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NICOLAS-SYLVESTRE BERGIER
AND THE DIVINE INFINITY

Nicolas-Sylvestre Bergier i boska nieskończoność

Abstract:

Nicolas-Sylvestre Bergier was an eighteenth-century Catholic priest whose numerous writings defending the Christian faith against deistic and atheistic criticisms were very popular and highly valued in his time. In his discussion of the existence of God and His attributes, Bergier relied on the concept of infinity. The article discusses his interpretation of this concept, pointing to some possible problems that result from equating infinity with perfection.

Keywords: Nicolas-Sylvestre Bergier, proofs of the existence of God, infinity, perfection

Streszczenie:

Nicolas-Sylvestre Bergier był osiemnastowiecznym księdzem katolickim, którego liczne pisma broniące wiary chrześcijańskiej przed krytyką deistyczną i ateistyczną były w jego czasach bardzo popularne i wysoko cenione. W swej dyskusji istnienia Boga i Jego atrybutów Bergier oparł się na koncepcji nieskończoności. W artykule omówiono jego interpretację tego pojęcia i wskazano możliwe problemy wynikające z utożsamiania nieskończoności z doskonałością.

Słowa kluczowe: Nicolas-Sylvestre Bergier, dowody na istnienie Boga, nieskończoność, doskonałość

Introduction

Abbé Nicolas-Sylvestre Bergier (1718–1790) studied theology in college, then in the seminary, and finally at the University of Besançon, where he received his doctorate in 1744. In 1743, he was ordained a priest and continued his studies in Paris. In 1749, he became the curate in the parish Flangebouche near Besançon. In 1765, he became the director of the college of Besançon. In 1769, he was appointed a canon of the Notre Dame cathedral in Paris.[1]

Bergier was a prolific author of theological works that were very popular, being repeatedly republished in the eighteenth and well into the nineteenth century, not to mention multiple translations.[2] He was not known for succinct writing – for instance, his *Traité historique et dogmatique de la vraie religion* came out first, in 1780, in twelve volumes – he discussed basic theological questions, but he was particularly concerned about the influence of deism, skepticism, and outright atheism in France, although originated in England, and criticized in great detail works of Holbach, Rousseau, Helvétius, Voltaire, Bayle, and many others. One of the basic problems was the evidence concerning the existence of God.

Proof from design

According to Bergier, the first step in converting a "savage" is to instruct him about the existence and attributes of God through the spectacle of nature and self-reflection (1.476).[3] This reflects the physico-theological view so popular in the eighteenth century that the orderliness observed in nature should convince

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[1] Notice historique sur l'abbé Bergier, in: [N.-S.] Bergier, *Plan de la théologie*, Besançon: Out[henin] Chalandre 1831, pp. 1–23; J.-B. S. Jacquenet, *Histoire du séminaire de Besançon*, Reims: Bonnefoy 1864, vol. 1, pp. 478–487; A. Jobert, *Avant-propos*, in: A. Jobert (ed.), *Un théologien au siècle des Lumieres: Bergier correspondence avec l'abbé Trouillet, 1770–1790*, Lyon: Centre André Latreille 1987, pp. 15–44.

[2] In fact, his books "were for many years among the most widely used in French and other seminaries and in the small libraries of parish priests," R. F. Costigan, *The consensus of the Church and papal infallibility*, Washington: Catholic University of America Press 2005, p. 109.

[3] References are made to volume and column numbers in N.-S. Bergier, *Oeuvres complètes*, Paris: J.-P. Migne 1855, vols. 1–8. The following works are quoted: *Examen du matérialisme, ou refutation du Système de la nature* [1771], 1.1-410; *Le Déisme refuté par lui-même* [1765], 1.410-624; [Lettre à] A.M.A. Berberis, 1.623-630; *Examen du système de Bayle sur l'origine du mal*, 1.629-642; Refutation de quelques articles du *Dictionnaire philosophique portatif* [par Voltaire], 1.645-694; *L'Origine des dieux du paganisme* [1767], 1.743-1112; *Les élément primitifs des langues* 1.1129-1265; *Principes de métaphysique et de morale* [1780], 1.1265-1402; *Dictionnaire de*

everyone without requiring scholarly training that nature is a manifestation of a powerful, supernatural intelligence. Could the mechanism of the physical nature arise by accident from the random motion of preexisting atoms? It has been said that the first word of the *Aeneid* is *arma*, which is one possible combination out of 24 of four letters, so, random throws would generate it fairly quickly; similarly, the first verse could be generated by random throws and then the entire poem. But some prerequisites are overlooked here: that these letters have been randomly created; that they are part of the same alphabet; that these letters are written on, say, cubes, on all their sides; that these cubes are thrown onto a flat surface; that after each throw, letters form one line; "voila, absurd suppositions if they are attributed to chance" (299; 6.357).

Some say chance/accident (*hasard*) is an effect of a cause we do not know (*discernons*). Bergier disagrees. We don't know the cause of gravity or electricity, but we do not think that their effects ares accidental. An accident is something in which intelligence has no part, so it is an opposite of intelligence, not of necessity (1.44); that is, to distinguish accidental causes, attention has to be directed to the knowledge, intention, prediction, and design of these causes, not to the contingency or necessity of their actions (6.351). A design is indicated by the order and relation of parts to one another and their coordinated effort to accomplish one goal. All parts of the universe (1.45) are made one for another; their motions and functions serve the preservation of the whole and of individuals, and perpetuation without interruption and yet a philosopher who sees order and purpose in a watch denies it to the universe. We would ascribe purpose to the watch by observing its work and arrangement even without being certain what this purpose is (46). Causes without intelligence are blind and operate by chance. All natural causes work according to the laws prescribed by God (53, 296), even though we do not quite know these laws. "Under the rule of an infinitely wise and powerful engine, nothing happens by accident, since it predicted and regulated everything." When we notice in nature an order analogical to our proper ideas, a regular plan, regulated/regular phenomena, we conclude with reason that nature is governed by an intelligent cause, which we should respect for this order (54). Seeing that we would be unable to create an order on a cosmic scale, we are forced to make an infinite difference between us and that invisible cause, which is infinite, immutable, unique, and perfect. This sovereign Being, the engine of matter, the creator and the ruler of nature is inconceivable, and we have only an imperfect idea of it (55).

God does not act on human senses directly by Himself, but through His creation that He moves in an orderly, planned, and wisely manner. When people enter a skillfully built palace with tasteful furniture, they do not need to see the

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théologie dogmatique, liturgique, canonique et disciplinaire [1783], vols. 2–5; *Traité de la vraie religion* [1780], vols. 6–7.

architect to be convinced of his existence (1.116). No person able to reflect and who looks at nature and his own makeup can refrain from thinking about a wise and attentive intelligence that presides over this work and preserves it (113).

We recognize an excellent order of the universe, we admire the mechanism of the human body even knowing that it can suffer and die (1.289), we recognize the admirable makeup of plants and animals, and we are also struck by the mechanism of destructive phenomena. We recognize God in His works, although His goals may elude us. God wanted to preserve the whole by the destruction of parts and allowing apparent and particular disorder in the general order (290).

The investigation of nature should not be done casually, regardless of whether a person is scholarly inclined or not. Bacon was right in stating that the superficial knowledge of nature leads to atheism, but profound study brings people back to religion. The greatest philosophers were humble worshippers of the Divinity (1.400). The better nature is known, the better it is seen as an empire of the sovereign Master who made it and the philosopher who studied it more intensely – Descartes, Leibniz, Newton – were most convinced about the existence of God (1.228): "a true philosopher sees God everywhere: in the air that he breathes, in the sun that gives light and heat, in the earth which nourishes him, in animals that help and clothe him, in the grass under his feet and particularly in himself in the various faculties with which he is endowed" (1.1291-1292, 6.384).

The observation of nature and the recognition of its organization can lead to the recognition of one God, the Creator of this nature, but in respect to the theological aspect of this recognition, physico-theology is not an infallible guide. It does lead to the recognition of an animate and intelligent force behind nature, but the recognition of the nature of this intelligence can be widely off the mark. This is what Bergier saw in his analysis of religious faith, in particular, of the emergence of idolatry.

In his view, at the beginning of the humankind, there was one true religion revealed by God directly to people and transmitted by them from one generation to another (1.747). At the beginning, there was one religion that recognized one God (1333), but the original monotheism was corrupted by polytheism (6.194). Human passions got the better of people, and they pictured the power behind physical nature differently than they did in the beginning. They saw that matter was unable of self-motion, and thus, the motion in nature should come from the outside. And so, they associated particular parts of nature with spiritual entities, genies, responsible for their corners of the universe (1.752). The gods were not, as often thought, kings who became subjects of fables and were divinized (753). And so, in particular, four periods in the evolution of religion are depicted by Hesiod. First, the one God was Ouranos, a celestial being living above. Then, there was a period of the reign of Chronos or Saturn, and the Titans. Chronos/Saturn, the one who turns the heavens, was a son of

Ouranos (759). Then planets, winds, etc. became rational beings, leading to the belief in the existence of demons, genies, and nymphs, all called Titans. The third period, the age of polytheism, was the reign of Jupiter and other gods, each with assigned particular roles and a cult associated with them (760). Finally, in the fourth period, humans have been set on the level of gods (761).

The existence of one God

Convincing as it may be, the proof from design can lead to the recognition of a non-physical origin of the world and the life in it, but it may also lead to polytheism and even idolatry. In Bergier's mind, something stronger was needed to lead people back to monotheism, and he presented twelve propositions concerning the existence of God.

First, there is at least one necessary being, eternal and uncreated, that gave existence to other beings, and nothing limits its power. This is because the possibility of an eternal world and, thus, an infinite causal chain is rejected out of hand. Actual infinity cannot grow; otherwise, there would be one infinity larger than another (1.1281-1282, 6.334).

Second, matter is not a necessary being; it received its existence from an immaterial being. If a substance exists necessarily, so, its attributes cannot change. Matter is not infinite; the distinction of its parts is already a limitation. It is absurd to say that limited parts can form an infinite whole, and thus, matter was created by a spirit (1.1283-1284).

Third, there is obviously motion in the universe, but motion is not an essential attribute of matter since matter can be in motion, but it also can be at rest; also, if motion were essential, the direction of motion would be too (1.1284-1285; 6.344). Thus, all motion stems from an active cause that has will. This is so obvious to people that they assume the presence of spirits in bodies as causes of motion. That is the origin of genies, demons, and gods among pagans (1286).

Fourth, motion is a subject of invariable laws by which from the same cause uniformly follow regular/orderly effects, so, motion comes from an active, intelligent cause that knows what it is doing. An accident is opposed to intelligence, not to necessity. It is not an effect of an unknown cause but of a cause that does not know what it is doing. We do not know the cause of gravitation or magnetism, but the effects are not fortuitous, but regular. It is impossible to attribute regularity, design, and orderly connection between ends and means to a blind cause, to an accident. It is certain that random motion never produced a working watch, all the more, it is certain that random motion cannot produce the universe (1.1286-1288, 6.352-653).

It is important to qualify the invariability of laws. Physical laws are immutable for creatures who cannot change them, but they are the result of God's

will, and this will can also change them. Miracles were foreseen from eternity, just as the laws themselves (6.1037). Miracles are performed to open people's eyes who do not see God in His works, to show them that He is the supreme Master of the natural order. „The momentary interruption of the physical order is necessary to reestablish the moral order" (1029). In fact, from the perspective of the Christian religion, such momentary interruptions are indispensable: apostles did not convert the world by philosophical reasoning but by proving their mission by miracles (7.909). Take away the miracle of the Gospel and there will not remain in the entire earth one disciple of Christ (1.602). Thus, miracles should be viewed not only from their physical side but also moral and through their impact on morals (607).

Fifth, inanimate matter cannot be the cause of living beings; they must be the work of the Creator (1.1288). The organized body could not be formed in succession; each part presupposes the existence of other parts, all parts working for one general purpose (6.364). It is interesting to observe that today, the proponents of intelligent design use the same argument, calling it irreducible complexity. Bergier projected it onto the entire universe: everything in it should be created at time (1.1289), well, at least within six days of creation.

Sixth, we trust in our senses (1.1289), yet a connection between qualities of matter and sensation is a work of the Creator of sensory organs (6.329): there is no more essential connection between an image of a tree on the retina of the eye and the tree itself than between the word „tree" and the tree itself. The former connection is instituted by the Creator; the latter is a linguistic convention (3.367). Impressions that people receive through their senses are the natural language through which God speaks to their souls for their good and their preservation (1.1290, 3.368). It is no different with facial expressions: we recognize the mood of a person by the expression on the face, but the connection between the two has been established by God (6.368).

Seventh, thinking substances were created by a spirit (6.329). Humans are thinking beings, and saying that matter has an awareness of myself is to say we are other than we think we are (1.1290; 6.369). Thinking is not a motion, which is divisible; thinking is an indivisible act, instantaneous, incapable of duration or quantification; and it is not shared (6.370). This points to the indivisibility of the human soul, and as indivisible, the soul could only be created, not emanated (1.1291).

Eighth, the world is not eternal; thus, it was created by an intelligent being (1.1292). God willed from eternity what exists, but He willed it to be made in one instant. His acts of will are not successive, but the effects are (6.340).

Ninth, there is in nature an order worthy of admiration of a philosopher that can occupy his reflection all of his life; thus, an intelligent Creator presided over the construction of this world, the fact recognized by such luminaries as Newton, Cassini, Haller, Réaumur, and Buffon (1.1293, 6.386). The four elements of

nature interact according to constant and invariable laws; these elements and laws are not necessary and are not a result of accident; thus, they have been created. There is a succession of ends as it is of causes and effects; a particular effect was designed to follow a particular cause; therefore, the investigation of final causes is also an investigation of physical causes and their effects (6.387-388). Also, the rejection of final causes would mean that eyes were not made to see, legs to walk, etc. (1.51). Animals were created for the benefit of humans, notwithstanding the abuse of these animals by people. " "To judge that the nourishment of humans was a final cause of fruits, it is enough to know that these fruits physically produce that effect" (1294; 6.388). "By creating physical cause, God wanted the effect that they produce by necessity" (1295, 6.388).

Bergier stressed the importance of final causes, but he seldom elaborated on it by a reference to particular examples the way physico-theologians did. In a rare illustration of this point, he stated that mountains divide the clouds, condense vapors, store snow and water, are the source of rivers, multiply air currents, double the surface of the soil, reverberate/reflect sunrays, to vary the view. They were not formed by purely mechanical causes, but with design by an intelligent worker (6.382). The ferocity of animals is one reason for people to congregate and form societies; thus, it is not useless as to the needs of humans (400). Also, harmful animals are not harmful in all respects. Besides, they multiply less than needed animals, and they avoid humans (391), although insects appear not to follow this rule.

Tenth, people discover in themselves "a taste for virtue," conscience applauding or condemning me depending on my actions (6.400). This disposition was not created by matter. Also, society would not be possible without this inclination. Passions act against conscience, the voice of which is reinforced by the idea of God, the legislator who punishes and rewards. The existence of God (1295; 6.401) is engraved in my heart (1296). In fact, the concept of God is as old as humanity and is inseparable from reason (1.302), a concept that is also engraved in his spirit and in the heart (303), along with the notions and the sentiment of vice and virtue (1.1303). However, the impact of this inborn impression can be dimmed leading, in the worst case, to atheism, which is espoused by people corrupted by luxury and pleasures (1.1296, 6.401). In any event, the voice of conscience and the order of nature speak about the existence of God (1.258). Everywhere, conscience says that one should glorify the author of one's being, love others, and not do to others what one does not want to be done to oneself, which is the golden rule. Everywhere, it says that there is God who punishes crimes and rewards virtues and that virtue is the most important thing in one's own interest to follow since only virtue decides one's eternal fate (105). Reason and conscience are interpreters by which God communicates to people His law and will; conscience is the voice of God Himself (348). Conscience attests the presence of the supreme legislator and His

justice (7.704). This is very important from the eschatological perspective: if conscience speaks about God and His moral law, then the kind of the afterlife depends on the level to which the dictates of conscience are followed – whether a person has heard about the Gospel or not.

Eleventh, deniers of the existence of God are punished (6.329). Also, the failed arguments of atheists speak to the existence of God: they reduce humans to the level of animals to show they are not the work of God, which hardly can inspire anyone to do anything honorable (6.403). They deny the existence of providence because of the presence of evil. They say that belief in God is inspired by the fear of punishment, not by love. They say the state of the world is uncertain, and the collapse of the order is possible at any time (1.1297).

Finally, the belief in God is universal (1.1297, 1332; 6.405), and it is often contaminated and turns into polytheism (1298; 6.406) because people do not consider the totality of the physical order, but only part, they could not comprehend that one God could rule over the entire universe without undermining His happiness (6.415).

These twelve proofs – Bergier called the first three metaphysical, the next six physical, and the last three moral (1.1281) – are sometimes connected if only loosely, and they are of different convincing power.

The problem of infinity

The first proofs involve infinity in a significant manner. Also, Bergier repeatedly stated that God's goodness is infinite. In a brief explanation of this contention, he stated that God's goodness is infinite since for any degree of goodness, God can generate more, since He is all-powerful (3.1426). In his estimation, the world is finite, and thus, an infinite creature is a contradiction (6.429). The size of the world is the result of God's will, and thus, it is conceivable that the world could be larger. What is even more clear, the population of the world, by the Biblical account accepted by Bergier, grew from the moment of creation to the flood and then again from the flood to today. How about God's goodness? Was it lesser at the beginning, when only the first human parents were created, than at the time when the world was populated by the progeny of Adam and Eve? Is God's goodness proportional to the size of the population? It would not be easy to find a theologian who agrees with it. Since God is immutable, as Bergier agreed, His goodness would also be immutable from eternity onwards. It does not matter in how many cases it manifests itself in action – two people or millions – God's goodness does not grow nor diminish.[4]

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[4] A perfection consists in a virtue to perform certain action, but an execution of this action adds nothing to this perfection (F. de Salignac Fénelon, *De l'existence et*

However, the scope of its manifestation does change, and there is no limit to how large this scope can be. The unlimited character of this manifestation of goodness is associated with God's power, which is His omnipotence, rather than with His goodness. Thus, it seems that it is a misapplication of the term "infinite" to apply it to God's goodness. What Bergier meant was that God's goodness is perfect with no admixture of evil, and he simply equated infinity with perfection, which, at best, can be confusing since infinity-perfection or infinity-limitlessness is not in the same category as infinity-size. It is conceivable that there may exist a being whose goodness is unadulterated by any shadow of evil but whose powers are limited, and so, this goodness would not manifest itself in a desired action in all possible cases. Could angels be included in this category? If so, there may be other divine attributes which should not be considered finite nor infinite but perfect: God's holiness, mercy, benevolence, simplicity, oneness, and happiness.

God's power appears to be an obvious candidate for an infinite attribute. For this reason, Bergier criticized Leibniz for his statement that this world is the best possible since in this way the power of God is limited; if He could not create a world with less evil and more good, He would not be infinitely powerful (1.317). However, infinity is not an unrestrained limitlessness. It is a universal agreement that God cannot overcome contradictions: He cannot create something that exists and does not exist at the same time, is round and not round at the same time, and in middle ages theologians discussed the problem of whether God can undo existence: can God undo an event as though the event never happened? Not, for instance, simply by bringing a person back to life after the person died but by bringing the world to a state in which this death never happened.

How about God's knowledge? Is it infinite? Consider first this quandary: Bergier considered infinity to be indivisible (1.1284, 3.1425, 6.484). If infinity were divisible and one atom or the smallest part were taken away, would what remains be infinite or finite? If it is infinite, infinity can be made larger by adding to what was taken away, which is an absurdity; if it were finite, it would mean that an addition of an atom can make infinite something that is finite; an infinite quantity added to a finite quantity cannot produce an infinite quantity (6.428).[5] However, we should remark that since God is omniscient, He knows all the events past and future, and, let us add in the Leibnizian spirit, all possible events and possible worlds' trajectories (to be able to choose the best world). If such facts are treated as atoms, then by separating one from God's mind, we would have the possibility of two infinites that Bergier was afraid of. It may be stated that God does not have to know at the same time all

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des attributs de Dieu, Paris: Librairie de Firmin Didot Frères 1861, p. 323), otherwise, creation would be necessary for the perfection of God (p. 324).

  [5] Bergier followed here Fénelon, *op. cit.*, p. 320.

possible mathematical truths; it may be enough if He knows just axioms and rules of inference, and with an infinite speed, He could derive any theorem. So, it may be conjectured that there may exist a set of axioms using which all future events can be derived; thus, God would not have to hold at the same time all single facts. How many such axioms are there? Is it possible that there is only a finite number of them? Can such knowledge be called infinite? Well, for a simple Peano's arithmetic, there is a small number of axioms, but the axiom of induction is a scheme of axioms representing an infinity of them, but still, it is just one statement, although schematic. So, it is possible to think that finite knowledge can encompass infinite knowledge; the knowledge of a finite set of axioms encompasses the infinity of theses, lemmata, and theorems that could be derived from it. Infinite knowledge or finite? Moreover, if the number of axioms is infinite, then still, one of them could be isolated from others, and we are back at Bergier's quandary.

Consider also this. God is defined as a necessary being, since by the first proof, there must be one such being because the world exists. For Bergier, necessity means that God is an uncaused being, the being whose existence did not and does not depend on any cause. This leads Bergier to an introduction of a rather curious phrase that God is not limited by a cause. This is important for Bergier since, by a free association, having no limit becomes for him tantamount to infinity, and thus, God is infinite because He is a necessary being (1.235, 6.428). A question can be asked, is a concept of a necessary and finite being contradictory? Bergier did not stop there: because God is infinite, this gives infinity a special, divine status which should not be shared by any other being. Thus, infinity can be only a divine attribute. However, because God is also a simple, non-compound being, so has to be infinity, and thus, infinity has no parts, a concept which truly defies intuition, which would not trouble Bergier since infinity cannot be comprehended by a finite human mind anyway.

By an introduction of the concept of indivisible infinity-perfection, an infinity which has no elements, Bergier defined something which has nothing in common with the concept of infinity-size, which has the number of elements that succeeds any natural number. And yet what he determined – or he thought he did – about the former, he posited about the latter. For example, there cannot be two infinities since one would be a privation – or a limit – of what is in the other, which destroys the idea of infinity (1.272-273). In this way, two infinite lines could not exist at the same time. We can ask, how can one line become a privation to the other line?

If something is infinite, it cannot have a limit, and thus, an infinite sequence of generations – as proposed by those who said that the world has no beginning – "is evidently absurd": it is called infinite, and yet it ends today – a supposed contradiction (1.1282, 1286, 6.345). The supposition that today we are at the point of the union of two infinites, one extending infinitely into the past, another

into the future, "is even more pronounced absurdity" (1.1282). The thrust of Bergier's argument appears to be the desire to make impossible an argument for the eternity of the physical world rather than the desire to reconfigure the concept of infinity. And yet, according to his principles, a line that has a starting point and extends infinitely in one direction cannot be considered infinite, and, besides, such a line, in reality, would be evidently absurd, although the reason for this absurdity may elude the reader.

In his view, nothing in the world can be infinite, since created infinity is contradictory since created beings are necessarily limited (1.1301) because we can surmise, at least by the fact that they have been created, whereby they are limited by the cause. Also, creating infinity would apparently mean creating God Himself, which would be contradictory by the fact that this would be creating an uncreated being.

Bergier was not completely oblivious to numerical and geometrical infinity, but he made no meaningful connection to his concept of infinity. He stated, for example, that mathematicians speak about infinite sequences (*suites*), but infinity of geometry is different than in metaphysics (1.1286). Mathematicians "call infinite what surpasses the finite, that is, what can be measured or expressed in number" (1277). What does it mean? How can what surpasses the finite be expressed by a number? At that time, the world had to wait over a century for transfinite numbers to express cardinalities of infinite sets. Would that mean that mathematical infinities are quantities, sets of elements, each of which can be assigned a number? Bergier did not elaborate. However, if he meant such a quantitative infinity, there would not be anything contradictory by saying that there would be possible to have an infinite causal chain, each element of which could be numbered, or no contradiction would arise from the assumption that matter can be infinite since each atom could be numbered. However, Bergier vehemently rejected both the eternity of the world, and thus, an infinity of physical causal chains and infinity of matter, the former, because it has the last effect at the present moment, and thus, such an infinity would grow, the latter, because genuine infinity is indivisible and matter is.

Incidentally, a rejection of an increasing (also decreasing) infinity also appears to be motivated by the principle that the whole is greater than its part (6.614). In which case, say, in an eternal world, the number of people until last year, by Bergier's principle, would be smaller than the number of people until this year, and yet both numbers of people would be infinite – two different infinities, and Bergier could not have that. Besides, the number of people is still growing, which is somehow contradictory (1.24). It could, from his perspective, get even worse. Holbach said that matter was infinite and infinitely divisible, but that would mean an infinity of infinites, which is absurd (1.24). What Bergier likely meant was that this infinite amount of matter is divided into chunks; each chunk could be divided into infinity, and

hence, an infinity of infinites would take place. It is thus convenient to reject it out of hand.[6]

The problem could be handled within the level of knowledge of Bergier's time fairly easily by taking a hint from arithmetic. The set of numbers A = {1, 2, 3, 4, …}, contains one number that is not in the set B = {2, 3, 4, …}, and, in a way, a claim can be made that B is part of A (strictly speaking, elements of B are parts of A, whereby B is included in A), but no profound knowledge of numbers is needed to see that the amount of numbers in both sets is the same.

This problem also troubled Descartes who ascribed true infinity only to God, but he found a solution by allowing the existence of mathematical infinity and possible physical infinity in terminological subterfuge by speaking about an indefinite number of elements.[7] Newton was also troubled by this problem and was speaking about different infinities to be neither equal nor unequal.[8] In a way, rather weakly, Bergier pointed in this direction when he recognized the fact that mathematicians speak about infinity and also when he stated that it is absurd to say that infinity can be larger or smaller; infinity cannot grow, a potential infinity is acceptable since it does not exist (1.626) and, again, we do not have a clear and positive idea of the actual infinity, but only about the potential infinity (6.428), which is a quantity that can be increased never becoming an actual infinity. In this, Bergier would follow Aristotle with the grudging acknowledgment that there is something to infinity, which at least mathematicians recognize, but only on the conceptual level. And so, a series of numbers would only be potentially extendible into infinity. In that case, what would be the status of numbers in the divine mind? God, in His omniscience, knows all mathematical truths; are numbers in His mind existing only potentially or also actually? Bergier, however, did not address this problem.

Perhaps another approach would be possible. Bergier saw all attributes of God as infinite (1.443), whether infinity could intuitively be associated with the attributes or not. There is thus God's infinite power (1.1306, 7.214, 1108), infinite intelligence (6.423), infinite will (6.423), infinite wisdom (1.1301, 6.1022, 7.164), infinite goodness (6.1022, 7.767, 1109, 1293), infinite justice (1.1301), infinite happiness (6.423), and infinite holiness (7.165). As suggested above, some of these attributes are rather artificially set together with infinity since what was meant was the perfection of these attributes rather than their infinity (unless converted into some element-free infinity). Maybe it would

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[6] If matter is divided into a countable number of chunks and each chunk would be a continuum of points (infinite divisibility means there are no atoms or points are atoms), then there the infinity of infinities would also be continuum.

[7] R. Descartes, *Oeuvres*, Paris: Cerf 1897–1913, vol. 5, pp. 52, 167. In Fénelon's estimation, Descartes' indefinite world is ridiculous if it doesn't signify real infinity (*op. cit.*, p. 318).

[8] R. Bentley, *Works*, London: Francis MacPherson 1838, vol. 3, pp. 208, 210.

be judicious to go all the way by detaching infinity from all divine attributes, whereby His power would not be infinite, but perfect, with no admixture of limitation, His wisdom would not be infinite, but perfect, with no admixture of error or ignorance. In this way, God could be considered to be beyond any infinity and beyond any finitude. A case can be made that Augustine was of this opinion, Augustine, to whose authority Bergier fairly frequently referred.[9]

Bergier vs. Fénelon and Clarke

It appears that, to a large extent, Bergier modeled his proofs of the existence of God on Fénelon and Clarke,[10] in particular, in seeking a correspondence between the necessity and infinity of God.

First, Fénelon specified in the second part of his *Traité de l'existence et des attributs de Dieu* the attributes of God whose existence he wanted to prove: God is the supreme perfection, existing of Himself, immutable, holding in Himself the necessity of His own existence (*op. cit.*, 120). The being that is by itself is in the supreme degree of being and thus is infinitely perfect in its essence. On the other hand, I am a limited, imperfect being, infinitely removed from infinite perfection. I am not a cause of myself. A being that can create something out of nothing (121), must exist of itself and be infinitely powerful since there is an infinite distance between nonbeing/nonexistence and existence. To this Being I owe my existence and this Being which is by itself, and by which I am, is infinitely perfect (122). This is supposed to be the first proof and, yet, it relies on very strong assumptions. Why, we can ask, should a being existing of itself be perfect? Why should it be infinitely perfect? Why must a being that can create something out of nothing be infinitely powerful? In what sense is the difference between existence and nonexistence infinite? Second proof: I have an idea of infinity and of perfection in my finite and imperfect mind (123). Infinity has a positive meaning, it is "finite" that has a negative meaning (124). The idea of infinity must come from an infinitely perfect being that presents

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[9] Bergier valued Augustine, but not unconditionally. In fact, he flatly rejected some of Augustine's views, in particular, Augustine's rigid opinion concerning grace and redemption, cf. J. D. Burson, *Nicolas-Sylvestre Bergier (1718–1790): an enlightened anti-philosophe*, in: J. D. Burson, U. Lehner (eds.), *Enlightenment and Catholicism in Europe: a transnational history*, Notre Dame: University of Notre Dame Press 2014, pp. 80–84.

[10] Maybe second hand, through abbé Jean-Baptiste Bullet, whose proof of the existence of God given in *L'Existence de Dieu, démontrée par les merveilles de la nature*, Paris: Delalain 1768, vols. 1–2, seems to be based to a large extent on Clarke; cf. his 11th proposition: A necessary Being is infinite (vol. 2, p. 36). Incidentally, Bergier studied under the direction of Bullet in the Besançon seminary (1.v, 1.1221).

itself to me (126), which effectively is the ontological proof of God stated by Anselm and Descartes. Third, the perfectly infinite being exists necessarily; it cannot be conceived as non-existing; existence is in its essence (129). We should accept actual existence from the simple idea of an infinitely perfect being just as we should accept my actual existence from my actual thought (130). In all this, the concept of infinity is accepted as noncontroversial and more basic than the concept of the finite, again, following Descartes, and from this, the idea of God's necessary existence is apparently derived. When continuing his investigation, Fénelon arrived at the conclusion that a composed whole cannot be infinite (138); there is only simple, indivisible infinity (161, 318, 320); thus, infinity has no parts, and it is ridiculous to think that any number of infinities could be larger than one infinity (139).

Clarke in his series of propositions, started with the statement that something existed from eternity (proposition 1), which is an immutable and independent Being (proposition 2), the Being which is self-existing, that is, existing necessarily (propositions 3), the Being that of necessity is infinite and eternal (proposition 6). In the proof of proposition 2, Clarke simply stated that "an infinite Succession of changeable and *dependent* Beings" without the first cause is simply absurd since no element of this sequence is self-existent or necessary, which supposedly amounts as being caused by nothing, which, as "every Man knows is a Contradiction."[11] The proof of proposition 6 states that an existing infinity must be independent and of itself, otherwise, the existence of such an infinity would mean that "an Effect could be perfecter than its Cause" (87). This appears to mean that infinity is perfection and that infinity cannot be created. It leaves open a possibility of the existence of multiple uncreated infinites. This tacit assumption of the perfection of infinity appears as a conclusion: the infinity of the self-existent Being is its fullness, meaning, without limits, diversity or defect. Interestingly, Clarke allowed for the infinity of matter since such an infinity would mean having no limits, but "it might have within it self any assignable Vacuities," which the fullness of the self-existing being excludes. This infinity also does not allow for divisibility, that is, a separation of parts, even mentally, since that would somehow destroy infinity (90).

It seems that Fénelon derived the necessity of being from its infinity, while Clarke derived infinity from necessity. This is very interesting since Clarke, a Protestant theologian, followed more closely Aquinas than Fénelon, a Catholic clergyman. Aquinas stated in his *tertia via*, the third way/proof, that God is a necessary being (*Summa th*. 1.2.3), and as self-subsisting (1.32 ad 3), He is infinite (1.7.1). This is the approach embraced by Bergier, but both Fénelon and Clarke defined infinity as a perfect whole without parts, which Bergier

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[11] S. Clarke, *A demonstration of the being and attributes of God*, London: Will[iam] Botham 1705, pp. 24–26.

also followed. In all these three theologians, attempts to inject the discussion of infinity into the proofs of the existence of God are at least unconvincing. They all wanted to stay on the level of *a priori* proofs, which, as far as infinity goes, did not come out well.

Conclusion

The eighteenth century was the age of physico-theology, and, at least to some extent, Fénelon spearheaded its application in France by his very clear and forceful presentation in the first part of his *Traité* that appeared in 1713. He somehow felt obligated to provide also *a priori* proofs, which he did in the second part which appeared posthumously in 1718. Clarke also tried to cling to the *a priori* approach to prove the existence of God, although, when he admitted that to prove God's intelligence, an *a posteriori* approach is needed, and he somewhat feebly referred to physico-theology in the proof of his eighth proposition.[12] France saw physico-theology presented in full force by Noël-Antoine Pluche in his multivolume *Système de la nature*. Bergier referred to physico-theology rather curtly, on a very general level, without going into details how this physico-theology can work. Most physico-theologians referred to infinity, in particular the infinite, infinitely perfect attributes of God, whose existence they show proven by the existence of the harmonious universe, but they rarely discussed the concept of infinity and why God's attributes are actually infinite. Bergier was a rare example of a theologian who concentrated on the infinity-related aspect of theology and tried to integrate it with physico-theology. Successful in that respect or otherwise, his was a very significant theological effort that seldom became a preoccupation of physico-theologians of his times.

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[12] Incidentally, physico-theology figures in Bullet's works much more prominently.

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