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Kant's Theory of Biology and the Argument from Design

In this paper¹, I treat the question of whether and in what regard Kant's theory of biology contains a version of the argument from design, which is the question of whether Kant considers the purposive order of organized nature as a physico-theological proof for the existence of God, and in turn, the existence of God as the supersensible ground for the teleological order of organized nature. As an introduction to the topic, I name traditional examples of the argument from design (section 1). I then outline Kant's changing attitude towards the argument in his *Theory of Heavens*, his *Argument* essay and the three *Critiques*, highlighting Kant's return to the argument from design in the *CPJ* after examining and rejecting it in his earlier writings. I elaborate in detail Kant's different uses of the argument in the "Critique of the Teleological Power of Judgment" (section 2). In section 3, I develop a consistent reading of Kant's references to the physicotheological proof in the "Critique of the Teleological Power of Judgment": in the "Analytic" he develops a teleological account of nature that makes no use of the argument from design but is consistent with it. In the "Dialectic" and the "Methodology", however, Kant discusses more ambitious systematic questions: the unity of the theoretical laws of nature and the unity of the natural and the supernatural moral laws. These are questions that require an explicit reference to the argument from design (section 3).

I The Argument from Design

The argument from design or physicotheological proof of the existence of God has a long tradition in the history of ideas. The scriptures of many major theistic religions contain passages that suggest evidence of divine design in the world. The *Old Testament* (Psalms 19.2) states that "[t]he heavens declare the glory of God; and the firmament shows the work of his hands". Similarly, Romans 1.19–20 of the *New Testament* claims:

¹ Kant quotations for which the reference is not given immediately are covered by the following reference.

Since what may be known about God is plain to them, because God has made it plain to them. For since the creation of the world God's invisible qualities—his eternal power and divine nature—have been clearly seen, being understood from what has been made, so that people are without excuse (New International Version).

Further, *Koran* 31.20 remarks: “Do you not see that Allah has made what is in the heavens and what is in the earth subservient to you, and made complete to you His favors outwardly and inwardly”? Ancient Greek philosophers also formulated versions of the argument from design. Plato in his *Timaeus* (28a–31b) argues that the demiurge could not create matter *ex nihilo*, but is able to organize pre-existing matter into the rational order that we see around us in the world. Thomas Aquinas in his writing *Summa Theologiae* (1266–72, I 2.3) presents the argument from design as the fifth of five proofs of the existence of God. If natural beings lack intention but nevertheless behave with apparent order and visible goal-directedness, then their behavior cannot be the result of chance, he argues. An intentional being external to them, namely an intelligent divine architect, must be the cause of their goal-directed behavior. In David Hume's famous *Dialogues Concerning Natural Religion* (1779), the character Cleanthes is a proponent of the argument from design:

Look round the World: Contemplate the Whole and every Part of it: You will find it to be nothing but one great Machine, subdivided into an infinite Number of lesser Machines, which again admit of Subdivisions, to a degree beyond what human Senses and Faculties can trace and explain. All these various Machines, and even their most minute Parts, are adjusted to each other with an Accuracy, which ravishes into Admiration all Men [...]. The curious adapting of Means to Ends, throughout all Nature, resembles exactly, tho it much exceeds, the Productions [...] of human Design, Thought, Wisdom, and Intelligence. Since therefore the Effects resemble each other, we are lead to infer, by all the Rules of Analogy, that the Causes also resemble; and that the Author of Nature is somewhat similar to the Mind of Man; tho' possessed of much larger Faculties, proportion'd to the Grandeur of the Work, which he has executed. By this Argument *a posteriori* [...] do we prove at once the Existence of a Deity, and his Similarity to human Mind and Intelligence (Hume 1779 in 1976, 161–2).

Drawing an analogy between man-made machines and natural products, Cleanthes claims that the material universe resembles the intelligent productions of human beings (machines) in that it exhibits marks of design (adjustment, accuracy, purposiveness). Since the design in any human artifact is the effect of having been made by an intelligent artisan, and since like effects have like causes, the design in the material universe is the effect of its having been made by an intelligent creator.

William Paley, whom I will use as a final example, formulates what became known as the “watchmaker analogy” at the beginning of his writing *Natural Theology* (1802):

In crossing a heath, suppose I pitched my foot against a *stone*, and were asked how the stone came to be there: I might possibly answer, that [...] it had lain there for ever [...]. But suppose I had found a *watch* upon the ground, and it should be inquired how the watch happened to be in that place; I should hardly think of the answer which I had before given [...]. [...] [T]here must have existed, at some time, and at some place or other, an artificer or artificers who formed [...] [the watch] for the purpose which we find it actually to answer: who comprehended its construction, and designed its use. [...] [E]very indication of contrivance, every manifestation of design, which existed in the watch, exists in the works of nature; with the difference, on the side of nature, of being greater and more, and that in a degree which exceeds all computation (Paley 1802 in ⁶1819, 1, 3, 16).

Paley's watchmaker analogy, like the discussion in Hume, emphasizes the analogy between the production of a watch by an artisan and the generation of nature by a creator, although the latter cause, due to the incomparable size, complexity, and intricacy of its effected object, must be conceived of as “greater” than the maker of a watch.

As the examples demonstrate, the starting point of the argument is a *posteriori*. It begins with the identification of specific empirical properties as design-indicative features of nature—for instance the beauty, fine-tuning, purposiveness, and order of things and rejects that chance could be the cause of these features of nature. It identifies them as evidence that nature was designed. The second step of the argument states that marks of design require the presupposition of a designer with intellectual capacities such as intelligence and intentionality, able to cause the design-indicative features of nature. A third step is the identification of the designer as God. The crucial premise of the argument from design is the analogy between a work of art (e.g., a watch) and its designer (e.g., a watchmaker), and organic natural products—which are considered to be complex works of art or a complicated machine—and their maker. Human designers produce houses, watches, and other artificial things. The natural world is *like* a house or a watch or a collection of houses, watches, and other artificial things; therefore it is produced by something like a human designer.²

² For analyses of the structure of the argument from design, see Himma (2009), Mackie (1982), Ratzsch (2001), Sober (2004, 117–47), and Swinburne (1979/²2004, 153–91). For accounts specifically of Kant's views on physicotheology, see Wood (1970, 171–7; 1978, 130–45) and McFarland (1970, 1–2).

II Does Kant Give an Argument from Design in His Theory of Biology?

In his dissertation (1755), Kant describes a cosmology that contains a physico-theological argument for God's existence (see *Theory of Heavens* II 331.21–347.32). Several years later, in the *Argument* essay (1763), Kant discusses the ontological and the physicotheological proofs for God's existence. Whereas he argues on the basis of the "logical exactitude and completeness" of the ontological argument that it is the only possible proof for God's existence, he nevertheless praises the "accessibility to sound common sense, vividness of impression, beauty and persuasiveness in relation to man's moral motives" (*Argument* II 161.8–11)³ of the physicotheological or argument from design, and leaves his readers in no doubt about his esteem for the physicotheological proof.

At the time of the first *Critique*, the physicotheological proof of the existence of God was one of the three traditional arguments for the existence of God beside the ontological and the cosmological argument. New to Kant's position in 1781 is his strict rejection of the ontological argument and, on the basis of this rejection, the rejection of the physicotheological and cosmological argument, which for Kant now are grounded in the ontological argument. Further modifications are that the only possible proof for God is no longer the ontological but the moral argument (*CPR* B 838–9, *CPR* B 856–8), and that the realism of Kant's pre-critical discussion of the proofs for God's existence has changed into the criticism of a regulative approach proving God's existence as an idea only. But despite the changes, even in the first *Critique* Kant expresses estimation for the physicotheological argument with a clear reference to his position in the *Argument* essay (*CPR* A 625/B 653). He claims that the physicotheological argument

deserves to be named with respect. It is the oldest, clearest and the most appropriate to common human reason. It enlivens the study of nature [...] [and] brings in ends and aims where they would not have been discovered by our observation itself, and extends our information about nature through [...] a particular unity whose principle is outside nature (*CPR* A 623/B 651).

In the second *Critique* (1788), the moral argument is presented as one of the three postulates, whereas the physicotheological and other traditional arguments for

3 In this passage Kant names the physicotheological argument "cosmological" (esp. *Argument* II 160.7), but based on the context of the passage it is clear that he refers to the physico-theological proof. For scholarly comments in line with my view, see Schmucker (1983, 45) or Theis (1994, 140).

the existence of God are not noted.⁴ All the more astonishing is the reappearance of the physicotheological or design argument in the third *Critique* (1790), which now precedes the moral argument for the existence of God in the discussion of the unity of the critical system (*CPJ* V 436.3–442.10). Even though it is in principle entailed in the moral argument, the design argument is presented in its own right and is attributed a limited function for the unity of the theoretical laws of nature. Whereas the physicotheological and the moral proofs of God's existence had nothing to do with one another in the first *Critique*, in the third *Critique* the physicotheological proof is described as a preliminary stage to moral teleology.⁵

The specific object of this paper is a detailed analysis of Kant's presentation of the argument from design in the "Critique of the Teleological Power of Judgment", i.e., in his theory of biology.⁶ At first glance Kant seems to express different, if not even contradictory views on divine design in the "Analytic", the "Dialectic", and in the "Methodology": in §§61–8 he constructs a theory of biology based on mechanical and teleological laws, which does not need but also not contradict an argument from design. The justification of a possible unification of mechanical and teleological laws in §§69–78, however, explicitly refers to an argument from design. And the discussion of the unification of natural (mechanical and teleological) laws and moral laws, which Kant treats in §§79–91, leads to a criticism of the reach of the argument from design, since it can guarantee only the unity of the natural, but not the unity of the natural and moral laws. I begin with a closer look at Kant's statements.

II.1 Biology without Theology: the "Analytic" (§§61–8)

In the "Analytic" Kant offers an account of biology that makes no use of the argument from design but that would not be inconsistent with it. This can be demonstrated at three points:

(1) In §§64 and 65 of the "Analytic", Kant presents an analogy and also a disanalogy between the production of art and the generation of natural things. The

⁴ Beck (1960, 275–9) has put into question whether the argument for the existence of God in the second postulate is a moral (practical) or a teleological (theoretical) argument analogous to the physicotheological argument. He argues for its theoretical status. Wood (1970, 171–6; 1978, 133–5) agrees with Beck's claim that the argument is teleological. It is an argument from design. But he thinks that Kant argues on practical rather than theoretical grounds.

⁵ Here my view is in line with Sala (1990, 431, 435).

⁶ For further discussions of the design argument in Kant's theory of biology, see my paper "The Antinomy of Teleological Judgment" (unpublished manuscript).

acceptance of the analogy would be required to give a direct and strong version of an argument from design. But Kant is more concerned to name differences between artificial things and natural things, and claims that one “says far too little about nature and its capacity in organized products if one calls this an *analogue of art*” (CPJ V 374.27–9). Even though the “capacity for separation and formation” in an organized being is not entirely distinct from an artisan’s productions it remains “remote from all art” (CPJ V 371.24–6).

The comparison between the production of a watch and the generation of a tree demonstrates these disanalogies: whereas an organism such as a tree “generates itself as far as the *species* is concerned” and as an “*individual*” (CPJ V 371.9, 13), a wheel of a watch “is not the efficient cause for the production of the other”. And “even less does one watch produce another” (CPJ V 374.10, 15–6). And whereas one part of an organic being reproduces itself “in such a way that the preservation of the one is reciprocally dependent on the preservation of the other” (CPJ V 371.30–2), a watch “cannot by itself replace parts”, or “make good defects in its original construction”, or “repair itself when it has fallen into disorder” (CPJ V 374.17–20).

In addition, Kant claims that the maker of a product of art creates it by the means of the causality of an idea, which lies outside of the artificial product. A work of art is a “product of a rational cause distinct from the matter” (CPJ V 373.10–1); it is possible only due to the “causality of the concepts of a rational being outside of it” (CPJ V 373.16–7, see CPJ V 374.29–30). A natural object, however, cannot be conceived of otherwise than by the causality of an idea that is causally effective in the thing. A being is to be judged as a natural end in itself in accordance with its “*internal possibility*” (CPJ V 373.26, my italics). This is possible only if the idea of the whole determines “the form and combination of all the parts” and if the parts are “combined into a whole by being reciprocally the cause and effect of their form” (CPJ V 373.17–21).

However—one could argue—the only thing that is required for the argument from design is an *analogy* between and not the identity of the generation of organic objects and the creation of artificial things. On this line, the fact that Kant stresses the differences between the production of art and the generation of natural organic objects in §§64–5 does not mean that he rejects the analogy between them. And one could add that Kant does not really reject the analogy between artificial things and natural organisms because he only claims that organisms “cannot be explained through the capacity for movement *alone* (that is, mechanism)” (CPJ V 374.25–6, my italics) and that one “says *far too little* about nature and its capacity in organized products if one calls this an *analogue of art*” (CPJ V 374.27–9, first italics are mine).

Inasmuch as a natural being can be considered as matter in motion, artificial things and organisms resemble each other and can both be described according to the laws of motion. Furthermore, both kinds of beings have formal features that are contingent with regard to the mechanical laws. And it is also true that the form of the contingent features of both types of beings show a law-likeness or necessity because these contingent features are only contingent compared to the laws of nature, but they are necessary compared to the idea of the artist or the idea of the observer of nature who judges that the natural object is organized with regard to a purpose in the thing. Thus, although Kant stresses the distinctions between works of art and natural objects, it is nevertheless a distinction between *similar* fundamental features, which does not rule out entirely the possibility of an analogy between them.

(2) In §§66–7, Kant relates teleological judgments to the idea of a supersensible, but he leaves open the question of whether this supersensible has to be identified with a supernatural divine architect. If Kant had an argument from design in mind, he would have stated that a designer, who has to be identified with God, actually designs organisms. God, he would have said, like an artist, created nature by means of his idea as a sign of his intelligence and wisdom. Hence one could think that Kant's mentioning of a "supersensible determining ground" (*CPJ* V 377.11) in §66 or of a "unity of the supersensible principle" (*CPJ* V 381.5–6) as the cause of the natural object in §67 would be the placeholder for the divine being that the argument from design requires.

However, the term "supersensible" can have many meanings much weaker than the theological supersensible divinity: it could refer to a human idea of a single organism or a human idea of nature as a whole—both as a regulative principle of reflective judgment—or it could be considered as a causality such as supernatural human noumenal freedom (see *CPJ* V 436.19–20), or as the idea of God, or as God. And it is obvious that Kant does not allude to a divine being: rather, he holds the position that the internal purposiveness in organized beings is only an "idea of the one who judges" (*CPJ* V 376.20–1). It is a principle of reflecting human judgment, for our human understanding cannot explain organisms otherwise than on the basis of the presupposition that an "idea has to ground the possibility of the product of nature" (*CPJ* V 377.3–4). And, since an idea in a Kantian sense is an absolute unity of the representation, the unity of this idea has the same grounding as the idea of nature as a whole. But this grounding is not specified as God, and therefore the "Analytic" also in §§66 and 67 can be reconstructed without theological references.

Nevertheless, the reference to an ambiguous term of a supersensible does not rule out the possibility of a supernatural divine grounding of nature. It does not make use of a strong interpretation of the concept of a supersensible

in the sense of a supernatural being, but leaves open whether there could be such a being (for other theoretical requirements).

(3) At the end of the “Analytic”, in §68 (see also §79), Kant explicitly rejects the systematic grounding of biology as a science in a theological principle, and adds an entire section on the topic of the immanent and internal systematic principles of a science as a science, and also of the science of organic nature as a self-sufficient science. In this passage, Kant again clarifies his views on the independence of natural teleology from theology: if one “brings the concept of God into natural science”, he warns us, “in order to make purposiveness in nature explicable, and subsequently uses this purposiveness in turn to prove that there is a God, then there is nothing of substance in either of the sciences” (*CPJ V* 381.25–9). Natural science should not be intermingled with “the consideration of God”, and “a *theological* derivation” of natural science (*CPJ V* 381.34). For instance, in all sections of the “Analytic”, Kant presupposes organized materials and a formative power, without raising the question where these power and materials come from. He is not interested to ask whether they are created or eternal, a question that might require theological explanations.⁷

These passages find support in the writing *Teleological Principles*, written in 1788, two years before the *CPJ* (1790). There Kant emphasizes that questions about the very first beginning of the generation of organisms including the question of the origin of organized materials and a formative power cannot be investigated and analyzed within the field of biology.⁸ It must lie outside the realm of natural philosophy and belongs to the fields of “*metaphysics*” or theology instead:

Since the concept of an organized being already includes that it is some matter in which everything is mutually related to each other as end and means, which can only be thought as a *system of final causes*, and since therefore their possibility only leaves the teleological but not the physical-mechanical mode of explanation, at least as far as *human* reason is concerned, there can be no investigation in physics about the origin of all organization itself. The answer to this question [...] obviously would lie *outside* of natural science in *metaphysics* (*Teleological Principles* VIII 179.8–18).

If we take Kant’s remark in the *Teleological Principles* into account, one could say that Kant, in his philosophy of biology, consciously does not raise questions that transcend biological investigation: for instance, the question of the ultimate origin of organized nature, and the question of whether the creative elements of na-

⁷ For discussions of those points see my paper “Kant on Formative Power” (2012).

⁸ Kant calls it “*physics*”, since biology was not yet established as a science at this time.

ture (formative power and organized materials) themselves are created. Again, this does not rule out the possibility of a theological grounding of organized nature. It simply marks the border between distinct fields of scientific investigation.

II.2 The Idea of an Intelligent Divine Architect as a Unifying Ground of Natural Laws: the “Dialectic” (§§69–78)

In contrast to the “Analytic”, in the “Dialectic” (§§69–78) Kant *states* a version of the argument from design. Two points are in need of particular attention:

(1) In the “Dialectic”, as earlier in the “First Introduction”, Kant frequently uses the concept of a “technique [*Kunstfertigkeit*] of nature” (*CPJ* V 390.33–7, 391.16, 393.3, 395.23–4, 404.18, 410.15, 411.18). The repeated use of this phrase suggests that Kant consciously affirms the analogy between the production of art and the generation of nature—and thus the premise of the argument from design—without emphasizing its restrictions as he does in the “Analytic”. He seems to be convinced that nature can be analyzed in terms of art-like features and he seems to suggest that natural production equals craftsmanship.

In his first version of the “Introduction” to the third *Critique*, Kant says that a certain concept arises from the power of judgment, namely that of a “technique of nature” or “nature as art” (*First Introduction* XX 204.13–4). It designates the generation of the systematic form and order of nature with regard to its particular empirical laws. In view of its “products as aggregates”, Kant claims, nature proceeds “mechanically, as mere nature”, but in view of “its products as systems” nature “proceeds technically, i.e., as at the same time an art” (*First Introduction* XX 217.29–32). According to Kant, a human observer cannot conceive of this systematic generation of natural objects otherwise than in comparison with intentional actions that are directed to the idea of an end or a purpose: the “technique of nature” is a “causality of nature with regard to the form of its products as ends”. It is opposed to the “mechanics of nature”, a causality “through the combination of the manifold without a concept lying at the ground of its manner of unification” (*First Introduction* XX 219.18–23). Also in the “Analytic” we can find a passage in which Kant claims that we represent the possibility of a natural object analogous to a causality that we “encounter in ourselves”, and hence “we conceive of nature as technical through its own capacity (*CPJ* V 360.32–3). These statements from the “First Introduction” and the “Analytic” clearly show that Kant poses an analogy or similarity between natural and artificial practices and that he uses craftsmanship as a pattern for the generation of organic nature.

In the “Dialectic” Kant uses the phrase “technique of nature” repeatedly—twice in the headings of §§74 and 78 (*CPJ* V 395.23–4, *CPJ* V 410.15) and in several other passages.⁹ In *CPJ* V 393.5–6, the term “technique” refers to the “correspondence of generated products with our concepts of ends”. Likewise, in *CPJ* V 404.18–9 the “technique of nature” describes “a connection to ends in it”. In the passage *CPJ* V 411.18, Kant explains “technique of nature” objectively as a “productive capacity” in nature, in *CPJ* V 413.17 and *CPJ* V 414.9 subjectively as an intentional mode of explanation that is superordinate to the mechanical mode of explanation of the possibility of a natural product. Kant nowhere articulates doubts about the analogy as he does in the “Analytic”.

(2) At the end of the “Analytic” Kant states that teleological explanations should not be confused with theological ones (*CPJ* V 381.31–382.1). In the “Dialectic”, however, he claims that “teleology cannot find a complete answer for its inquiries except in a theology” (*CPJ* V 399.3–5), and he explicitly gives a version of the argument from design. He shows that both kinds of principles of nature, the mechanical as well as the teleological laws, can be unified in one and the same common ground: in the idea of “God” (*CPJ* V 399.37), the supernatural designer of nature. In the “Dialectic” Kant explicitly identifies the supersensible with theological content.

However, Kant does not claim God’s objective existence, but only stresses the importance of the idea of God as a subjective principle of reflective judgment, which enables us to understand and to explain the systematic order of the two kinds of laws of nature. So he says at the end of §74 that an “original ground of nature” can be “thought without contradiction” but “is not good for any dogmatic determinations”. An objective reality of the divine being cannot be guaranteed (*CPJ* V 397.18–9). And in §75, Kant points out that the “*intentionally acting* supreme cause” (*CPJ* V 399.11–2) can only be established subjectively, not objectively. We cannot claim that God exists. Instead

[a]ll that is allowed to us humans is the restricted formula: We cannot conceive of the purposiveness which must be made the basis even of our cognition of the internal possibility of many things in nature and make it comprehensible except by representing them and the world in general as a product of an intelligent cause (a God) (*CPJ* V 399.37–400.6, see *CPJ* V 400.28–401.2).

In §75, Kant points out that the self-generation of nature does not explain why certain features of nature are directed towards the idea of an end, i. e., towards the purpose of a natural product. The explanation of this specific constitution of

⁹ I leave out a difficult passage here that would require separate attention: *CPJ* V 390.21–391.23.

organized beings requires an argument from design: God has created them in such a way that these features are directed toward their end. This God is an intelligent being outside of the world (*CPJ* V 399.2–3). It is a cause that “act[s] in accordance with intentions” and is productive analogous to “the causality of an understanding” (*CPJ* V 397.31–398.3).

Although Kant himself does not explicitly connect his remarks about the intelligent God in §§74–5 of the “Dialectic” with his notion of an intuitive understanding in §§76–7, the reconstruction of an argument from design in the “Dialectic” can include the §§76–7, based on Kant’s lectures on rational theology in the 1780s, where he identifies the divine kind of consciousness with an intuitive understanding.¹⁰

II.3 Limits of the Notion of an Intelligent Divine Architect: the “Methodology of the Teleological Power of Judgment” (§§79–91)

Kant gives the argument from design¹¹ in the “Dialectic” without any major criticisms. This will change in the “Methodology” (§§79–91). In this part of the text, Kant gives a version of the argument from design; however, he criticizes it and describes its limitations and shortcomings. In §§85–7, Kant discusses the physicotheological¹² (§85) and the moral argument (§86) for the existence of God in the context of the unification of the realms of nature and freedom. The argument from design introduces a reduced concept of God, but does not lead to an identification of the designer with a God having the traditional divine attributes and moral perfection. This is because only the idea of an intentional and intelligent cause outside of the world is required for us to understand organisms. In order to conceive of natural products as purposes, we do need an intentional and intelligent but not an omniscient, omnibenevolent, and morally virtuous being.

10 I keep this point very brief here. For a detailed analysis see my paper “The Antinomy of Teleological Judgment” (unpublished manuscript).

11 In §75 Kant not only gives a physicotheological but also a cosmological argument for a supernatural being (as a regulative principle for the reflecting power of judgment), since his characterization of organized beings is also concerned with the ultimate necessity of the contingent empirical features of nature. The relationship between the contingent features of the world and their grounding in a necessary final being is discussed in the cosmological proof for the existence of God rather than in the physicotheological proof (see *CPJ* V 398.32–399.5).

12 The physicotheological argument is the traditional name for the teleological or design argument as a proof for the existence of God. Although Kant presents a version of the argument already in §§74 and 75 he does not use this term before §85.

But it is those classical divine attributes that would be required for a conception of a divine standpoint that unifies the realms of nature and freedom.

In §85, Kant explicitly takes the physicotheological argument for the existence of God into consideration. Physicotheology “is the attempt of reason to infer from the *ends* of nature (which can be cognized only empirically) to the supreme cause of nature and its properties” (CPJ V 436.5–7). A physicotheologian aims to draw the conclusion that a being outside the realm of nature exists (CPJ V 437.28–9). In this section, Kant emphasizes the empirical starting point of the argument, and he immediately rejects the possibility of drawing non-empirical conclusions (for instance the non-empirical properties of the supersensible architect) from empirical data. Physicotheology, “no matter how far it might be pushed, can reveal to us nothing about a *final end* of creation; for it does not even reach the question about such an end” (CPJ V 437.18–20). Since

the data and hence the principles for *determining* that concept of an intelligent world-cause (as the highest artist) are merely empirical, they do not allow us to infer any properties beyond what experience reveals to us in its effects (CPJ V 438.5–9).

Empirical data cannot lead us to the presupposition of non-empirical properties such as the omniscience and intelligence, omnipotence, and omnibenevolence of a supernatural designer. According to Kant, physicotheology can never be more than a physical teleology because the relation to ends in it must be considered only as conditioned within nature. Physicotheology

reduces the concept of a *deity* to that of an intelligent being that can be conceived by us, which may have one or more, or even many of the important properties that are requisite for the establishment of a nature corresponding to the greatest possible ends, but not all of them (CPJ V 438.16–22).

Beside his criticism of the empirical starting point of the argument, Kant now describes the physicotheological God as an intelligent and intentional agent that includes the theoretical use of reason only (CPJ V 440.26–442.5). God as an intelligence is a legislator for nature (CPJ V 444.13). An ethicotheological God, however, as Kant says in §86, would be “*omniscient*”, “*omnipotent*”, and “*omnibenevolent*”, a being that not only has theoretical reason, but practical wisdom also such as “*justice*” and “*goodness*” (CPJ V 444.15–28). An ethicotheological divine being could not only be a legislator for nature, but also a “sovereign in a moral realm of ends” (CPJ V 444.14–5).

III Kant's Account of the Argument from Design in the *CPJ*

III.1 Is Kant's Account of the Argument from Design in the *CPJ* Consistent?

Now I will clarify the systematic line in Kant's different perspectives on the argument from design. I will defend the view that Kant's remarks on this matter are consistent but entail significant shifts motivated by the different contextual questions that Kant treats in the "Analytic", the "Dialectic", and the "Methodology of the Teleological Power of Judgment".

(1) In the "Analytic", Kant tries to determine the significant features of an organism and establishes the two kinds of laws of nature: mechanical and teleological laws. Within this investigation, Kant adopts premises of the argument from design; however, he makes no use of the notion of a divine architect. He gives an account of biology as a science that is independent from external theological groundings: although organized beings that are subject to biological scientific investigation are among those beings that are subject to theological scientific investigation, the science of theology raises different questions about those objects than the science of biology. For this reason he has to keep two things in balance.

First, he has to demonstrate the internal principles of biology as a science and to secure that an organism and organic nature as a whole can be explained by these internal principles alone. The internal principles of biology as a science consist in a combined use of mechanical and final causal explanations of nature. Second, if biology as a science could be embedded into a broader metaphysical or theological context, Kant would have to secure that his account of biology does not contradict the premises of such a metaphysical or theological framework. I think this is what Kant is trying to do.

In the "Analytic", Kant develops an account of mechanical and final causation that suffices to explain the self-generation of the species, the individual, and the parts of an individual organism. But Kant does not go back to the first pair of the species, a question that might require theological explanations (as in the notion of generic preformism in §81). In addition, Kant approves the analogy between art and nature, although it remains subject to restrictions. The analogy does not include the hypothesis of a divine architect who produces organic beings. Kant uses the notion of a supersensible as a unifying teleological ground of the forms of nature; however, at this point he does not identify it with theological content. Instead, he interprets it as an idea of the judging human mind. And

at the end of the “Analytic”, Kant does not reject God as a possible object *per se*, but as an object that belongs to the scientific field of organized nature.

(2) In the “Dialectic”, Kant raises the question of whether the application of two kinds of natural laws might cause an antinomy in our consciousness when we judge organized beings. Kant now searches for a unifying ground between the mechanical and teleological laws of nature to avoid a conflict between those laws in our consciousness. He finds this unifying ground in an intuitive understanding, i.e., the intentional and intelligent consciousness of a physicotheological God, based on an argument from design. In intuiting both kinds of laws, the divine architect creates and implants them into nature and determines the finalistic hierarchy between them: the subordination of mechanism under teleology. And in doing so it fulfills the idea of such a unifying ground of both laws outside of nature. Like an artist who subdues matter to his ideas of a purpose (the systematic form of an artificial object), the divine architect subdues natural matter to his idea of a purpose (the systematic form and order of the natural world).¹³

(3) In the “Methodology”, Kant leaves the immediate context of biological investigations. He now discusses the systematic position of his theory of biology within the critical philosophy, and raises the question of whether there is a unifying ground between the realms of natural and moral laws. The answer to this question can no longer be adequately given by the idea of a physicotheological notion of God based on an argument from design. It requires a higher-ordered unifying ground than the idea of an intelligent, intentional supernatural being, namely an ethicotheological God based on an ethicotheological argument for the existence of God. In §85, Kant offers the argument from design as the penultimate step in the critical system that can bring the world’s natural features in a finalistic order, but not its natural and moral ones. The intentional and intelligent designer of the physicotheological argument is an intelligent but not necessarily an omniscient, omnipotent, and it is not a morally good being. These properties are required for the unification of the realms of nature and morality.

Furthermore, the intelligence of an intelligent divine architect who brings the two types of natural laws into order involves only a “theoretical use of reason” (*CPJ* V 438.29–30, 439.20), for the insight into natural laws is based only on theoretical knowledge. In contrast, the moral perfection and practical wisdom of a divine being that unifies the realms of nature and morality also requires the “practical use” of reason (*CPJ* V 438.35). Therefore, a physicotheological God

13 For a detailed discussion of the notion of an intuitive understanding see my paper “The Antinomy of Teleological Judgment” (unpublished manuscript).

can only govern a kingdom of theoretical (natural), but not a kingdom of theoretical and practical (natural and moral) ends.

III.2 Further Considerations

In this final section of my paper, I will outline a difficulty for this reconstruction of Kant's account. It arises regarding the relation and necessity of the two notions of God involved in Kant's account. (a) Their relationship could be interpreted such that they are two irreducibly different ideas of supernatural divine beings at the end of the critical system—the idea of a physicotheological God that unifies the theoretical natural laws, and the idea of an ethicotheological God that unifies the theoretical natural and the practical moral laws. But is then not a third unifying ground required that unifies the physicotheological and the ethicotheological concepts of Gods to reach the highest *unity* of the critical system? Is Kant at fault for not having spelled out such a third notion of God? This is unlikely.

(b) One could instead take Kant's account to be that there are two notions of God at the end of the critical system, but that the notion of an ethicotheological God covers the functions of the physicotheological concept of God. The physicotheological concept of God would then be reducible to an ethicotheological one. Some of Kant's remarks seem to suggest such a reductive reading. For instance, Kant says that the moral proof of the existence of God does not “properly merely *supplement* the physico-teleological proof, thereby making it into a complete proof” but rather it “is a special proof that *makes good* the lack of conviction” in the physicotheological argument (*CPJ* V 478.13–6). Some remarks even indicate that the teleological proof is dispensable: the moral proof would “always remain in force even if we found in the world no material for physical teleology at all or only ambiguous material for it” (*CPJ* V 478.30–2). But why then do we need the concept of a physicotheological concept at all? Why did Kant give so much time to the discussion of the physicotheological argument and its function if it is entailed by the concept of the ethicotheological God? Why did Kant reintroduce the argument in the third *Critique* after examining and rejecting it in the first and abandoning it in the second?

As an answer, one could suggest a model of division of labor between both ideas of God that is similar to the division of labor in the government of a state. Although a king knows the function of those subordinate persons who are responsible for the order in the different realms within his kingdom, he nevertheless does not himself develop the detailed specific knowledge and capacities that are required to govern these different subordinate realms of the kingdom.

Analogously, one could say that the ethicotheological God as the supreme sovereign of his kingdom of ends knows the functions and potentially has the capacities of the physicotheological God, however he himself does not develop the specific facilities and particular knowledge that is required to unify the realm of nature. For instance, he himself cannot directly administer the endless manifold of empirical features of the natural world that the physicotheological God has to unify under teleological laws. This reading seems to be supported in passage *CPJ V 447.16–448.13*, where Kant says that the (subordinate) physicotheological God orders and organizes the outer natural world in accordance with the legislation of the inner moral world, which is given by the (superordinate) ethicotheological God. This process is analogous to legislation in a state or kingdom where the executive power transfers the inner order of laws, which are normatively legislated by the leader of the state or king, into the outer natural world (for a more extended discussion of this point see Cunico 2008, 317).

Reading (b) still argues for two notions of God that stand in the relation of a hierarchy to one another. (c) But one could also read Kant as holding that there is only one God at the end of the critical system whose different aspects can be proven in different ways from the perspective of human judgment. This one God (due to his theoretical reason) could be considered the creator of the more limited unity of the natural laws. It could then be proved based on the physicotheological proof from the human point of view. Or this one God (due to his theoretical and practical reason) could be considered as the creator of the unity of the natural and moral laws. It could then be proved based on the ethicotheological proof from the human point of view. In this reading Kant's remarks do not introduce two ideas of God, but only two aspects of one and the same God and two proofs of these aspects from the human point of view. It then suffices to give a reasonable explanation for the reintroduction of the physicotheological argument and its value for our human judgment. This could be the persuasive power of the physicotheological argument for common sense. As already mentioned, Kant, from his early writings on, emphasizes the simplicity and easy empirical accessibility of the argument, which make it especially attractive for non-philosophical discourse and every day life. Thus Wood has pointed to physicotheology and its "unique value for morality and moral religion". He claims convincingly, that "the moral man believes in the governance of the world by a wise plan" and, for this reason,

it is only natural that he should be on the lookout for signs of his wisdom, and that he should find in the purposive arrangements he observes in the natural world an apparent confirmation of his orally grounded convictions. The physicotheological proof, therefore,

is in common thinking very closely allied to moral faith (Wood 1978, 133, see also Wood 1970, 171).

Kant would then argue for one notion of God at the end of the critical system, but for two different modes of access to two aspects of this notion from a human point of view. This is the reading I favor.¹⁴

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