts about the existence of God. This is the first passage that demonstrates Darwin's belief that God exists: “This follows from the extreme difficulty or rather impossibility of conceiving this immense and wonderful universe, including man with his capacity of looking far backwards and far into futurity, as the result of blind chance or necessity. When thus reflecting I feel compelled to look to a First Cause having an intelligent mind in some degree analogous to that of man; and I deserve to be called a Theist. This conclusion was strong in my mind about the time, as far as I can remember, when I wrote the *Origin of Species*.” [32] Then he explains the doubts: „But then arises the doubt - can the mind of man, which has, as I fully believe, been developed from a mind as low as that possessed by the lowest animal, be trusted when it draws such grand conclusions? May not these be the result of the connection between cause and effect which strikes us as a necessary one, but probably depends merely on

inherited experience? Nor must we overlook the probability of the constant inculcation in a belief in God on the minds of children producing so strong and perhaps an inherited effect on their brains.” [32]

All the passages show Darwin’s rejection of the teleological argument, which should come as no surprise. Similarly, modern evolutionists reject the ways of Thomas to the existence of God. Richard Dawkins conducted a critique of *quinque viae* showing how all ways can be replaced by the Theory of evolution. Dawkins treats the first three *viae* as one way of argumentation. He writes: „All three of these arguments rely upon the idea of a regress and invoke God to terminate it” [33]. Dawkins emphasizes that in some ways the teleological argument is, ‘the best’ and that young Darwin was impressed of it, but „Unfortunately for Paley, the mature Darwin blew it out of the water. There has probably never been a more devastating rout of popular belief by clever reasoning than Charles Darwin’s destruction of the argument from design. It was so unexpected. Thanks to Darwin, it is no longer true to say that nothing that we know looks designed unless it is designed.” [33, p. 79]

5. Possibility of resolving the dispute between Science and Theology

If the source of the conflict between Science and Theology is the overlapping of these two ‘domains’ and the recognition of their competences as legitimate where the other party questions them, it seems right to draw a demarcation line between Science and religion. Methodological naturalism restricts the type of scientific research within the natural sciences to what does not go beyond ‘this world’ and forbids any reference to supernatural causes. Such an approach is able to rule out ‘God of the gaps’ - like arguments as an unjustified mental shortcut taking away the possibility of further research. I believe that methodological naturalism is also helpful for Theology by clarifying its approach to reflection on Nature. Methodological naturalism does not entail ontological naturalism. The latter is a consequence of not applying the theory of the real distinction between essence and existence. If God does not create the existence of a thing from which essence and action arise, then God must create the essence directly. If it is possible to explain the origin of the essence of things without referring to God, then the essence itself is left with its assumed, causeless existence. The only reality available is a concrete being. In this way, ontological naturalism ‘emerges’. It had to be historically preceded by the approach of Newton, Boyle et al. The origin of essence can be explained by the sequence of cause and effect, while God’s action is direct to existence. It is hardly surprising that scientists did not perceive God’s action directly on the essence, and a more effective approach was to apply methodological naturalism. It does not, however, result in ontological naturalism, as the research method does not determine (non)existence. It can be said that ontological naturalism is an *a priori* thesis if it results from methodological naturalism and thus exceeds the goal of the natural sciences.

Figures 1 and 2 show how the consideration of the distinction between essence and existence or its exclusion affects human cognition of reality. In both cases, the starting point in cognition is the same, but the point of arrival may differ. In the first case, there is the possibility of denying the existence of God and ontological naturalism, in the second case, the possibility of arguing ‘God of the gaps’.

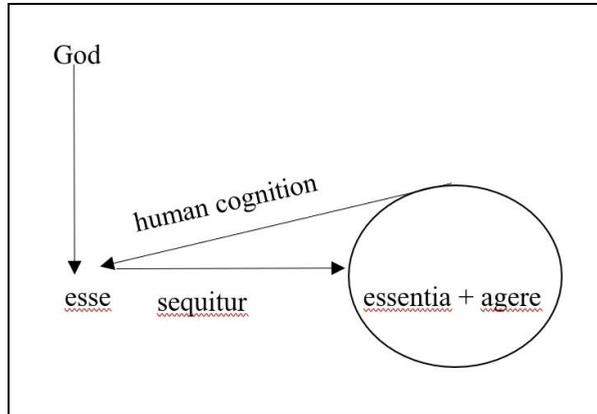


Figure 1. The relationship between God and the world from the perspective of the doctrine of the real distinction between essence and existence.

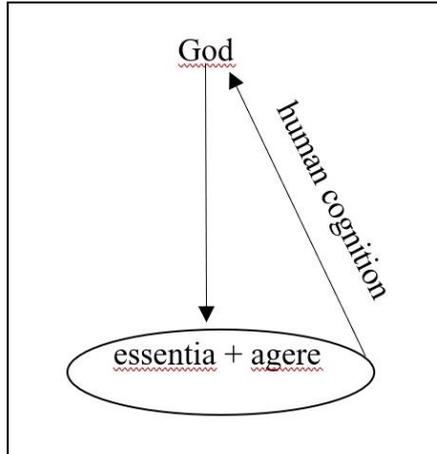


Figure 2. The relationship between God and the world without taking into account the real distinction between being and existence.

So how to reconcile Science and religion/Theology? I believe that the return to the doctrine of the real distinction between essence and existence and the application of the *agere sequitur esse in actu* principle is crucial for defining the relationship between Science and religion. The advantage of this metaphysical approach is that it does not force religion and Science to accept theses that are foreign to them, but also places clear boundaries between the area of religion/Theology and Natural sciences. From the point of view of religion,

this limitation is not interpreting reality in the light of the cause-and-effect sequence in the aspect of the operation of things. The history of the religion-Science relationship shows that such an interpretation led to the use of the 'God of the gaps' argument and then rejection by Natural sciences along with the rejection of religion. From the point of view of the Natural sciences, this limitation is not inferring the existence from the action of a thing. No scientific method can explain existence as such. If anything, the Natural sciences can explain why something exists by pointing to the laws of Nature and the way reality works in general. As for existence itself, it is elusive, not comprehensible. It seems that religion and Theology have a metaphysically justified concept of *creatio ex nihilo*. When the Natural sciences reserve for themselves to draw metaphysical conclusions, it leads to the rejection of Science and the confinement of religion within its own doctrine. This transgression of competences on both sides of the dispute gives the impression that Science and religion are incompatible with each other. I believe that understanding how it happened will help to return to their coexistence, which is fruitful for the culture.

To demand that Science confirm the truths of faith goes against the idea of religion. If religion postulates the existence of life after death in the form of eternal salvation or damnation, and if salvation depends - at least in Christian terms - on love for God, and love arises from free will [34], then faith in God supported by love is man's choice. If free choice is to be undetermined, at least to some extent, it seems that the essential system of things should not unequivocally indicate the existence of God. Such an unequivocal indication that there is God would in some sense preclude free choice, and belief in God would be intellectually non-free. But is this not what many theologians, including Paley, are demanding from the Science? Faith in God, however, is not fideism as it has a very strong intellectual foundation in Metaphysics. Within it, the theory of the real distinction between essence and existence is the most crucial. It divides being into two parts, but also divides Science into specific and general disciplines, and determines various scientific methods depending on whether we study essence or existence. Religion and Theology do not have to contradict specific disciplines if the division of being into essence and existence and the internal relations between essence and existence determine the relationship between Science and religion.

6. Conclusions

The conflict between Science and religion was inevitable but it is not necessary. This inevitability was caused by the non-application of the theory of the real distinction between essence and existence, which resulted in the overlapping of Theology and Natural sciences. If we assume that each scientific discipline studies the same reality (in a general sense), then their aspects differ. In the case of Theology and the Natural sciences' aspects are as different as essence and existence. The study of the same being from the point of view of such different aspects had to lead to separate results. However, both theologians

and scientists have often argued that it is in their competence to speak about 'the other side of being'. This led to a conflict that is, as it were, an indirect evidence of the impossibility of treating essence and existence in the same way, so the distinction between them must be real, not just conceptual. Conflict between Science and religion need no longer be necessary, however. Knowing the historical background of these religious-scientific antagonisms, we can overcome them by resorting to Metaphysics and delineating the boundaries between Theology and specific disciplines along the division between existence and essence.

References

- [1] I. Barbour, *Issues in Science and Religion*, Prentice Hall, New York, 1966, 172.
- [2] T. Peters, *Theology*, **120(3)** (2017) 164.
- [3] I. Barbour, *When Science Meets Religion: Enemies, Strangers, or Partners?*, Harper, San Francisco, 2000, 2-4.
- [4] T. Peters, *Science, Theology, and Ethics*, Routledge, Aldershot, 2003, 15-22.
- [5] R.J. Russell, *Ann. NY. Acad. Sci.*, **950(1)** (2001) 108-127.
- [6] A. Plantinga, *Where The Conflict Really Lies: Science, Religion & Naturalism*, Oxford University Press, Oxford, 2011, 254-255.
- [7] A. Plantinga, *Warranted Christian Belief*, Oxford University Press, Oxford, 2000, 190.
- [8] S.H. Nasr, *Religion and the Order of Nature*, Oxford University Press, Oxford, 1996, 4.
- [9] S.H. Nasr, *Knowledge and the Sacred (The Gifford Lectures)*, State University of New York Press, New York, 1989, 120-121.
- [10] S.H. Nasr, *The Need for a Sacred Science*, State University of New York Press, New York 1993, 7.
- [11] S. Hameed, *Science*, **332(5908)** (2008) 1637.
- [12] D. Sagan, *Roczniki Filozoficzne*, **LXI(1)** (2013) 74.
- [13] R. Szopa, *Św. Tomasza z Akwinu teoria partycypacji bytu w ujęciu Louisa Geigera i Cornelio Fabra. Studium historyczno-metafizyczne*, Diecezjalne Centrum Edukacyjne, Legnica, 2017, 17-96.
- [14] Thomas Aquinas, *Summa contra gentiles*, vol. III, Doubleday & Company, New York, 1956, 69.
- [15] Z.J. Zdybicka, *Partycypacja bytu. Próba relacji między światem a Bogiem*, Towarzystwo Naukowe Katolickiego Uniwersytetu Lubelskiego, Lublin, 1972, 10.
- [16] Justin Martyr, *The Dialogue with Trypho*, A. Lukyn Williams (ed.), The Macmillan Co., London, 1930, 13.
- [17] T. Stępień, *Warszawskie Studia Teologiczne*, **XX(1)** (2007) 103.
- [18] S.L. Brock, *Nova et Vetera*, **3(5)** (2007) 470.
- [19] M.A. Krąpiec, *Struktura bytu. Charakterystyczne elementy systemu Arystotelesa i Tomasza z Akwinu*, Katolicki Uniwersytet Lubelski. Redakcja Wydawnictw, Lublin, 2000, 342.
- [20] Thomas Aquinas, *An Exposition of the On the Hebdomads of Boethius*, The Catholic University of America Press, Washington, 2001, 22.
- [21] M. Gogacz, *O konieczności studiowania metafizyki Awicenny (On the necessity to study Avicenna's metaphysics)*, Akademia Teologii Katolickiej, Warszawa, 1973, 25.

- [22] M.J. Osler, *That the Scientific Revolution Liberated Science from Religion*, in *Galileo Goes to Jail and Other Myths about Science and Religion*, R.C. Numbers (ed.), Harvard University Press, Boston, 2009, 91.
- [23] L. Laudan, *Progress and Its Problems: Towards a Theory of Scientific Growth*, University of California Press, Berkeley, 1977, 377.
- [24] L.B. Geiger, *La Participation dans la philosophie de S. Thomas d'Aquin*, Librairie Philosophique J. Vrin, Paris, 1942, 28.
- [25] C. Fabro, *La nozione metafisica di partecipazione secondo s. Tomasso d'Aquino*, Società Editrice Internazionale, Torino, 1963, 176.
- [26] S. Snobelen, *Neue Z. Syst. Theol. R.*, **4(52)** (2010) 377.
- [27] I. Newton, *Philosophiæ naturalis principia mathematica*, Eebo Editions, Proquest, London, 1687, 415.
- [28] J.J. MacIntosh and P. Anstey, *Robert Boyle*, in *The Stanford Encyclopedia of Philosophy*, E.N. Zalta (ed.), The Metaphysics Research Lab, Stanford, 2018, online at <https://plato.stanford.edu/archives/win2018/entries/boyle/>.
- [29] W. Paley, *Natural Theology Or, Evidences of the Existence and Attributes of the Deity, Collected from the Appearances of Nature*, Cambridge University Press, New York, 2009, 81.
- [30] S. Pinker, *Evolutionary Biology and the Evolution of Language*, in *The Origin and Evolution of Intelligence*, A.B. Scheibel & J.W. Schopf (eds.), Jones & Bartlett Learning, Sudbury, 1997, 151.
- [31] A. De Morgan, *A Budget of Paradoxes*, Vol. II, Dover Publications, New York 1954, 5.
- [32] N. Barlow, *The autobiography of Charles Darwin 1809-1882. With the original omissions restored. Edited and with appendix and notes by his grand-daughter Nora Barlow*, Collins Clear-Type Press, London, 1958, 92-93.
- [33] R. Dawkins, *The God Delusion*, Transworld Publishers Ltd., London, 2006, 77.
- [34] T. O'Connor and C. Franklin, *Free Will*, in *The Stanford Encyclopedia of Philosophy*, E.N. Zalta (ed.), The Metaphysics Research Lab, Stanford, 2022, online at <https://plato.stanford.edu/archives/spr2022/entries/freewill/>.