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Artículo de investigación

THE OBJECTIVE VALUE OF THE NATURAL WORLD IN THE RATIONALIST COSMOLOGIES OF DESCARTES, SPINOZA AND LEIBNIZ

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ABSTRACT

The paper presents and analyses three possible ways of thinking about the value of nature objectively, corresponding to three interpretations of the principal figures of early modern rationalism: Descartes, Spinoza, and Leibniz. While all three propose a notion of nature's value that is not subjectively mediated, their metaphysical and cosmological theories differ radically, resulting in very different conceptions of objective value. The advantages and disadvantages of these interpretations are assessed, focusing on their consistency and suitability as candidates for a robust conception of nature's objective value. It is shown that the Cartesian model, which is based on voluntarist theology, conceives a notion of value that is independent of human valuers. However, it fails to provide a means for humans to judge objective value for themselves. Spinoza rejects the idea that traditional properties such as goodness or beauty have any real basis in nature. Instead, he seeks an objective value intrinsic to nature itself, namely, the power to exist. Thus, Spinoza offers a non-anthropocentric solution that is accessible, yet restricted, for humans to evaluate nature. Finally, Leibniz's theory permits human access to nature's values as traditionally understood. Nonetheless, this advantage comes with the potential drawback of an arguably anthropocentric conception of value.

Keywords: Descartes; Spinoza; Leibniz; Value; Nature; Environment.

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INTRODUCTION

For several decades, there has been a growing consensus in environmental philosophy regarding the limitations of traditional ethics and aesthetics in addressing the value of nature in a way that is not instrumental to humans (Callicott 1984, Rolston 1988). The main challenge is to conceive a notion of intrinsic or objective value for the natural world. This paper aims to make a modest contribution to this topic by presenting, comparing, and analysing three different conceptions of nature's objective value based on the philosophy of the three main figures of early modern rationalism. The purpose is not to solve any specific issue in contemporary discussions about the topic, but to supply a record of three possible ways to conceive nature's value, their strengths and limitations.

In the following pages I show how the distinctive metaphysical, theological, and cosmological theories offered by Descartes, Spinoza, and Leibniz result in very different interpretations of the objective value of nature. By examining the ideas of the three great thinkers of early modern rationalism, I seek to offer three different systematic views that tackle three related questions: 1) What are the origins of value, the natural world, and their relation? 2) How is the concept of objective value in nature understood in relation to the answers provided to the preceding question? And 3) how do we humans relate to nature's value? Upon addressing these questions, I will analyse the advantages and disadvantages of these theories, focusing on their consistency and suitability to explain a notion of nature's objective value.

Firstly, I will reconstruct a model of Cartesian voluntarism that can offer answers to our questions. This model is based on the idea that all objective values in nature are the product of an arbitrary divine decision. This decision lacks any criteria and is beyond human understanding; therefore, the resulting value of the world is not necessarily within the reach of human judgement. Secondly, I explain that for Spinoza the traditional values that we attribute to nature are only in our imagination and have nothing to do with nature itself. Yet, I argue that if Spinoza's notions of "Nature" and natural individuals were to have any valuable property, it would be a notion of perfection that suggests that things are valuable just by existing as they are and not because they comply with any human criterion. Thirdly "I show that Leibniz's position is based on the idea that the divine understanding includes objective and eternal rules that work as criteria for values, and thus, nature had value prior (with logical priority) to its existence, when it was just a possibility. I conclude that, although natural value can be understood

as more than a mere projection of human subjectivity in the three models, the Cartesian model provides a more limited and less versatile notion of objective value than the other two. Among the remaining models, only Leibniz's framework allows for complete cognitive access to nature's values as we traditionally understand them. However, this comes at the cost of an arguably anthropocentric conception of value, whereas Spinoza's view effectively avoids this issue, yet it does so by being rather opaque and not very informative.

Before we start, a brief definition: by objective or intrinsic value I simply mean that the value is in the object and not the subject. In the context of the philosophy of nature, this tends to entail the idea that nature possesses value independently of human valuers. I based this view mainly on John O'Neill's third definition of intrinsic value: "Intrinsic value is used as a synonym for 'objective value' i.e., value that an object possesses independently of the valuations of valuers" (1992, 120). Here I will also sometimes use the notion of "autonomous value" in order to emphasise a value possessed by an object with independence of anything beyond or external to the object itself, not just human valuer, but also from any other external source.

1. DESCARTES

Descartes never postulated an explicit theory about value in general nor he gave any systematic account about specific notions of value, such as ethical[2] or aesthetic value.[3] Nevertheless, there is a theory about the value of the natural world that is more or less implicit in Descartes' voluntarism. Here I will try to extract this theory and examine how it reflects on the aforementioned questions.[4]

The notion of voluntarism that we consider here refers to a theological position that upholds the complete freedom of the divine will in the creation of the universe. The clearest example of Descartes' voluntarism is perhaps his doctrine of eternal truths. This doctrine states that God freely decided which facts are going to be necessary truths. Therefore, facts such as the ones from mathematics, geometry, and logic are necessarily true only because God decided so. Descartes

[2] Of course, there have been some attempts to extract an ethical system from Descartes' comments (for example, Svensson 2011) or indirect references to ethics contained in his philosophy of knowledge (Araujo 2012) or medicine (Romero 2017).

[3] Benedetto Croce writes that "Cartesianism recoiled in horror" from aesthetic notions (1964, 207). Nevertheless, Croce recognises the efforts of a few thinkers that tried to reconcile Cartesianism with aesthetics, such as J. P. de Crousaz 1724 and André 1741 (Croce 1964, 205-6). For more recent works see Reiss 1999 and Griffith 2024.

[4] Given these limitations, a fully fleshed-out model would require some interpretative effort on our part. For this reason, I will make a few assumptions and treat Leibniz's critique of Descartes' views on value as a valid contribution for constructing a "Cartesian model" of nature's value.

first manifests this idea in a letter to Marin Mersenne (1630) where he writes as follows:

> The mathematical truths which you call eternal have been laid down by God and depend on him entirely no less than the rest of his creatures. Indeed to say that these truths are independent of God is to talk of him as if he were Jupiter or Saturn and to subject him to the Styx and Fates (AT I, 145/CSMK III, 23).

God does not need to conform to the truths of mathematics; rather, the truths of mathematics exist as they do because God decided for them to be in this way.[5] Descartes explains that God created eternal truths just as he created any other thing, since "God is the author of everything" (AT IV, 152/CSMK III, 25).

This particular type of voluntarism, i.e. voluntarism applied to necessary truths, has been called "logical voluntarism" (Hartz & Lewtas 2017, 190). However, this is not the only variety of voluntarism espoused by Descartes, since this doctrine also applies to other values. Indeed, Descartes extends his commitment to voluntarism to normative properties such as order, laws, and goodness:

> If anyone attends to the immeasurable greatness of God he will find it manifestly clear that there can be nothing whatsoever which does not depend on him. This applies not just to everything that subsists, but to all order, every law, and every reason for anything's being true or good. […] just because he [God] resolved to prefer those things which are now to be done, for this very reason, in the words of Genesis, 'they are very good'; in other words, the reason for their goodness depends on the fact that he exercised his will to make them so (AT VII, 435-6/ CSM II, 293).

Just as in the case of truths, goodness depends on God's will: whatever God preferred to create is good because he decided to create it so. Thus the goodness of something is determined when God decided to create such a thing as something good. This type of voluntarism has been called "normative voluntarism" (Hartz & Lewtas 2017, 190) and is the type that the present paper is concerned with. Nevertheless, both types of voluntarism are inextricably related in Descartes, so we need to explore them both.

The main reason Descartes provides for holding both types of voluntarism is that it preserves God's freedom as absolute. By rejecting the presence of most

[5] It must be said that there is much debate among commentators about the nature and existence of eternal truths. Unfortunately, we cannot extend much on this issue here, yet for a more in-depth discussion about eternal truths in Descartes see: Kenny 1970, Frankfurt 1977, and Curley 1984.

values logically prior to God's exercise of freedom, this theory ensures that nothing influences God's will and, thus, nothing affects his freedom. Descartes explains this as follows:

> If this were not so, then, […] God would not have been completely indifferent with respect to the creation of what he did in fact create. If some reason for something's being good had existed prior to his preordination, this would have determined God to prefer those things which it was best to do (AT VII, 435/CSM II, 293).

The key term here is "indifference": in order for God to exercise absolute freedom in the act of creation there cannot be any reason to prefer the creation of something X instead of another thing Y. If X possessed any measure of any value —such as goodness, truth, or perfection— more than Y, there would be a reason to prefer X. If this were the case, God would be compelled to choose X instead of Y, and hence he would not be conducting his will with absolute freedom. Therefore, Descartes' solution is that only God creates all value, criteria for value or valuable things. Thus there is no values, criteria for value, or valuable things that are logically anterior to God's decision. In this way, God's decisions are indifferent and, therefore, he is completely free to do as he pleases and to create the world in whatever way he wants.

Before we continue, it is important to notice that Descartes is not very clear about what it is that God creates in order to bring forth value. We cannot say with certainty whether this theory states that (a) whatever God decides to create is valuable in itself because it was created by God or (b) God creates criteria for value and then things are valuable when they fit these criteria or, even, (c) God infuses value into something after he creates it. Here we will not solve this issue, as that would require to go beyond the extension of this paper. For this reason I will refrain from taking a position and take these three alternatives to be equally viable.

Although Descartes does not explain in detail the relation between his voluntarism and the value of the world, it is safe to assume that he would have not denied that the value of nature can be derived from being dependent on God's will. After all, he explicitly states that there can be "nothing whatsoever which does not depend on him [God]" and it seems implicit that he is talking about the world in some of the quoted passages. In fact, Leibniz establishes the connection between voluntarism and the value of nature. The second paragraph of Leibniz's *Discourse on Metaphysics* (1686) is entitled "Against Those Who Claim That There Is No Goodness in God's Works, or That the Rules of Goodness and Beauty Are Arbitrary" (A VI 4, 1532/AG, 36). Here, Leibniz attributes to Descartes the

idea that the criterion of goodness in nature is arbitrary, as the natural world was created following arbitrary rules.[6]

With this in mind, we can model a Cartesian theory of nature's value mirroring Descartes' doctrine of the creation of eternal truths and his views about normative voluntarism. This theory can be conceived as encompassing the following ideas:

(a) Since God's will is completely free and thus indifferent, there can be no value or criteria for value prior to —or independent of— God's decision to create the world.

(b) God's decision determines what is valuable (or what makes something valuable).

(c) Thus, the world's value is somewhat arbitrary (or, at least, not based on rules or criteria), since it is whatever God decided it to be.

Besides coupling voluntarism with the value of the world, Leibniz also contributes to flesh out this Cartesian theory —yet through opposing it— by indicating how it reflects on the relation between the world's value and us, subjective perceivers. Leibniz favours the view that God must have created the most perfect possible world following a pre-established criterion of perfection, and hence value can be recognised by us in things in themselves when we grasp this criterion, independently of the recognition of God's hand in their making. Leibniz attributes to Descartes the exact opposite position: value is grounded on a "formal reason", i.e. judging the value of a thing not in itself, but by deducing it from assumed external premises, such as the divine authorship of those things (A VI 4, 1532/AG, 36). Leibniz's attribution of this view to Descartes may seem appropriate if we consider the following paragraph from Descartes's *Principles of Philosophy* (1644):

> [W]e must bear in mind the infinite power and goodness of God, and not be afraid that our imagination may over-estimate the vastness, beauty and perfection of his works. On the contrary, we must beware of positing limits here, when we have no certain knowledge of any, on pain of appearing to have an insufficient appreciation of the magnificence of God's creative power (AT VIII, 80/CSM I, 248).

What seems to be an authorisation to over-estimate the perfection of God's works and a warning against appearing to have an insufficient appreciation of their magnificence might suggest that Descartes is asking us to accept the perfec-

[6] Although it is not said explicitly, according to Loemker, the passage referred to is specifically directed to Descartes and the link between his voluntarism and Spinoza's mechanism (L, 328).

tion of creation based on God's goodness. In fact, according to the quoted passage, God's power and goodness are the main reasons why we should accept that the world has value.

Cartesian voluntarism, as described here, could be accused of asserting the impossibility of relying only on our judgments regarding nature's value. This is the case because there is no assurance that our criterion for judging value matches God's own arbitrary decisions. Therefore, our relation to natural perfection would be best realised through faith; more specifically, faith in God's goodness.[7] Thus depicted, this Cartesian theory proposes that the value of nature is independent from human perceivers: God decided that the world would be good or it is good because God made it so, irrespectively of our capacity to judge, perceive or even understand this value. Therefore, the value of nature is not in our minds, but must be in nature itself.[8]

There are many issues with this view. Probably, the most extensively discussed one is that logical voluntarism conflicts with Descartes' own proofs of the existence of reality, even with his famous argument for the certainty of the existence of the cogito.[9] This discussion led some commentators to question if Descartes was actually committed to logical voluntarism.[10] Since here I am more concerned with normative voluntarism and I do not have enough space to address this issue, it suffices to point out that I agree with Gijsbert van den Brink and others in acknowledging that, although Descartes does not systematically explain his voluntarism, the passages that refer to this doctrine form a coherent whole and there is no solid evidence to claim that Descartes held conflicting views or changed his mind about this matter (1993, 1-2).[11]

Conversely, there is considerably less discussion regarding Descartes' normative voluntarism, which is understandable given that Descartes is not widely

[7] This conclusion is reinforced in a letter to Denis Mesland (1644), where Descartes explains that we should not try to understand God's decisions, since there are some truths that are beyond our understanding (AT IV, 118/CSMK III, 235). Hence, it should not be much of a stretch to suppose that the same limitations extend to our ability to comprehend the real value of nature.

[8] Alternatively, it could be said that value is given by God as a valuer, but it is not objective. However, this position would have to assume that God values something that does not have value in itself, which would be like God suffering a hallucination. Therefore, it seems more plausible to think that once God values something that value is in the valued thing by itself, even so if the only reason for that value is God's authorship and/or valuation.

[9] The first well-known objection to this issue was raised in 1689 by Pierre-Daniel Huet in his *Censura Philosophiae Cartesianae*. For a rebuttal against Huet, see Pierre-Sylvain Regis' *Réponse* (1691).

[10] Just to name a few commentators who have downplayed Descartes' voluntarism in order to defend his consistency, see Koyré 1922, Osler 1994 and Gaukroger 1995.

[11] See also Hartz & Lewtas 2017.

recognised for a theory of value or ethics. However, Leibniz explores and criticises the extension of this Cartesian position, in a way that directly addresses the core concerns of this paper. Yet before we get to that argument, we need to examine Spinoza's position.

2. SPINOZA

Unlike Descartes, Spinoza rejects the notion that nature possesses values commonly associated with it, such as goodness, beauty, or harmony. For example, in a letter to Oldenburg (20th November 1665), Spinoza unambiguously states: "I do not attribute to Nature beauty, ugliness, order or confusion. It is only with respect to our imaginations that things can be said to be beautiful, ugly, well-ordered or confused" (Ep32. G IV, 170/ SH, 192). However, it could be said that there is some sort of an anti-theory, since Spinoza's rejection of these values could be understood as a revindication of the proper value that can be attributed objectively to nature. I will argue that Spinoza's notion of perfection suggests that there is a sort of value in nature that, despite being neither goodness, nor beauty, nor any of the aforementioned ones, can be understood as a non-anthropocentric conception of autonomous value.

For Spinoza, God and Nature (with capital N) are not different entities: God and Nature are the same and only existent substance. Everything else is just a mode or an expression of this one substance: necessary effects of the substance under a certain attribute. This not only includes material things, the entire natural world and human beings, but also all thoughts or ideas (E1p14c2). This doctrine also entails that there is nothing outside of God/Nature. As Spinoza explains in the *Ethics* (1677): "nothing can be or be conceived without God, but that all things are in God. So there can be nothing outside him by which he is determined or compelled to act. Therefore, God acts from the laws of his nature alone, and is compelled by no one" (E1p17d. G II, 61/CE, 425).

The quoted passage also states that, just like for Descartes, Spinoza's God is not compelled by anything outside himself. Yet, unlike the Cartesian God, Spinoza's God/Nature does not exercise his free will in a traditional sense that implies deciding among many possibilities. Rather, the Spinozian God acts following the laws of his own nature.[12] If for Descartes God is characterised by his absolute freedom to choose given by his indifference, the main attribute of Spinoza's God is power: "all things have been predetermined by God, not from free-

[12] Despite this, Spinoza does consider that God is free, furthermore God is the only free cause (E1def7). Nevertheless, as said, this freedom is not based on freely choosing among many possible alternatives.

dom of the will or absolute good pleasure, but from God's absolute nature, or infinite power" (E1app. G II, 77/CE, 439). Indeed, he denies the notion of an indifferent God, choosing what to create, since everything that has been created has necessarily flowed from God/Nature "in the same way as from the nature of a triangle it follows […] that its three angles are equal to two right angles" (E1p17s. G II, 62/CE, 426). Thus the creation of the universe was the necessary effect of a divine cause.

This formulation also entails that God/Nature or any of its modifications (e.g. the natural world) in themselves have no purpose.[13] Since everything in nature follows necessarily and blindly from God's essence, there is no divine plan, aim or goal for creation: "As he [God] exists for the sake of no end, he also acts for the sake of no end" (E4pref. G II, 206-7/CE, 544).

For Spinoza, purpose or final cause is a human misunderstanding:

> All the prejudices I here undertake to expose depend on this one: that men commonly suppose that all natural things act, as men do, on account of an end; indeed, they maintain as certain that God himself directs all things to some certain end, for they say that God has made all things for man, and man that he might worship God. (E1app. G II, 77-8/CE, 349)

Humans wrongly think that they act freely following their will on account of a purpose, because they are ignorant of the causes of their decisions. Moreover, humans do not limit this false belief to themselves; we also attribute purpose to nature. The result is the assumption that the purpose of the natural world is to serve us, as a means to our own ends. But God/Nature, and thus also the natural world, is not inscribed with an objective purpose. Hence, God did not create the world to please us:

> They [men] believe all things have been made for their sake, and call the nature of a thing good or evil, sound or rotten and corrupt, as they are affected by it. For example, if the motion the nerves receive from objects presented through the eyes is conducive to health, the objects by which it is caused are called beautiful
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> […]

[13] Some authors believe that Spinoza's metaphysics does not exclude all teleological thought and explanations. For example, Don Garrett argues that Spinoza excludes teleology only from his portrayal of God or Nature as a whole, but not from individual entities (2018, 321-351). Here we disagree with this view, and we will try to show a notion of perfection in individual things free from teleology. However, we do not have enough space for a complete refutation of Garrett's view.

> [T]he perfection of things is to be judged solely from their nature and power: things are not more or less perfect because they please or offend men's senses, or because they are of use to, or are incompatible with, human nature (E1app.G II, 82-3/CE, 445-6).

Since we treat the natural world as a mean for our ends, we project our preferences, tastes, and values onto it. But the perfection of the world (the natural world as an expression of Nature) is not made to coincide with our taste. In a letter to Hugo Boxel (September 1674?), Spinoza writes "either that God made the world as to suit the desires of men, or the desire and the eyes of men so as to suit the world" (Ep54. G IV, 252/SH, 269). For Spinoza the answer is neither of those alternatives, since both of them imply divine purpose, which Spinoza denies.

Since the natural world is a purposeless expression of God, the former was not made with any objective finality by the latter and thus was not designed to contain any value specifically destined for the benefit of humans, such as beauty[14] or goodness.[15] But how is it then that we do perceive nature as expressing values such as beauty, order, and goodness? For Spinoza, the source of these misapprehensions is our imagination:

> We see, therefore, that all the notions by which ordinary people are accustomed to explain nature are only modes of imagining, and do not indicate the nature of anything, only the constitution of the imagination. And because they have names, as if they were [notions] of beings existing outside the imagination, I call them beings, not of reason, but of imagination (E1app. G II, 83/CE, 445).

Goodness, order, harmony and beauty are merely "modes of imagining" or "beings of imagination" not actual properties of the world. In this sense, it could be said that Spinoza is partial to a subjective theory of values such as beauty, goodness, order, etc. For example, in the case of beauty, he explicitly confirms

[14] Commentators disagree regarding the plausibility of a Spinozian aesthetic theory. On the one hand, some like Filippo Mignini (1981) and Lee C. Rice (1996) have argued that although Spinoza himself manifested no significant views about the matter, his philosophy could very well ground an aesthetic theory. See also Franz Schlerath (1920) and Carl Gebhardt (1926). On the other hand, James C. Morrison argues that Spinoza's type of philosophy is alien and even hostile towards aesthetic notions such as art and beauty (1989, 359).

[15] Regarding goodness Spinoza writes in the *Ethics* that "As far as good and evil are concerned, they also indicate nothing positive in things, considered in themselves, nor are they anything other than modes of thinking, *or* notions we form because we compare things to one another." (E4pref.G II, 208 /CE, 545). However the nature of ethical values or properties in Spinoza is a very complicated issue and the subject of a lengthy debate among scholars. I will limit here to just recommend some relatively recent works about the topic such as Kisner 2010, Lebuffe 2010 and Andrew Youpa 2010.

this view in the same previously quoted letter to Boxer: "Beauty […] is not so much a quality in the perceived object as an effect in him who perceives […] So things regarded in themselves, or as related to God, are neither beautiful nor ugly" (Ep54. G IV, 252/SH, 269). Beauty, as well as other values, takes place only in the imagination of our finite minds, since if God were to be considered as a perceiving subject, he would not see either beauty or ugliness in things.

It is important to notice that this type of imagination is not a positive element in Spinoza's philosophy, since it is related to passivity in opposition to reason and adequate knowledge. For Spinoza, imagined things are the product of a lack of adequate (complete or exhaustive) knowledge. Beings of the imagination occupy a place in our minds only when we are deprived of a more complete understanding of reality that necessarily excludes those imagined things.[16]

That said, Spinoza does refer to Nature as "perfect", which seems to imply a notion associated with value.[17] For Spinoza, perfection is related to reality, power, and activity. I think that he offers three approaches to explain the notion of perfection. These three approaches seem to align quite well with each other in general terms; hence the distinction made here is mainly analytical. The three approaches are:

(a) Perfection as the existence.

(b) Perfection as the power to act.

(c) Perfection as the effort to maintain existence.

I believe that, among these three approaches, (a) is the best starting point in order to better understand (b) and (c). Furthermore, I think that (a) is better suited to explain perfection understood as nature's value, as Spinoza uses nature and natural things as an example of (a).[18] This approach to perfection appears at

[16] Unfortunately, here we cannot spend any longer on this matter. For Spinoza's views on imagination and error, see E2p18. G II, 106/CE, 465 and E2p40s3. G II, 134/CE, 489.

[17] It should be acknowledged that it is possible to think that Spinoza uses the word "perfection" in a descriptive manner and not as a qualification referring to value. For example, it could be thought that Spinoza simply wants to convey the literal meaning of perfection as "complete" without an evaluative meaning. However, I think the evidence suggests that this was not Spinoza's intention. For instance, from the earliest mentions of the term in the *Treatise on the Emendation of the Intellect* (written in 1661), perfection is used in equivalence with good and imperfection with evil (TIE 12), as well as to refer to the improvement of thought (TIE 13). Also, both in his letters to Blyenbergh (Ep19&21), as well as in E4pref, Spinoza develops his notion of perfection and imperfection either in the context of the problem of evil or contiguously to a definition of good and evil. Moreover, it would have been very unusual in his time to think of perfection as something neutral, since the term was famously applied to God, even by Spinoza himself. For example, one of the first mentions of the term "perfection" in the *Short Treatise* (written in 1660-61) refers to God (KV, 9. G I, 19/ADKV, 94).

[18] This is not a position free from controversy. Unfortunately, I do not have the space here to explain this as it deserves, so I apologise for what follows, as it is a relatively brief and not

the beginning of the fourth part of the *Ethics.* In this segment, it is stated that the perfection of human-created entities is attained through their correspondence with the mental ideal or conceptual standard that humans hold regarding those entities:[19]

> For example, if someone sees a work (which I suppose to be not yet completed), and knows that the purpose of the author of that work is to build a house, he will say that it is imperfect. On the other hand, he will call it perfect as soon as he sees that the work has been carried through to the end which its author has decided to give it. […] But after men began to form universal ideas, and devise models of houses, buildings, towers, etc., and to prefer some models of things to others, it came about that each one called perfect what he saw agreed with the universal idea he had formed of this kind of thing, and imperfect, what he saw agreed less with the model he had conceived, even though its maker thought he had entirely finished it (E4pref. G II, 205-6/ CE, 544).

Spinoza refers to this view of perfection as a "mode of thinking", i.e. something real exclusively to the attribute of thought.[20] Humans mistakenly apply this view to nature, ascribing normative standards to it based on the assumption that there is a model of how natural things should be: "So when they see something happen in nature which does not agree with the model they have conceived of this kind of thing, they believe that Nature itself has failed or sinned, and left the thing imperfect" (E4pref. G II, 206/CE, 544). However, Nature, the natural world and natural individuals do not aim to fulfil any model or genus, since Nature, nature and natural individuals, do not have any intrinsic purpose, and therefore natural things cannot be called imperfect just because they are missing some feature that they are supposed to have according to the genus we assign them in our mind.

However, Spinoza seems to suggest that, even though perfection is a being of reason, there is a proper way to understand the perfection of nature. This way also involves comparing natural entities to a genus, but to a more general one: the genus of being. Thus Spinoza proposes "to refer all individuals in Nature to one genus, which is called the most general, i.e., to the notion of being, which pertains absolutely to all individuals in Nature" (G II, 207/CE, 545). If we are to

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fully developed version of my position. Nevertheless, I will examine one objection and try to explain my view as clear as possible in the limited space we have.

[19] Spinoza also calls this mental ideal "universal idea", as well "*genus*", which indicates that he is thinking in classificatory general concepts that relate to a multiplicity of concrete individuals, like types to tokens.

[20] In the *Ethics* he writes*:* "The formal being of ideas is a mode of thinking (as is known through itself), i.e. (by IP25C), a mode that expresses, in a certain way, God's nature insofar as he is a thinking thing." (E2p5d. G II 88/CE 450). See also his *Metaphysical Thoughts* (CM I 1.G I, 233/ CE, 299).

assess the perfection of natural individuals with the genus of being as a standard, the degree of perfection of each individual thing in nature is equivalent to their degree of being or reality. Degree of reality, in turn, is defined in the first part of the *Ethics*, as degree of power: "For since being able to exist is power, it follows that the more reality belongs to the nature of a thing, the more powers it has, of itself, to exist" (E1p11s. G II, 54/CE, 418).

From here we can take two approaches to Spinoza's notion of the perfection of nature: firstly, from his insistence in rejecting teleology, nature's perfection is its mere existence; that is, a natural entity is perfect simply by existing and being as it is, since it has no ideal model to achieve, but being itself. This implies that a natural entity is perfect regardless of its particular form of existence. However, in apparent contrast with this view, Spinoza is clear that we can compare the degree of perfection of different natural things (EIVpre). This comparison is done by considering their degree of power, since things in nature do have different degrees of power (E4a1). As Spinoza writes,

> So insofar as we refer all individuals in Nature to this genus, compare them to one another, and find that some have more being, *or* reality, than others, we say that some are more perfect than others. And insofar as we attribute something to them that involves negation, like a limit, an end, lack of power, etc., we call them imperfect (E4pref. G II, 207/CE, 545).

Hence secondly, the degree of perfection a thing has is its degree of power or more specifically as power to act.

That said, there is a possible interpretation that unites both approaches. It could be said that Spinoza's ontology suggests that the degree of power of one thing is its capacity to realise its own essence against external opposition.[21] But, here we must remember that Spinoza's anti-teleological stance would reject the idea that the essence of a thing is an ideal model that individuals aim to achieve.[22] Spinoza's famous definition of essence in the second part of the *Ethics* is as follows: "I say that to the essence of any thing belongs that which, being given, the thing is [NS: also] necessarily posited and which, being taken away, the thing is necessarily [NS: also] taken away; or that without which the thing can neither be nor be conceived, and which can neither be nor be conceived without the thing" (E2def2. G II, 84/CE, 447). So we must think of the essence as whatever a thing

[21] For example, Viljanen states "thus, I would call conatus the principle of perfect essence realization, and its central idea can be stated as follows: each and every singular thing is a powerful entity which, when it encounters opposition, strives to exist and to bring about things derivable from its own definition alone" (2014, 127-8).

[22] In the *Short Treatise*, Spinoza argues that, if particular beings must conform to a nature distinct from their individual one, they would cease to be what they truly are (KV I, 4, §7).

is and not as it ought to be.[23] Thus a thing's power to realise its essence is whatever it requires to exist and to be whatever it is. If something does not have enough power to realise its own essence, it does not continue existing. Hence, we could say that degree of power is the power to maintain existence. It follows that the degree of power or perfection is the force of a thing to be as it is, which is not very different from saying that the perfection of something is existing as it is, i.e. perfection as mere existence.[24] Therefore, if we take perfection to be equivalent to value, we could say that for Spinoza the value of nature is a thing's mere existence as the thing it is and not a value that is achieved by improving what it is or becoming what it is supposed to be.

Against this interpretation it could be insisted that perfection understood as degree of power suggests that a thing can improve its own value by improving its power, thus a thing does not appear to be perfect simply by virtue of existing in its current state, regardless of what that state is. I recognise that it is hard to deny this objection, yet it should be considered that it would be also wrong to assert that the fact that an entity x is more perfect than another entity z implies an error or defect (or sin) in z.[25] The reason is that, for Spinoza, essence is the power or activity of a thing, and the thing does not persist if its essence changes. Hence, if z were to increase its power or activity to the level of x, the essence of z would become the essence of x, and z would cease to exist. Spinoza notices this problem near the end of the preface of part 4:

> But the main thing to note is that when I say that someone passes from a lesser to a greater perfection, and the opposite, I do not understand that he is changed from one essence, *or* form, to another. For example, a horse is destroyed as much if it is changed into a man as if it is changed into an insect. Rather, we conceive that his power of acting, insofar as it is understood through his nature, is increased or diminished (EIVpre. G II, 208/CE, 545)

It is important to clarify that when Spinoza refers to "his nature", he is not thinking about general natures such as genus or species in an Aristotelian manner, since he clearly rejects their existence in nature. Hence, Spinoza must be talking

[23] Spinoza also says: "So its existence must follow from its nature alone; hence its existence is nothing but its essence" (G II, 54/CE, 419).

[24] Della Rocca offers a different explanation justifying the strive to increase our power as a way to anticipate possible threats to our survival: "there is, as we might say, no telling which ability, which power, may come in handy, and so our was striving to preserve ourselves dictates that we strive to acquire as much power as possible" (2008, 172). For other positions on this issue, see Allison 1987, 235 and Curley 1988, 115.

[25] Nor, in any way, can a normative proposition be derived from this disparity in the levels of imperfection, in the form of a duty, or any kind of call, for z to increase its perfection to the level of x.

about an individual nature.[26] Accordingly, the degree of perfection of a thing z is limited by the individual nature of z and cannot be compared to any other thing but itself and its own existence.

Along these lines, Arne Naess suggests that, in Spinoza's philosophy, nature and natural things are perfect in themself in the sense that they are complete in themself. As stated, there is nothing outside Nature, not even time. Thus, Nature has no aims or goals that are logically required to be understood in time. At this point Naess advances an idea that I think is important to understand Spinoza's perfection: if there is no purpose in time, "the bacteria do not have any function or value when 'higher' forms have developed" (1977, 47). This means that the objective value of a part of nature is not given by the role it fulfils for the benefit of the whole. In other words, Nature and all its parts are already perfect in themselves, independently of how they relate to any other entity.

In this sense, if we consider perfection as a sort of value, Nature —as well as its expression as the natural world and any of its parts— is valuable just because it is as it is: the value of Nature and nature is grounded on its very being. Values such as beauty or goodness are the result of an anthropocentric vision, when we project our values onto nature. But nature in itself lacks these values, it only possesses the value of perfection. This interpretation of Spinoza rejects anthropocentric values yet still suggests a way in which nature is not value-neutral, but something that must be regarded as complete and thus worthy in itself only for being what it is. Furthermore, if we follow Naess' view, individuals in nature do not derive their value from any type of relation, not even their relationship with other natural entities. Accordingly, we can conclude that for this interpretation of Spinoza there is a radically autonomous and intrinsic notion of value, as perfection, so autonomous indeed that value is not to be established by any criterion extrinsic to or beyond what nature is in itself.

3. LEIBNIZ

For Leibniz the universe, in general, and the natural world, in particular, have perfections, i.e. positive properties or values. In turn, perfection is described as something related to —or based on— harmony.[27] In opposition to Descartes and

[26] For example, in the *Short Treatise* Spinoza's position is that only individual things have causes, while general ideas and things lack them, and therefore, they are not real (KV I, 4, §7). Similarly, in in his correspondence with William van Blyenbergh, (January 1665), Spinoza asserts that in the divine intellect there are no genera or kinds of natural species (Ep19). Hence these ideas must pertain only to our intellect and not to reality

[27] As early as in his *Elementa iuris naturalis* in 1670-1 (A VI 1, 466) and as late as a letter to Christian Wolff in 1715 (GW, 171–2/AG, 233), Leibniz expresses the relation between harmony and perfection and affirms that harmony is the main, or even the only, source of pleasure and joy, even for God. See also his *Confessio Philosophi* (A VI 3, 116/ CP, 29-31).

in agreement with Spinoza, Leibniz's God does not choose arbitrarily what to create. However, contrary to Spinoza and in agreement with Descartes, Leibniz's God does choose what to create among many (infinite) alternatives. As I will show, from these two ideas, his philosophy concludes that the world involve objective values (such as goodness and beauty) that we can recognise by ourselves through our own faculties.

For Leibniz, God is an "absolute perfect being" who possesses "supreme and infinite wisdom" and, therefore, "acts in the most perfect way" (A VI 4, 1531/AG, 35). This implies that he created the world in the most perfect possible way, which includes following rules of perfection and goodness in all created things, as §2 of the *Discourse on Metaphysics* (1686) reads:

> Thus I am far removed from the opinion of those who maintain that there are no rules of goodness and perfection in the nature of things or in the ideas God has of them and who say that the works of God are good solely for the formal reason that God has made them […] the excellence of God's works can be recognized by considering them in themselves, even when we do not reflect on this empty external denomination which relates them to their cause. (A VI 4, 1532/AG, 36).[28]

Since God created the world following these rules, according to his own wise and perfect nature, he did not choose arbitrarily. In contrast to Descartes' voluntarism, these rules and perfections that God followed were not dependent on his will, but on his intellect.[29] In other words, God's intellect contains the criteria that make something beautiful or good and his will followed these criteria when creating the world. Thus, God's choice is logically posterior to God's knowledge of any criterion of value.[30]

Leibniz defends the thesis that God is to be praised exactly because he acts in compliance with rules and perfect reason and not otherwise:

> For why praise him for what he has done if he would be equally praiseworthy in doing the exact contrary? Where will his justice and wisdom reside if there remains only a certain despotic power, if will holds

[28] According to Loemker, the quoted passage was written with Descartes in mind (L, 328).

[29] This position can also be found a few years before the *Discourse* in a couple of letters to Christian Philipp in 1679 and 1680 (A II 1, 505-6). We will refer to them later in this text regarding a related issue.

[30] Very early in his career, Leibniz writes in a letter to Magnus Wedderkopf in 1671, that the divine will is based on the divine intellect, which in turn finds its reason in harmony and thus perfection (A II 1, 117/L, 146). Leibniz kept his commitment to this idea until the end, see for example this *Theodicy* of 1710 (GP VI, 382/H, 382). It is worth noting that, although there is significant consensus about Leibniz's general anti-voluntarist position, there are authors who claim that the young Leibniz was a voluntarist concerning divine justice. See Robinet 1994. However, this interpretation has also been refuted by other authors. See Rateau 2008 and Silva 2020.

> the place of reason, and if, according to the definition of tyrants, justice consists in whatever pleases the most powerful? Besides, it seems that all acts of will presuppose a reason for willing and that this reason is naturally prior to the act of will. (A VI 4, 1532-3/AG, 36)

Because Leibniz's God is not a tyrant, we should not call his creation good, or assume that it is beautiful, just to praise the arbitrary choice of its author; on the contrary, we should praise God because we recognise beauty and goodness in his creation. What Leibniz means can be summarised in the following phrase: "it is through a consideration of his works that we can discover the craftsman" (GP VII, 86/L, 304). Like a craftsman, God created the world following laws and rules that are based on reason. (GW, 163/AG, 231). We, finite subjects, are able to understand these rules, since for Leibniz, reason is one and the same for us and for God. The same goes for other faculties and values such as wisdom, goodness, and even beauty (GP VI, 51/H, 76). Thus we are "equipped" to potentially grasp nature's rules, values or perfections, such as goodness and beauty. It is for this reason that these values can be recognised by us in nature itself, independently of the recognition of God's hand in their making. Therefore, contrary to Descartes, Leibniz's view on the relation between the world's value and us entails the idea that our value judgments about the world can be valid without requiring any "formal reason": we find nature's value just by noticing nature's positive properties.[31]

Yet, Leibniz's criticism of Descartes is not confined only to state the failure of voluntarism to provide a satisfactory connection between our faculties and the world's values. Leibniz goes further and criticises Descartes for being unable to offer a consistent account of the objective value of the world. Leibniz thinks that the logical consequences of some of Descartes' cosmological views end up meeting Spinoza's negation of nature's value. In a couple of letters to Christian Philipp (1679 and 1680) Leibniz disputes Descartes's assertion that "matter must successively assume all the forms of which it is capable" (AT IXb, 126/CSM I, 257). Leibniz not only strongly objects to Descartes' view, but also pairs it with Spinoza's opinions:

> [I]f matter receive successively all possible forms it would follow that nothing so absurd, so strange and contrary to what we call justice, could be imagined, which has not occurred or would not some day occur. These are exactly the opinions which Spinoza has more clearly explained,

[31] That said, Leibniz recognises that our grasp of the world's laws and values is limited to our finitude and thus not as complete as God's own understanding of the universe, and thus faith might be needed. Admittedly, this sounds very similar to Descartes' recommendation to overestimate God's creation just because it is God's creation. The difference is that faith has only a temporary role for us, since we have the potential to know everything, just not the time (GP VI, 508/LTS, 246).

> namely, that justice, beauty, order belong only to things in relation to us, but that the perfection of God consists in a fullness of action such that nothing can be possible or conceivable which he does not actually produce. (A II 1, 505-6/AA II, 786-7/D, 2)[32]

The idea that matter assumes all possible forms implies a lack of any kind of criterion (besides possibility) to guide God's decisions regarding creation. It follows that there must have been, there are, or there will be forms that are absurd, strange, unjust, ugly, and chaotic. For Leibniz this means that Descartes' God is indifferent to properties such as justice, beauty, and order. In other words, these properties do not correspond to God's perfection. If beauty, goodness, and other values do not correspond to God's perfection or his creation, but are possible for us to conceive, it must be the case that they are only in our imagination, which is exactly what Spinoza says. Leibniz is very much aware that Descartes never explicitly manifests these opinions, but he thinks that they can be clearly concluded from Descartes' arguments (A II 1, 506/AA II, 787/D, 2).

Nonetheless, this divine indifference towards value is already entailed by Descartes' more explicit view of voluntarism: if God's will is the only ground for value, something valuable is just whatever God decides to create, and hence God's will does not pursue what is beautiful or good, but what is beautiful or good comes after his will; therefore his will is indifferent to beauty or goodness. For Leibniz the will must have the good as its object and be preceded by the truth of things in God's understanding. Otherwise —if the will were as Descartes suggests— it would imply that the will has as its object only another will—a will of a will—and, in turn, a will of this second-order will, leading to an infinite regress, which suggests its impossibility (A VI, 4, 1408). Furthermore, the indifference in Descartes' position does not only derive in Spinoza's subjectivism regarding justice, goodness, and beauty, it also seems just trivially distinct from Spinoza's determinism. In Leibniz's view, Cartesian voluntarism turns the divine will into a "fiction" that results in an understanding of God and his creation that is not significantly different from Spinoza's blind determinism. This is the case because a divine will that does not follow values or perfection is a will inclined by no reason to choose one thing over another and, thus "he [God] will either do nothing or he will do all. But to say that such a God has made things, or to say that that they have been produced by a blind necessity, the one, it seems to me, is as good as the other" (A II 1, 507/AA II, 788-9/D, 4).

In contrast, Leibniz's view guarantees the creation of a world that manifests the perfection and essence of its creator and at the same time includes a divine

[32] The opinion given by Spinoza that Leibniz refers to in the passage is expressed in the following sentence from the *Ethics*: "From the necessity of the divine nature there must follow infinitely many things in infinitely many modes" (G II, 60/CE, 424).

choice. This results in a God who does not bring everything into existence, just what is the best, or to be more precise the more perfect possible set of things, which Leibniz refers to as a "world". The idea that God decided to actualise only the most perfect possible world entails the notion that there are alternative possible worlds, even if they are non-actual entities. Indeed, possible things do not have existence if they have not been actualised, yet they are true beings if they are conceivable without contradiction: "A being is that whose concepts involves something positive or that which can be conceived by us provided what we conceive is possible and involves no contradiction" (GP VII, 319/L, 363). This means that there are infinitely many possible things and worlds, yet they do not possess existence. The reason why this world —with the specific traits that makes it *this* world— exists, and not another world, is because this world excels in perfection:

> For, since all the possibles have a claim to existence in God's understanding in proportion to their perfections, the result of all these claims must be the most perfect actual world possible. And without this, it would not be possible to give a reason for why things have turned out in this way rather than otherwise (GP VI, 603/AG, 210).

This world was chosen among an infinite quantity of possible ones to be brought into existence because, as a whole, it was considered the most perfect one by God, according to values or positive properties, such as harmony goodness and beauty among other.[33]

With this in mind we can argue that values such as perfection, goodness or beauty must have been in things as properties even "before" [34] they reached existence or even if they never do. If Leibniz's God chose to actualise the best possible universe (to bring into existence) as an alternative within a set of other possible universes (true beings without existence), this means that God actually had a set of criteria to which that best possible universe conforms, even "before" he took the decision to actualise this world. It also means that the chosen alternative had certain properties "before" God decided to choose it —when it was still a non-actualised possibility, i.e. a true being but without existence—, since it was because of these properties that God chose it as the most perfect possible world. These properties are what we referred to before as perfections, which include harmony, beauty, goodness, and other positive properties. The result is that things, like the natural world, have positive properties in themselves "before", or even without, existence; thus they have value "before" any exposition to an in-

[33] Just to quote one example, Leibniz says that "God created [or chose] all things in accordance with the greatest harmony or beauty possible" (A VI 4, 2804/D, 130).

[34] Here the term "before" indicates logical priority and not a position in time.

stance of subjective recognition. For example, in the case of beauty, Leibniz explicitly states that "[f]or the beautiful falls into things even which we consider only as possible" (A VI 4, 1415).[35]

This theory assures us that God decided what to actualise and also that he chose according to true value criteria residing in his intellect; thus the actual world was not created arbitrarily, but it was voluntarily chosen by God. Leibniz's theory also reinforces the idea that objective positive properties or values are accessible for us, human perceivers, because the positive properties are in the things themselves and our faculties to recognise those properties do not differ in kind from the faculties of the creator.[36] Also the autonomous and objective value of the world is guaranteed by excluding any possible dependence on other subjective-like entities, as it is established that the world's perfection and the world itself were as such logically prior to existence, thus before any other subjective-like entity recognised them. It is for this reason that the world cannot have value but with complete autonomy from perceivers.

CONCLUSIONS

In the introduction we proposed to examine the philosophical models of these three philosophers in order to answer the following questions: 1) What are the origins of the world, value and their relation? 2) How is objective value in nature conceived? And 3) how do we humans relate to nature's value?

I explained that in the model of Cartesian voluntarism presented, the natural world and its value are the product of an arbitrary divine decision. Thus the world does have objective value, since this value is given by God independently of any criterion that our own faculties could use to judge. For Spinoza, the natural world is a fully determined mode of the essence of Nature/God, which lacks any of the usual values that we attribute to nature. Therefore, the natural world is not objectively good or beautiful. However, it could be said that nature's perfection is a value that is objective and completely autonomous as it is independent of any extrinsic reference, including the anthropocentric criterion. In the case of Leibniz, I explained that the actual world was chosen among many possible worlds, because it is the most perfect. In order for this world to have been chosen as the most perfect, it must have been as such even before it reached existence. In this

[35] Similarly in *Elementa iuris naturalis* Leibniz explicitly affirms this: "Just so the relations of numbers are true even if there were no one to count and nothing to be counted, and we can predict that a house will be beautiful, a machine efficient, or a commonwealth happy, if it comes into being, even if it should never do so" (A VI 1, 460/L, 133).

[36] As said, God's faculties are infinite, but they are not different from human faculties. See, for example, Leibniz's analogy of the drop of water in the ocean in the *Theodicy* (GP VI, 84/H, 107).

way, the value of the natural world was logically prior to its existence, and hence independent of subjective recognition.

Maybe the most salient issue concerning the second question is Leibniz's accusation that Descartes fails to provide a solid basis for objective and autonomous value. For Leibniz, Cartesian voluntarism's logical conclusion contradicts the notion of autonomous objective values as it entails that there cannot be objective goodness or beauty in a world created by the arbitrary decisions of a God indifferent to those properties. This is also Spinoza's conclusion, as for him Nature/God is also indifferent to positive properties that indicate traditional values for humans, such as goodness or beauty. However, Spinoza embraces this position, while Descartes rejects it, asking us instead to not over-estimate God's goodness, as well as the beauty and perfection of his works.

The main point here is that objective values cannot be freely determined without there being previous criteria to determine how something is good or beautiful. The problem is finding what the proper criteria are in the case of nature's values. Here is where Spinoza's critical approach proves particularly pertinent: why should we attribute our own criteria and our own values to nature? A recurring idea in specialised literature, both in environmental ethics and aesthetics, is to evaluate nature as nature. This involves developing value criteria that are for nature as well as intrinsic to nature itself, without relying on criteria derived from human interests, moral systems, or cultural and artistic considerations.[37] A perfect example of a criterion of value for nature as nature would be Spinoza's notion of perfection as power to exist. In contrast, for Leibniz nature is beautiful and good because it complies with external criteria that are not in nature exclusively and could be considered to be more like an extension of human values than something native to nature itself (although Leibniz conceives them as universal values with their origins in the divine understanding, not in humans). In this sense, it could be said that Leibniz' notion of natural value is not as autonomous and non-anthropocentric as Spinoza's view on nature's perfection.

Regarding the third question, however, Spinoza's concept of perfection is not without its problems. For Leibniz the objectivity of nature's value is available for us to be judged, perceived and known, since our faculties can apprehend the criteria that determine the values according to which the world was made. Furthermore, we can and should consider nature itself in order to judge its value. In this way, Leibniz steers away from his understanding of the Cartesian view, which appeals to a "formal reason", external from nature, to determine value. Yet, how can we humans judge the value of nature if its value is just existing as Spinoza thinks? Spinoza's formula for autonomous value pays the price of falling short in offering us a method to engage in a meaningful way with nature's values,

[37] See, for example, Carlson 1981, Carroll 1993, Budd 2003, Rolston 1988.

as its real value does not allow us to compare and diversify our judgement, it just limits us to valuing existence over non-existence. Yet maybe this is a price that we have to pay in order to be fair and judge nature as nature.

ABBREVIATIONS

Descartes:

AT Adam, Charles − Tannery, Paul − d'Albert, Louis Charles, eds. 1964–1976. *Oeuvres de Descartes*. 12 vols. Revised edition. Paris: Vrin/CNRS.

CSM Cottingham, John − Stoothoff, Robert − Murdoch, Dugald, eds. 1984–1985. *The Philosophical Writings of Descartes*. 2 vols. Cambridge: Cambridge University Press.

CSMK Cottingham, John − Stoothoff, Robert − Murdoch, Dugald − Kenny, Anthony, eds. 1991. *The Philosophical Writings of Descartes*. Vol. 3. Cambridge: Cambridge University Press.

Spinoza:

G Gebhardt, Carl, ed. 1925. *Spinoza's Opera*. 4 vols. Heidelberg: Carl Winters Universitätsbuchhandlung.

CE Curley, Edwin, trans. and ed. 1985. *The Collected Works of Spinoza*. Vol. 1. Princeton: Princeton University Press.

SH Shirley, Samuel, trans. 1995. *Spinoza: The Letters*. Cambridge: Hackett.

Leibniz:

A 1923-. *Sämtliche Schriften und Briefe*, Darmstadt and Berlin: Berlin Academy.

AA 1923-. *Sämtliche Schriften und Briefe*, Rehie II, Darmstadt and Berlin: Berlin Academy [digital version]

AG Ariew, Roger − Garber, Daniel, eds. 1989. *G. W. Leibniz: Philosophical Essays*. Indianapolis: Hackett.

CP Sleigh, Robert C., Jr., ed. and trans., with contributions from Brandon Look and James Stam. 2005. *Confessio Philosophi: Papers Concerning the Problem of Evil, 1671–1678*. New Haven: Yale University Press.

D Duncan, George Martin, trans. and ed. 1890. *The Philosophical Works of Leibnitz*. New Haven: Tuttle, Morehouse & Taylor Publishers.

GP Gerhardt, Carl Immanuel, ed. 1875–90. *Die Philosophischen Schriften von Gottfried Wilhelm Leibniz*. 7 vols. Berlin: Weidmann. Reprint, Hildesheim: Olms, 1975–90.Grua Gaston Grua, ed., *Leibniz: Textes Inédits*, 2 vols., Paris: Presses Universitaires de France, 1948.

GW Gerhardt, Carl Immanuel, ed. 1860. *Briefwechsel zwischen Leibniz und Christian Wolff*. Halle: H. W. Schmidt.

H Huggard, E. M., trans. 1951. *G. W. Leibniz: Theodicy; Essays on the Goodness of God, the Freedom of Man and the Origin of Evil*. London: Routledge and Kegan Paul. Reprint, La Salle, Illinois: Open Court, 1985.

L Loemker, Leroy E., trans. and ed. 1969. *G. W. Leibniz: Philosophical Papers and Letters*. 2nd ed. Dordrecht: Reidel.

SLT Strickland, Lloyd, trans. and ed. 2006. *The Shorter Leibniz Texts: A Collection of New Translations*. London: Continuum Impacts.

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