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Jan Salamucha's Model of Relations Between Theology, Philosophy and Scientific Knowledge in the Context of the Thomist Doctrine of Causation

Jan Salamucha was one of the leading members of the Cracow Circle, a philosophical movement in Poland in the 1930's. The aim of the paper is to discuss his model of relations between theological worldview, philosophy and science. Next, following Salamucha's model, we will consider the question whether the Thomist conception of divine causation is reconcilable with certain theories of contemporary science, e.g., with the theory of evolution, contemporary cosmology or quantum mechanics. In order to better understand how Salamucha's model arose, in the first part of the paper, the main premises of the Cracow Circle are presented.

The Cracow Circle had four prominent members: Jan Salamucha, Józef Maria Bocheński OP, Jan Drewnowski and Bolesław Sobociński. The Circle formed during the Third Polish Philosophical Congress in Cracow in September 1936, but the group had to end their activity rather soon, in 1939, when the Second World War started.¹ The main meta-philosophical ideas of the Cracow Circle were applying modern mathematical logic to the analysis of Thomas Aquinas' philosophy and modernizing the scholastic tradition. The idea of applying the tools provided by mathematical logic to the Thomist doctrine was very original at the

¹ Jan Salamucha was a Catholic priest; in 1939, he was deported to the Nazi concentration camps, first to Sachsenhausen, then to Dachau. He was freed after the intervention of Heinrich Scholz, the German historian of logic. Salamucha was assassinated during the Warsaw Uprising in 1944 by the troops of the Russian National Army of Liberation who were fighting on the German side (Pouivet 2009: 237; Woleński 2013: 6). Józef Maria Bocheński and Bolesław Sobociński lived outside Poland after the war; Bocheński was active at the university of Fribourg in Switzerland, and Sobociński was Professor of logic at Notre Dame University, USA. Jan Drewnowski was the only member of the Cracow Circle who remained in Poland after the war, but his academic activity was restricted (Woleński 2013: 12).

time; the Cracow Circle may be regarded as the first school of analytic Thomism and analytic philosophy of religion (cf. Pouivet 2011: 2).

It was a new and bold idea because, in the 1930's, the European philosophy was dominated by three movements which were hostile either to logic or to metaphysics, namely, logical positivism (the Vienna Circle), phenomenology and neo-scholasticism (neo-Thomism). Logical positivism used logic but was against metaphysics and regarded metaphysical propositions as meaningless. Phenomenology was friendly to metaphysics but rather reluctant, or neutral at best, to mathematical logic. Neo-scholasticism, as represented by Jacques Maritain, held the view that traditional logic (Aristotle's syllogistic) is entirely sufficient for doing philosophy (cf. Woleński 2013: 12). Therefore, it is not surprising that when the program of the Cracow Circle became known, it was criticized by Polish Catholic intellectuals and clergy. Furthermore, those who strongly opposed the idea of modernizing Thomism with the help of mathematical logic accused members of the Circle of atheism (it is worth remembering that many eminent logicians of the time, such as Bertrand Russell, Stanisław Leśniewski and Tadeusz Kotarbiński, were declared atheists).

Also, in his writings, Salamucha mentions other anti-rationalistic trends influential at the beginning of the 20th century among Catholics, namely, modernism and French traditionalism (1997: 59-60). The latter (as represented by Reginald Garrigou-Lagrange²) resorted to Thomas Reid's philosophy of Common Sense. Salamucha was highly critical about the Scottish School and considered it irrational, but he was also well-aware of how attractive and popular this view was among the Catholics (Salamucha 1997: 60). In that situation, the most important and the only ally for the project of the Cracow Circle was the Lvov-Warsaw School, which treated mathematical logic as the basic tool for philosophy and was not hostile towards metaphysical studies.

However, it must be noted that philosophers from the Lvov-Warsaw School held a number of general premises of how philosophical studies should be carried out which were not coherent with the Thomist position. The independence of philosophy from the worldview, religion or any authority was indisputable for both Kazimierz Twardowski, the founder of the School, and his followers (Woleński 1989: 39-40). All members of the School were adherents of evidentialism and epistemological individualism, according to which, belief can be rational only if one has sufficient evidence supporting it – be it objectively testifiable empirical evidence or an inferential argument (deductive or inductive). Thomism could not meet these requirements. Furthermore, Thomism resorts to theology as a negative norm for philosophy; if there is a conflict between Christian dogmas and philosophy, it is philosophy which has to be revised. Salamucha writes explicitly that the fundamental beliefs about God, human and the world are to be accepted by

² See Garrigou-Lagrange (1922); in Poland, these ideas were defended by Jacek Woroniecki (1924).

Catholics because they are based on the authority of the Roman Catholic Church, and this authority is ultimately grounded in the Revelation (Salamucha 1997: 42). It is worth noting at this point that it was Jan Łukasiewicz (himself a Catholic) who supported the program of the Cracow Circle and defended its main ideas during vehement debates and polemics with its opponents.

The main achievements of the Cracow Circle include formalizations of traditional cosmological proofs for the existence of God (e.g., Salamucha's formal reconstruction of Aquinas' argument *ex motu*), Bocheński's studies on analogy and the language of religion (*Logic of Religion*), Salamucha's concept of essence and the levels of abstraction, as well as his studies in the history of logic. It should be stressed that members of the Cracow Circle, especially Salamucha and Bocheński, published also articles on ethics, philosophical anthropology and social philosophy (cf. Pouivet 2009: 239).

One of the major topics discussed in the Cracow Circle, particularly in Salamucha's writings, is the problem of relations between theology, philosophy and science (Salamucha 1946). He gives a general model of these relations and illustrates it with a geometrical cone (hence the name: 'the cone model'). Salamucha's main thesis is that a conflict between theology and science is logically impossible; however, there may be a conflict between theology and philosophy, or between philosophy and science. Theology and science have different objects of research; theology is concerned with God, the divine attributes and God's relations with the world and human beings, whereas sciences (physics, biology, cosmology, etc.) deal with the material world only. However, the object of philosophical consideration is everything: God, human and the material world. Thus, a conflict between theology and philosophy on the one hand, and philosophy and science on the other, is conceivable. Salamucha illustrates the former case with two contradictory propositions: 'God is omniscient' (a theological thesis) and 'God is not omniscient' (a philosophical thesis).³ From the principle that theology is a negative norm for philosophy (i.e., philosophy is subordinate to theology), it follows that the philosophical thesis must be false; a Catholic (Thomist) philosopher is obliged to reject it or he/she ceases to be a Catholic.

Not only did Salamucha propose this general framework of connections between theology, philosophy and science, he also wrote a series of short articles about time, space and the origin of the material world. In these articles, the theory of evolution, cosmology and quantum mechanics are discussed, as well as the controversy between natural determinism and indeterminism (Salamucha 1997: 90-91). He regards natural determinism and indeterminism as hypotheses which can never be ultimately confirmed, but need not exclude each other. As Salamucha convincingly speculates, it may be the case that natural indeterminism is true on

³ Though Salamucha does not mention anyone opposing the idea that God is omniscient, he may have meant Jan Łukasiewicz; the latter did reject the divine knowledge about future contingent events (Łukasiewicz 1961).

the quantum level, whereas natural determinism is true on the macroscopic level of the material world. It is noteworthy that Salamucha's papers: 'Struktura świata materialnego' ('The structure of the material world') (1946c) and 'Początek i koniec świata materialnego' ('The beginning and the end of the material world') (1946d) were written at the time when discussions about interpretations of quantum mechanics had only begun in the scientific and philosophical circles.

In this context, let us mention Salamucha's remark that in modernity natural determinism holds a dominant position not only among scientists but also among laymen. It has become part of the popular mindset; by resorting to it, many people reject the freedom of human will or the occurrence of miracles (Salamucha 1997: 90). But, as noted by him, new discoveries in quantum physics and the long history of controversy between determinism and indeterminism should 'immunize' people against 'deterministic fetishism'. This view, however, does not mean that Salamucha accepts natural indeterminism; rather, his position is that generalizations and extending scientific theories beyond their proper limits is a methodological mistake. Therefore, even if natural determinism is true, it does not entail that the free will or miracles are impossible.

Regarding Darwin's theory of evolution, Salamucha comments that the theory 'was tendentiously blown up in the nineteenth century.' As noted by him (1997: 98), the evolutionary theory that all complex organisms originated from a small number of relatively simple creatures does help to better understand the development of organic life on Earth. But Salamucha clearly states that the theory of evolution cannot give us an answer to the key question of how the first living organisms came into existence. It should be noted that though Salamucha stresses the limited explanatory capacity of the theory of evolution, he does not reject it. Likewise, Darwin's theory has never been condemned or rejected by the Catholic Church.

Salamucha also refers to the cosmology of his days, according to which the universe evolved from primitive nebulas. But again, he argues, cosmology does not give an answer to the question of how those primitive nebulas started to exist. He writes that some biologists and cosmologists commit a mistake by claiming to have given an ultimate explanation of how the living organisms or the physical cosmos came into being; a mere saying that all complex living creatures originated from some basic organisms and the universe has its origin in primitive nebulas cannot be an ultimate explanation of the existence of the universe and life therein. A scientist who claims that this might be *the* answer simply goes beyond his/her professional competence and misleads other people (Salamucha 1997: 98). As predicted by Salamucha, contemporary cosmology did discover something more primitive and basic than the first nebulas – we call it the Big Bang – but an analogous question of how the Big Bang came into being remains unanswered.

According to Salamucha, the 'ultimate' explanation can be provided by theology and philosophy only. His standpoint can be interpreted as a defence of

theology and philosophy against positivism and scientism, or scientificism, as we now call the position that science can explain everything. If science cannot provide a satisfactory and ultimate explanation of certain fundamental issues, and they are within the scope of theology or/and philosophy, there arise a number of more particular questions. For example, would Salamucha agree with Pope Pius XII that God was the cause of the Big Bang, or with the proponents of the Intelligent Design and the fine-tuning hypothesis?

Another problem is whether positive answers to these questions would be coherent with the program of the Cracow Circle, analytic Thomism and Thomas Aquinas' philosophy. This is far from obvious. On the one hand, God is the cause of the Big Bang if the Big Bang theory is true, and God is the cause of the incredible cohesion of all cosmological constants if this theory is true (it is assumed that we have enough evidence to justifiably believe so). God is the cause of these events because God is the cause of all events and all material and immaterial things – whatever one can imagine within the constraints of the laws of logic. According to the Thomist theory of causation, God is the first, or primary, cause of everything apart from Himself. But, on the other hand, God is not the cause of the Big Bang because He cannot be a cause in the same sense as fire is the cause of heat, or hitting a ball is the cause of its movement. According to Thomism, God can never be a natural, or secondary, cause. The Thomist doctrine of causation has it that there is the first cause, God, and secondary causes created and sustained in being and in causal powers by God (Davies 1993: 163).

There are two reasons why God cannot, by metaphysical necessity, be a secondary cause. First, God as the first cause is a transcendent being and, therefore, cannot be an immanent being as secondary causes are. Second, if God were a secondary cause, there could be a conflict between God and secondary causes. Conflicts between secondary causes happen in the world, but if there were a conflict between God and other secondary causes, God would contradict Himself. This would mean that He as the Creator and the first cause of all secondary causes brought into being causes acting against His will. Thus, if there were a conflict between God and secondary causes, God would cease to be the transcendent first cause of all things and events (Dodds 2008: 169-170).

Setting aside the question whether these arguments and the conclusion are sound and convincing, the above reasoning explains why, according to Thomism, God cannot be a secondary cause of the Big Bang or any other physical event in the universe. God is the first cause of the Big Bang or another event or state of the universe which was 'before' the Big Bang, and which He used to start the universe and its evolution. Regardless of the details concerning the beginning of the universe and life, God is their *first* cause.

Apart from introducing the distinction between primary and secondary causation, Aquinas adopted the Aristotelian notions of material, efficient, formal and final causes. Also, the scholastic philosophy holds the view of 'eminent'

causation, which means that cause is always ‘greater’ than its effect. One could raise the question whether the Thomist theory of causation is coherent with contemporary science, that is, with the theory of evolution and quantum mechanics. Salamucha did not pose this question explicitly, but it is a legitimate question given his model of relations between theology, philosophy and science, according to which, a conflict between philosophy and science is conceivable.

Let us consider first the concept of eminent causation and the theory of evolution. According to Darwin’s theory, highly developed and complex organisms originated by an evolutionary process from a small number of relatively simple creatures. Thus, it is clear that causes (simple creatures) are smaller than effects (highly developed complex organisms), and the concept of eminent causation does not work in this case. Next, the theory of evolution says that the evolution process depends on chance mutations and natural selection; moreover, there have existed some ‘blind routes’ of the process. How could this theory be reconciled with the Thomist doctrine that there are final or efficient causes operating in the world? Could a chance event be an efficient cause of anything if it is an event which has no causal explanation? Moreover, given the Copenhagen interpretation of quantum mechanics, which is still popular among scholars and is supported by recent discoveries such as Bell’s theorem, there are chance quantum events for which contemporary science can find no causal explanation. If the natural world is full of chance events (i.e., ontological chance), the question arises of how God can be the Governor of everything that happens, as the Thomist doctrine of divine causation holds.

As stated above, in Thomism, God is never a secondary cause of any event. If so, any theory concerning the divine action in the world which would claim that God acts only (or mainly) *within the constraints* of the laws of nature is incompatible with the Thomist doctrine. Such a theory, called NIODA, has been proposed by Robert John Russell (2001). NIODA is an acronym for ‘noninterventionist objective (special) divine action’. According to the theory, God can intervene in the natural order of the world by acting on the quantum level and using indeterministic gaps postulated by the Copenhagen interpretation of quantum mechanics.⁴

The project of ‘noninterventionist objective (special) divine action’ (NIODA) aims to account for the divine action *in the world of chance*. The idea of the project is that it is God who causes chance quantum events and chance mutations in the process of biological evolution *without* breaking or suspending the laws of nature issued by Himself. The laws of nature are probabilistic and leave room for the divine action. On this view, an ontological chance is an event which has no natural causal explanation but it has a supernatural causal explanation; God is the cause of chance events. Acting in this way, God can control all natural processes in the world and be the final cause of everything.

⁴ See also: Monton (2014).

The idea of divine intervention propounded by NIODA cannot be conceptualized within the Thomist philosophy and its theory of causation. If it were true that God acts within the constraints of the laws of nature as all *created things* have to act, then He would be an immanent cause and would cease to be the transcendent first cause. God would become one of many secondary causes acting in the world. Next, in NIODA, a divine 'intervention' means God causing a particular chance event to occur within the constraints of the laws of nature. Also, the proponents of NIODA conceive a divine intervention as God's action which is a sufficient cause of event *E*, and *E* would not have happened if God (whatever else happened in the universe) had not caused *E*. According to the Thomist view of divine causation, God, as the first cause, has its causal contribution to *every* event happening in the world. Therefore, chance events are also caused by God, but not as suggested by NIODA, that is, not *within* the constraints of the laws of nature. Furthermore, God does not need any special room for His causal action in the world. It is not needed because, as the first cause, He is active and present everywhere.

In his book *Unlocking divine action in the world* (2012), Michael Dodds argues that God, as the first cause, always has His divine causal contribution to every necessary, contingent, free and *chance* event.⁵ According to Dodds, chance events are those events which have no causal explanation in terms of secondary causation, but they are caused by the divine *first* cause.⁶ The difference between the Thomist account of a chance event *E* and the doctrine of NIODA is that, according to the former, a chance event *E* is caused by 'normal' divine action, i.e., by God's acting as the first cause bringing about *everything*. In the Thomist view, God's causing a chance event *E* cannot be understood as a divine intervention in Russell's sense because God cannot and does not intervene in the world at all. According to NIODA, a chance event *E* is caused by 'special divine action' bringing about *that particular event*. NIODA claims that in order for a particular event *E* to occur, God must do something *more* than He usually does as the first cause of everything.

Significantly, the Thomist solution has the advantage of providing a convincing response to 'the divine risk' objection. The latter says that if God cannot and does not intervene in the world of chance, then God is a risk taker. If the aim was to create human beings, and biological evolution is a natural process full of chance mutations, then it was at least plausible that God would not have achieved His aim. According to the Thomist view, God infallibly and from eternity knew what would happen in the world and how His goals would be realized.

⁵ Dodds writes: 'All aspects of nature including chance and the indeterminism posited by the Copenhagen interpretation of quantum physics involve the primary causality of the transcendent cause' (2012: 221).

⁶ Dodds is explicit that: 'God's transcendent primary causality can act through chance itself as a sort of secondary cause just as it does through other secondary causes. As God is not the immediate cause of effects that occurs through other secondary causes, so God is not the direct cause of events that happen by chance' (Dodds 2012: 220).

Thus, there is no risk on God's side because God causes everything, including all chance events on every level of the world; in this way, God does what He wills. Moreover, in a similar way, Thomism can defend the scholastic doctrine of 'eminent causation'. God uses secondary causes, e.g., chance quantum events, as instrumental causes to bring about some greater effects. But He is always, as the first cause of any instrumental cause, a greater cause than any creaturely effect. Thus, it might be concluded that the Thomist position is not inconsistent with quantum mechanics and the theory of evolution. If natural indeterminism is true and there are ontological chance events in the world, it does not entail a conflict between Thomism as philosophy and contemporary science. Undoubtedly, Salamucha would have approved of this conclusion.

The Thomist view of causation appears to be a powerful alternative for NIODA and other theistic accounts of divine action in the world as it has at least two important advantages. Firstly, Thomism is immune to the 'God of the gaps' objection because God never 'intervenes' and never becomes a secondary cause. In the future, there may be a new scientific explanation (in terms of natural and secondary causation) for the Big Bang, fine tuning, or quantum indeterminacy, but it will not influence the validity of the Thomist account of causation. The 'God of the gaps' objection, however, can be raised against NIODA. Secondly, Thomism is not a hostage to natural sciences; it does not have to change whenever science changes in certain relevant aspects. NIODA, in turn, is a hostage to science; if the Copenhagen interpretation of quantum mechanics proves false, the NIODA doctrine is over.

For the approach represented by the Cracow Circle, it is important that Thomism (as philosophy) be consistent with contemporary science. If there are chance events, as quantum mechanics holds (given the Copenhagen interpretation is sound), it is important that they be accounted for without compromising the Thomist philosophy. The theory of first causation allows for explaining natural chance events as instrumental causes used by God to achieve His eternally willed purposes. Salamucha, Dodds and other Thomists can justifiably claim that, first, there can be no conflict between theology and science, and, second, there are no conflicts between Thomism (as philosophy) and contemporary science. As argued by Salamucha (over 70 years ago), if any conflicts are observed, these will be only apparent discords rooted either in a wrong interpretation of the divine Revelation or in philosophical misinterpretations of scientific theories (Salamucha 1997: 54).

It must be noted, however, that approaches like NIODA have certain advantages which are absent from the Thomist account of divine causation. In one of his lectures, Robert Russell notices that it is perhaps the first time in history that one can justifiably claim that it is possible for God to act in the natural world without violating its laws, and, significantly, He can act not only as the *first* and transcendent cause of everything, but also as the immanent and *direct* cause of particular events. From this viewpoint, NIODA has more to offer and can be more

attractive to those theists who are willing to incorporate in their belief system what contemporary science tells us about the world.

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