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MAUPERTUIS VS. PHYSICO-THEOLOGIANS

MAUPERTUIS I FIZYKO-TEOLODZY

ABSTRACT:

The most popular proof used in the 18th century for the existence of God was the proof from design: the orderliness and beauty of nature pointed to the existence of the supernatural Designer. Physico-theologians who used this proof not infrequently made details of their investigations a subject of derision. Maupertuis proposed his proof he considered superior to other proofs to avoid pitfalls of the proof by design, a proof based on his principle of least action. The article discusses the theological relevance of this principle and his views on the attributes of God and on eschatology as related to his proof of the existence of God.

Najpopularniejszym XVIII-wiecznym dowodem na istnienie Boga był dowód teleologiczny: porządek i piękno przyrody wskazywały na istnienie nadprzyrodzonego Autora. Fizyko-teolodzy, którzy posługiwali się tym dowodem, nierzadko stawali się przedmiot drwin. Aby uniknąć pułapki dowodu teleologicznego, Maupertuis zaproponował swój dowód, który uważał za lepszy od innych dowodów, dowód oparty na jego zasadzie najmniejszego działania. Niniejszy artykuł omawia teologiczne znaczenie tej zasady i poglądy Maupertuisa na atrybuty Boga i na eschatologię w odniesieniu do jego dowodu na istnienie Boga.

Pierre Louis Moreau de Maupertuis (1698–1759), a member of the Royal Academy of Sciences at the age of 25, the director of this Academy (1742–1745) and the president of the Prussian Academy of Sciences (1746–1753), an accomplished researcher and scholar was keenly interested in theological issues that had been very intensely discussed in the 18th century.

The existence of God

Maupertuis proposed a proof of the existence of God he considered to be superior to all that had been proposed before. However, the assumption he made was, in a way, self-defeating: the existence of God is the most certain among all truths (1.ix).¹ If the

¹ References are made to a volume and a page of *Oeuvres de Mr. de Maupertuis*, Lyon: Jean-Marie Bruyset 1756, vols. 1-4. The following works are quoted: *Essai de cosmologie* (1750), 1.i-xxviii, 1-78; *Essai de philosophie morale* (1749), 1.171-252; *Vénus physique* (1745), 1-133; *Système de la nature* (1751), 2.135-160, 145*-160*, 161-176, 161*-176*, 177-184; *Lettres* (1752), 2.185-340; *Relation*

proposition that God exists is most certain, why make an attempt to prove it? Or is this the certainty of a different kind than the proof of its veracity? Maupertuis did not ask this question and stated that false proofs should be eliminated and making stronger the proofs that are weak should not be allowed to avoid the degradation of the natural light. Would then the certainty of God's existence come from the natural light? "The most certain truth is rendered suspect when proofs are not presented with enough precision or enough good faith" (ix). This apparently indicates that the proof is required even in the case of the certainty of truths.

"The entire system of Nature suffices to convince us that an infinitely powerful and infinitely wise Being is its author and presides over it." However, if only a part of nature is considered, the argument is not forceful enough (l.x), such as a small detail of the makeup of a plant or of an insect (xi). In this, Maupertuis referred to the physico-theological arguments proposed by, as he called them, naturalists. The eighteenth century was the height of the development of physico-theology that tried to derive the existence and the attributes of God from the makeup of the universe and its parts. Maupertuis found such arguments wanting or rather not entirely satisfactory. Consider a snake that having no legs nor wings can move faster than many animals due to the flexibility of its spine (14). However, why do these nasty harmful creatures exist? Do they have other unknown uses? It's better not to admire an animal that we only know as harmful. Consider a fly and its marvelous ways of protecting its eggs, nourishing the newborns, the use of chrysalis, the metamorphoses (15). All of it to generate insects that are a big nuisance to humans. The wonderful is inextricably linked here to the repulsive, to the harmful. Therefore, physico-theologians always faced the theodicy problem trying to justify the existence of the unpalatable with the wondrous. Frequently, the only explanation was: we don't know why, and Maupertuis agreed with such an answer: the bodies of animals and plants are machines too complicated, their ultimate parts escape our senses, and we know too little about their usage and their purpose to be able to judge the wisdom and power that was needed to construct them (14). Therefore, because of the limitations of our cognitive powers, we should avoid proofs which expose this limitation and significantly weaken the argument itself. Physico-theologians do not analyze the scope and power of their proofs (19). Why admire the regularity of the motion of planets on the same plain if we don't know whether it could be better if they moved differently? Is detailed knowledge of harmful plants and animals needed to see the goodness of the Creator? Maybe they are the work of demons? With our limited powers we cannot pursue too far the orderliness of things as an argument pointing to the existence of God (20).

Moreover, a physico-theological argument may easily become a subject of derision and, as an example, Maupertuis mentioned the proof from the folds of the skin of rhinoceros since without these folds the animal could not move because

d'un voyage au fond de la Lapponie, pour trouver un ancien monument (1747), 3.177-206; *Lettre sur la comète qui paroissoit en M. DCC. XLII*. (1742), 3.207-256; *Discours académiques*, 3.257-433; *Accord de différentes loix de la nature qui avoient jusqu'ici paru incompatibles* (1744), 4.1-28.

of the hardness of the skin. “Isn’t it harmful to the greatest of truths by willing to prove it by such arguments?” (1.12).² Maupertuis saw here a rather ridiculous contrast between the folds of the skin of an animal and the majesty of God, the Creator of the universe. However, in justifying his analyses of snails and mollusks, Lesser stated that God considered it to be worthy to create small animals, so he considered it worthy to bring them to the attention of people so that they could see in them the work of the Master.³ Similarly, a physico-theologians could state that God considered it worthy to create folds in the rhinoceros’ hide, so they considered it to be worthy of human attention.

Maupertuis’ answer to this problem is that not in small details, but in the universality without exception should we seek the supreme Being (1.21). The organization of animals, the smallness of parts of insects, the immensity of celestial bodies are good examples to astonish the mind, but not to illuminate it. “The supreme Being is everywhere, but he is not everywhere equally visible.” We should look for Him in the simplest objects, that is, “in the universal rules according to which the motion is conserved, distributed, or destroyed, but not in the phenomena which are only too complicated consequences of these laws” (23).

Motion is the most marvelous phenomenon of nature (1.26) and this is where Maupertuis was looking for his proof and found it in the principle of least quantity of action. The action of a body is proportional to its mass, velocity, and the distance it travels, $\text{action} = \text{mass} \cdot \text{velocity} \cdot \text{distance}$, where the quantity of action needed to make a change is always the smallest possible (1.xiv, 42-43). As phrased somewhat differently, the quantity of action “is proportional to the sum of spaces/distance each multiplied by velocity with which the body traverses them”; since only one body is considered, its mass can be disregarded (4.17). That is, $\text{action} = \sum mvs$ or rather, following Euler, $\int mvdv$ or $m \int vds$; the curve traced by the moving body is the curve that minimizes this expression. From his principle, Maupertuis derived the law for inelastic impact of bodies, the law for elastic impact, and the principle of the lever, the derivation considered to be “merely trivial.”⁴ In this way, the principle of least action was meant as a metalaw allowing to derive the laws already known

² The example is not entirely well-chosen since the article Maupertuis referred to says, “As to the Performance of this Animal’s several Motions, let consider the great Wisdom of the CREATOR, in the Contrivance that serves him for that Purpose. The Skin is entirely impenetrable and inflexible,” etc., A letter of Parsons to Folkes, in: John Martyn, *Anatomical and medical papers, The Philosophical Transactions Abridged* 9 (1747), p. 99; that is, no proof is proposed here; the existence of God is not in doubt, the folds are given here as a manifestation of the divine wisdom even in such a small detail as the make-up of rhinoceros’ hide.

³ Friedrich Christian Lesser, *Testaceotheologia*, Leipzig: Michael Blochberger 1756² [1744], p. 8.

⁴ Jerome Fee, Maupertuis and the principle of least action, “*American Scientist*” 30 (1942), no. 2, p. 157.

and new laws⁵; in this way, a hierarchy of laws was to be established organized by the level of generality and simplicity.⁶

Maupertuis stated that his principle left the world in the continuous need of the power of the Creator and was a necessary consequence of the wisest application of this power (1.44). He could justify this statement by saying that since the principle of least action is about the *least* action, the constant divine intervention is needed to assure that the action will indeed be the least from among the infinity of other possible trajectories. For someone who would not want to enter the area of theology, there may be a somewhat unsettling teleological element in this principle,⁷ but the existence of this principle does not point to its Creator, and if it does, it does not point to the need of constant maintenance of this principle by the divine power.

From his principle Maupertuis said he was able to derive the laws of motion, the laws universally applicable to the motion of animals (44), to the growth of plants, and to the revolution of stars/planets whereby the spectacle of the universe became grander, more beautiful, and more worthy of its Author considering that it was all derived from a small number of laws provided most wisely. In this way, we can have an adequate idea of the power and wisdom of the supreme Being not derived from the investigation of a small part of which construction and connection to other parts we know very little. “These beautiful and simple laws are perhaps the only ones that the Creator and the Orderer of things established for matter for them to operate in all phenomena of the visible World” (45).

In this, Maupertuis showed most clearly his criterion of the divine presence: generality. The more general are the laws of nature, the more clearly they point to their divine provenance. Complexity and orderliness of detail of creation, impressive as they may be, are but of secondary importance in comparison to the generality and, in fact, to the simplicity of natural laws and principles from which these laws can be derived.

It is interesting that when speaking about the theological relevance of his principle, Maupertuis said that it was one of the strongest arguments for the recognition of the wisdom and power of God (1.xiv). Also, in his view, this principle agreed with our idea of the supreme Being who always acts in the wisest way and everything depends on this Being (1.43). That is, the existence of God is already recognized, without any proof, since it is most certain and only the majesty of God’s attributes is accentuated by this principle. However, even this may not be

⁵ Helmut Pulte, *Mannigfaltigkeit der Regeln und Einheit der Prinzipien: Maupertuis und die Entmetaphysierung teleologischen Denkens*, in: H. Hecht (ed.), *Pierre Louis Moreau de Maupertuis: eine Bilanz nach 300 Jahren*, Berlin: Arno Spitz 1999, p. 241.

⁶ Vlad Dolghi, *The role of mathematics in Maupertuis’s epistemology and natural philosophy*, “Society and Politics” 11 (2017), pp. 36-37.

⁷ The principle of least action “has always been surrounded by a fog of mysticism. The system seems to ‘choose’ the actual path along which an action is less than along other paths. It is as if the system’s final state determines the path that the system takes to reach that state,” Vladislav Terekhovich, *Metaphysics of the principle of least action*, “Studies in History and Philosophy of Modern Physics” 62 (2018), p. 189.

considered Maupertuis' theological accomplishment since he considered it to be more certain and useful – more certain than done by his predecessors – to deduce general laws from the attributes of a wise and omnipotent Being which would be the strongest proof of the existence of this Being, the author of these laws (24) and his goal was to discover “the first laws of Nature” and “to draw them from the infinite source of wisdom from which they emanate” (iv).⁸ First, nowhere is there a trace of deriving any laws from God's attributes, and if it happened, it would have no theological relevance: as is stated in his *circulus vitiosus*, the laws are derived from attributes of God – hence, the existing God – to prove that God exists. On the other hand, he did mean his principle and the laws derived from it to be theologically relevant, since, according to his exclamation, “what a satisfaction for the human esprit to contemplate these laws which are the principle of motion of all bodies in the Universe to find in them the proof of the existence of the one who governs it” (45). Where exactly is this proof? There is an apocryphal story about Euler writing an inconsequential formula, $(a+b^n)/n = x$, and saying to Diderot, “thus, God exists,” which was meant as a mockery directed against Diderot.⁹ It appears that Maupertuis' proof can be summarized in the statement: action = *mvs* is minimal and, thus, God exists, except that it should be meant in all seriousness.

A materialist case can be made that natural laws are natural because they stem from the nature of material bodies. However, Maupertuis would counter that “if it were true that the laws of motion were indispensable consequences of the nature of bodies, this would even prove the perfection of the supreme Being: the fact that all things would be so ordered that blind and necessary Mathematics would execute what the most enlightened and freest intelligence would prescribe” (1.24-25). There is here more than a whiff of *non sequitur*¹⁰: the claim that natural laws are derived from the essence of bodies shows that these laws were created by God and only then they are blindly followed. A modicum of reflection makes the issue a bit clearer: “It cannot be doubted that all things are regulated by a supreme Being who, while he has imprinted on matter the forces which show his power, has designated it to execute the effects that mark his wisdom: and harmony of these two attributes is so perfect that without a doubt all effects of Nature could be deduced from each

⁸ “The proofs of the existence of God should be looked for in the general Laws of Nature. The Laws according to which the Movement is conserved, is distributed and is destroyed are founded on the attributes of the supreme Intelligence.” This is a section title included in Maupertuis' *Les loix du mouvement et du repos déduites d'un Principe Métaphysique, Histoire de l'Academie Royale des Sciences et Belles-Lettres, année 1746*, Berlin: Haude et Spener 1748, p. 277, but dropped from the text included in the *Oeuvres* (1.21).

⁹ R. J. Gillings, The so-called Euler-Diderot incident, “The American Mathematical Monthly” 61 (1954), no. 2, pp. 77-80.

¹⁰ Condillac marveled in his 1750 letter to Maupertuis, what if the universal laws “were the necessary consequence of the nature of bodies? I don't see how one could get out from this difficulty,” abbé A[chille] Le Sueur, *Maupertuis et ses correspondants*, Paris: Alphonse Picard et Fils 1897, p. 389. “Truly, we cannot see how ‘blind and necessary Mathematics’ can ‘prove the perfection of the supreme Being,’” Giorgio Tonelli, *La pensée philosophique de Maupertuis. Son milieu et ses sources*, Hildesheim: Georg Olms 1987, p. 22.

taken separately. Blind and necessary Mechanics follows the designs of the most enlightened and freest Intelligence; and if our mind were broad enough, it would see the causes of physical effects either by calculating the properties of bodies or by investigating the one which would be most likely to make them take place” (4.21). The starting point really is that there is no doubt that the world is regulated by God. A materialist trying to ascribe the regularity of the world to the laws determined by the nature of the material world simply disregards the starting point that should raise no doubts. However, the entire issue is about the existence of God and His creative act. The “no doubt” argument is really no argument at all; a materialist could just as well say that there is no doubt that the laws are determined by the essence of natural world.

In his proof from the principle of least action, Maupertuis tried to avoid the problem of theodicy which immediately comes up for a physico-theologian, at least for a poor choice of examples, as Maupertuis illustrated with the image of the snake and the fly. Looking at the reality from the highest, humanly possible perspective should blur the borderlines between what is good or nice and evil or repulsive. In a way, from such top-most perspective the problem of good and evil apparently disappears. There remains only the formula for the universe that should manifest the wisdom and the power of God by its conciseness, simplicity, and the universal applicability. However, the problem of theodicy does not in any way disappear. A question can be asked, why, when mathematically framing the world, God used a formula which permits for blossoming sin and evildoing? Maupertuis could conceivably refer to the statement that, by God’s design, the sun rises on the evil and the good and rain is sent on the just and the unjust, but this statement had not been meant to disregard the problem of evil. Incidentally, Maupertuis had something to say in respect to theodicy, if only briefly. He said, for instance that there are evils that are supported with joy and which become a sort of good by the hope of a better state (2.290); that includes illness since small things bring joys in some illnesses and even a drink of water may taste deliciously (291-292). We should add that Maupertuis knew something about illness.

Moreover, it is doubtful that Maupertuis won over by his proof many minds and hearts to the belief of the existence of God. It seems that showing orderliness in complexity even on the very low level of reality has much more convincing power than using an abstract, simple, and even ingenuous formula. In fact, this formula can only have a convincing power because its simplicity captures the complexity of the world and the variety of entities filling the universe on the micro and macro levels. In a way, Maupertuis sensed that since although he pushed hard the validity of his proof, he referred just as often to the physico-theological examples. The third part of his *Essai de cosmologie*¹¹ is, in fact, a short physico-theological treatise which could have very easily been written by William Derham or Noël-Antoine Pluche. In his description of the duties of the academician, he asked rhetorically,

¹¹ *Essai de cosmologie* is “one of the best Works that this century produced,” Samuel Formey, comments on Examen philosophique, “Nouvelle Bibliotheque Germanique” 24 (1759), pt. 1, p. 71.

don't we find in the study of the marvels of nature proofs of the existence of the supreme Being? (3.302). Stating that it is perhaps too soon to explain the system of the universe in all its intricate details, we can always admire the spectacle itself (1.51), and then he goes on to describe the planetary system mentioning the possibility of planets being inhabited, and he spoke about the stars, comets, and the makeup of the earth. "These are principal objects of the spectacle of Nature. If we get to more detail, how many new marvels we would discover!" (77) "If from Heavens we descend to the Earth; when after going through the largest objects we examine the smallest, what new marvels! what new miracles! Each atom offers [as much admiration] as the planet Jupiter" (78). Admiration of what? Marvels due to whom? A theologically laden answer goes without saying. After all, "proofs of the existence of God that we draw from the contemplation of the Universe" (xiii) in isolation have less certainty than a strong proof of geometric kind, but when many of them are taken together, they are just as convincing as any proof including Maupertuis' own (xii).

The attributes of God

What can be said about God, about "a Being of which we are so far from having the complete idea?" (2.297). As much as can be derived from the little clarity that we do have about God. Since Maupertuis wanted to derive his general laws from the idea of God, he already ascribed to God infinity, wisdom (1.iv), even the greatest wisdom possible (43), that is, infinite wisdom (2.142), and omnipotence (1.24), that is, an infinite power (2.142); also, for God, all is simultaneous what for us is successive (145).

The knowledge of these attributes was reinforced by his own proof which spoke very strongly about God's wisdom and power (1.xiv) and that the world depends of the wisest application of His power (44). Also, as already stated, "the entire system of Nature suffices to convince us that an infinitely powerful and infinitely wise Being is its author and presides over it" (1.x, 4.21), although it is unclear, how the investigation of nature can lead to the infinity of God's wisdom and power.

Maupertuis began his theological investigations with a strong preconception of who God was and through his scholarly investigations he wanted to confirm, or to abolish, his, and others', ideas about God. Theologians too imperiously forbid the use of reason; philosophers, on the other hand, say that speaking about God is preaching, but Maupertuis himself tried to be in the middle, far from sanctimony on the one hand and from impiety on the other (1.182). A scholar as he was, he did not reject the revelation as it became a fashion in the age of the Enlightenment – and the Enlightenment was even defined in terms of this rejection – but he made references to the revelation even in his scholarly work. For example, he said that "Religion forbids us to believe that the bodies that we see owe their first origin to the laws of Nature alone. The divine Scriptures teach us how all things were first pulled from nothingness and formed and we are far from having the smallest doubt

about any circumstances of this report.” But what are the laws of conservation of the world, the laws of reproduction? (2.154-155). The Scriptures are silent about it and Maupertuis saw his role as a scholar to uncover them. He relied on the Biblical account when stating that God expressly permitted humans to kill animals for food (2.221). He said that the sacred history tells us about waters covering the highest mountains (3.196). When describing the destructive impact of a comet that could come close to the earth to cause the deluge or the conflagration, he said that there is nothing contrary to reason or to Scriptures in his statements. God punished people with the deluge and will destroy the earth with fire; “the one who is the Creator and the Engine of all the bodies in the Universe could have so regulated their courses that they will cause these grand events when the time comes” (3.240).

It is thus only natural that he drew the attributes of God from the revelation. In his *Essay on moral philosophy*, a mathematician in Maupertuis tried to establish some sort of ethical calculus. In each happy or unhappy moment, the moment of pleasure or displeasure (*peine*), we have to consider duration and intensity of pleasure/displeasure (1.194) that would be expressed by the product, duration · intensity (195). Good is the sum of happy moments, evil, the sum of unhappy ones, i.e., good = $\sum_{\text{pleasure}} \text{duration(pleasure)} \cdot \text{intensity(pleasure)}$. Happiness is the sum of goods left after excluding all evils (197), i.e., happiness = good – evil = $\sum_{\text{pleasure}} \text{duration(pleasure)} \cdot \text{intensity(pleasure)} - \sum_{\text{displeasure}} \text{duration(displeasure)} \cdot \text{intensity(displeasure)}$. There is a problem with how to compare proximate and distant goods (199) and how to compare good and evil (200). Luckily, in the ordinary life, the sum of evil surpasses the sum of goods (201, 203, 214). Maupertuis contrasted the Epicureans who seek happiness in the increase of pleasure with the Stoics who find it in the decrease of pain (218), in which he found Stoicism to be more reasonable and the Epicureans not even worth further discussion (220). He contrasted, in turn, Stoicism with Christianity and found the essence of Stoicism to be: think only about yourself, sacrifice everything for your own peace. On the other hand, the morality of Christianity is summarized in two precepts: love God from all your heart; love your neighbor as yourself (234). Therefore, Christian morality is based on theology: of course, to love God, one has to have some idea who God is: “God in the eternal Order, the Creator of the Universe, omnipotent Being, all-wise, all-good. Man is his work composed of the body which should perish and the soul which will exist eternally.” To love God means “to submit oneself completely to the Order, to have no other will than the will of God” and the love of neighbor follows the love of God. All of it leads to happiness (235). The Stoics don’t have that. They submit themselves to fate which is inflexible and without feeling. For a Christian, an infinitely good Being rules over nature and the Christian submits himself to God with joy (236-237). The Stoics promise advantages for this world, Christians for this one and for the future world (238). Christianity doubtless has true rules of happiness (241). It is not necessary to consider Christianity as divine to follow its practical rules. It is also advantageous to follow its religious precepts. Its dogmas and incomprehensible mysteries are acceptable only by faith. Miracles are used as

proof of revelation. The advantage of Christianity over other religions is that it was announced several centuries before it came into being (242-243), which seems to be the reference to the Old Testament prophecies, particularly in Isaiah. And thus, ultimately, faith is the foundation of the understanding of God, the faith based on the Scripture.

Eschatology

Our life is placed between two instances, birth and death (2.3). “Without the light of Religion as to our being, the time when we did not live and the time when we don’t live any more are two impenetrable abysses” (5). Science cannot penetrate the veil of life to know anything about the human condition before birth and after death; the answers should be sought in religion. The matter is of extreme importance since one’s eternity is at stake if religion raises the prospect of eternal life, particularly if this life can be the life of bliss or damnation, then the means of reaching the former are of eternal consequence.

Although Maupertuis wanted to leave it to the minds more sublime to tell us what the soul is (2.5), he had a great deal to tell himself on the subject. The problem was particularly important to him in his investigation of the procreation process. In his view, female and male seminal fluids were mixed in the uterus, each fluid filled with small parts corresponding to particular body parts. These small parts arranged themselves to give rise to an embryo (2.89, 158-159). How was it possible that such an arrangement in most cases was orderly and the embryo had its body parts in the right places? It was because each element was endowed with some principle of intelligence similar to what we call desire, aversion, and memory (2.147, 155-158, 183); also, each element had some level of sentiment and perception (155*) and thus it had some kind of instinct (131-132, 163). Therefore, for instance, the particle of the heart derived from the mother’s heart remembers that it should be positioned next to the left lung and, thus, when the body of the embryo is being put together, it seeks the tiny part derived from the left lung and attaches itself to it. So, it has to be able to distinguish the seed of the left lung from any other seeds and it has to remember what its exact position in respect to the left lung should be. In this, presumably, the feelings of desire and aversion become active. In this, Maupertuis pushed to the extreme the accepted views: it was not uncommon to grant a measure of intelligence to animals, then why couldn’t some principle of intelligence be attributed to the smallest parts of matter? (149). However, how can this panpsychism be reconciled with the existence of the soul?

The accepted view was that thought was the essential property of the soul and extension was the essential property of bodies and that the properties of bodies could not be granted to souls and vice versa (2.150, 206). Maupertuis found it conceivable that thought and extension, as two properties, could both belong to the same entity or substance whose essence was unknown (151). This is a fairly elegant solution, but it appears to dissolve the soul into an unknown substrate that can also have palpable material properties. Maupertuis could try to defend his

position also from the eschatological perspective, since Christianity speaks about the resurrection of the body into an immortal state in which it is united with the immortal soul. However, he took a different route that was at variance with his version of panpsychism.

The nature of the soul is to know itself and to think (2.162, cf. 2.190, 217), that is, the soul not only reflects but also self-reflects; it not only possesses some knowledge about the world, but also about itself. Do animals have self-knowledge? Apparently, since they do have a soul. However, all souls are not of the same kind, in particular, the human soul is different from other souls. Only the human being can “know God in whom he finds the moral ideas concerning his duties. Particular perceptions of elements have as their objects only the figure and the motion of the parts of matter, and the intelligence resulting from it is of the same kind with some degree of perfection only. It is exercised on physical properties and perhaps is extended to Arithmetic and Geometric speculations, but it could not elevate itself to the knowledge of entirely different order the source of which is not at all in elementary perceptions” (160*). That is, the moral dimension of the human soul makes it human: the knowledge of good and evil, and this knowledge is presumably very intricately connected to the knowledge of God. The latter thus is imprinted on the human soul, the knowledge of God is inborn, and this knowledge distinguishes the human soul from other, lesser souls. And a *non sequitur* follows: to see that, “it is enough for us to know that we have an indivisible immortal soul entirely distinct from the body, the soul capable of deserving the eternal punishment or reward” (161). Why should the indivisibility and immortality of the human soul be the consequence of its imprinted knowledge of God and moral duties? An argument was often made that it would be contrary to the goodness of God if there was no eternal afterlife, since full happiness is unobtainable in this life. However, Maupertuis did not make it. He simply assumed the existence of an indivisible soul, which is a claim that does not quite square with his idea of an unknown substrate having a property of extension and, at the same time, of thought.

This expression of the belief in the immortality of the soul was not an isolated statement. Maupertuis did believe in the life after death. Considering suicide from the Christian perspective, he thought it to be the most criminal action. We are destined to a happier life the hope of which should make this life more endurable (1.189). This belief was not just a theoretical statement, but it had a personal aspect. Before death, Maupertuis frequently spoke to two Capuchin monks. He counted on the mercy of God with which he could not reconcile the problem of eternal punishment. After confession, he received the last sacraments/rites.¹²

It appears that on the personal level Maupertuis made a full circle. As a human, he was able to self-reflect and thereby he knew he had a soul. Also, with his panpsychism, he saw each elementary part of nature to be endowed with some mental attributes, at least, memory or some kind of instinct. No *tabula rasa*, then,

¹² L[aurant] Angliviel de La Beaumelle, *Vie de Maupertuis*, Paris: Ledoyen Libraire 1856, p. 211; Leon Velluz, *Maupertuis*, Paris: Hachette 1969, p. 158.

even on the bottommost level of reality. All the less on the human level: humanness of the human soul is characterized by the knowledge of God and morality. However, on the rational level this assumption may not be satisfactory and thus some rational proof of the existence of God is needed. Maupertuis obliged by proposing his own proof, whether his proof was satisfactory or not. His intention was to base this proof – or rather his principle of least action – on the attributes of God, although, in practice, this way of his derivation is hardly detectable. However, at the end, when it came to the future of his own soul, he relied on the advice and solace coming from churchmen rather than on eschatological consequences which could be derived from his proof of the existence of God.

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Słowa kluczowe: Maupertuis, fizyko-teologia, eschatologia, zasada najmniejszego działania
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