



ARTICLES



DIVINE WISDOM, NATURAL ORDER,
AND HUMAN INTERVENTION
LEIBNIZ ON THE INTERSECTION OF THEOLOGY,
TELEOLOGY, AND TECHNOLOGY

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A notable characteristic of the metaphysics of Gottfried Wilhelm Leibniz (1646–1716) is the systematic juxtaposition of contrary concepts. In Leibniz’s mind, there must be an underlying unity that these concepts in their tension serve to consolidate, but for his interpreters over the past three centuries it has been a trying effort to find this unity.

In one of the author’s most famous works, the *Discourse on Metaphysics* of 1686, we see two overriding concerns: the exaltation of God’s glory and wisdom, and the presentation of a true account of substance that can accommodate man’s place in the cosmic order. The way human beings ought to intervene in a preharmonized world, taking an active role in the ordering of things and so contributing to the unfolding of goodness in the world, is also touched upon. As we pursue an analysis of this text and its goals, we will enter into dialogue with ancient and modern sources, particularly Aristotle and Kant, in order to bring out the perennial and indeed current significance of the questions Leibniz poses. Far from being an esoteric byway in the history of philosophy, Leibniz’s discourse accurately pinpoints those fundamental questions with which philosophy must always deal if it is to be a love of wisdom and perform its task of guiding and illuminating human life.

More narrowly, Leibniz's contribution to what may be called "the problem of technology" (in the original sense of *technē* — art, craft, invention — and so extending to machinery and other forms of technology in the modern sense) serves to highlight a major tension between belief in a fixed natural order providentially arranged for the best, and belief in a world of infinite possibilities, malleable to human hands and subject to human minds. Whether God is placed explicitly at the center of our inquiries or not, the issues raised in Leibniz's meditations are with us still, taking ever new forms as the relationship between human beings and the world they inhabit grows more complex and more troubled. Revisiting Leibniz's clashing thoughts on divine wisdom, natural order, and human intervention is a helpful way of focusing anew on the ever-present challenge of seeing man's place in the world and learning how to assess "progress." It is no secret that in modernity, due to the absence of proper axioms and points of reference, we are all too likely to grossly exaggerate or severely denigrate man's nobility and consequently misconceive the extent to which the world is actually improving or deteriorating.

My argument will proceed in four steps. First, I will summarize Leibniz's doctrine of the "general order" planned by God and how the actions of beings other than God fit into it. Second, I will explain Leibniz's definition of man. Third, I will show what man's final end must be, if these other doctrines are true. Fourth, I will examine some parallels between Leibniz and Kant, and suggest some ways in which the trajectory of early modern philosophy might be said to arrive at a dead end.

1. DOES GENERAL ORDER PROMOTE OR HINDER PARTICULAR STRIVINGS?

Rejecting the Cartesian position that there is "no rule of goodness" except the Divine Will acting absolutely, Leibniz states that "reason is naturally prior to the act of will"¹ and that, as a result, the wise plan of God is made

¹*Discourse on Metaphysics* [hereafter *Discourse*], §2 (AG: 36). Citations from Leibniz are from the following edition: G. W. Leibniz, *Philosophical Essays*, ed. and trans. Roger Ariew and Daniel

manifest in his works. In fact, Leibniz will go so far as to say that God's works are totally perfect, good in every way: "to act with lesser perfection than one could have [acted] is to act imperfectly"²—an audacious thing to say about God. Hence, this world is the best of all possible worlds, for "God acts always in the most perfect and desirable way possible."³ Leibniz targets a cosmology of indifference, seeing Descartes as one who not only fails to give God his rightful due, but also undermines the intelligibility and goodness of the universe, of which we are assured both by Scripture and by the very laws of nature themselves. (Much of Leibniz's remarkable enterprise of "meta-physical physics," so to speak, stems from his insistence that the goodness of God can be discerned all the way down to the least action and reaction of corpuscles in a mechanistically-determined closed environment.) As a result of these teachings, Leibniz concludes that we must will precisely what God wills,⁴ and be satisfied not only with the structure of the universe but with every particular happening in it.

Therefore, it is perfectly consistent that Leibniz should maintain: "with respect to ourselves, we can say that the more enlightened and informed we are about God's works, the more we will be disposed to find them excellent and in complete conformity with what we might have desired."⁵ On the basis of this text, one would think that man needs to do nothing at all; everything in the world is just right, like baby bear's bowl of porridge, and whether man acts *or not*, still the order is exactly as God intends and maintains. If one sits back and does nothing, that too would be part of the general harmony. If the building next door is burning down and people are crying for help, a person of heroic inclinations might run over to help (and if he did, it would mean that God wanted him to do that and set it up that way), but the philosopher who realizes that everything happens for a judicious purpose may comfortably remain in his study.

Garber (Indianapolis: Hackett Publishing Company, 1989), abbreviated as AG.

² *Discourse*, §3 (AG: 37).

³ *Discourse*, §4 (AG: 37).

⁴ *Discourse*, §4 (AG: 37).

⁵ *Discourse*, §1 (AG: 35).

In fact, once Leibniz has laid out his “separate worlds” theory, where “each substance is like a world apart, independent of all other things, except for God,”⁶ it is inevitable that he will conclude: “God alone operates on me, and God alone can do good or evil to me; the other substances contribute only by reason of these [divine] determinations.”⁷ God harmonizes or disposes all things—happenings, sensations, deeds, etc.—for the benefit of those whom he wishes to profit, namely the minds on whom his image is impressed. In a striking phrase, he observes that “the souls of the just, in his hands, are safe from all the upheavals of the universe,”⁸ and similarly in the treatise *A New System of the Nature and Communication of Substances, and of the Union of the Soul and Body* (1695): “Thus minds have particular laws which place them above the upheavals in matter.”⁹ The independence of the soul “shelters it absolutely from all external things, since the soul alone makes up its whole world and is sufficient to itself with God.”¹⁰ There is *no* connection among phenomena, nor indeed among substances—this seems to be one element of Leibniz’s doctrine, and one that separates him from the majority of metaphysicians, ancient or modern.¹¹

Nevertheless, Leibniz tells us that “we must not be quietists and stand ridiculously with arms folded, awaiting that which God will do.”¹² Acquiescence to providential designs, as Leibniz recommends it, pertains only to the *past*, not to the future. (Why this should be the case when past and future mean nothing from God’s point of view, and when everything down to the last detail seems to be pre-planned for the greatest good of all rational creatures, is never explained.) We should not force ourselves to be “patient,” but rather

⁶ *Discourse*, §14 (AG: 47).

⁷ *Discourse*, §32 (AG: 63–64).

⁸ *Discourse*, §37 (AG: 68).

⁹ *New System* (AG: 140).

¹⁰ *Discourse*, §32 (AG: 64).

¹¹ Cf. *Discourse*, §14.

¹² *Discourse*, §4 (AG: 38).

act in accordance with what we presume to be the *will of God*, insofar as we can judge it, trying with all our might to contribute to the general good and especially to the embellishment and perfection of that which affects us or that which is near us, that which is, so to speak, in our grasp.¹³

How shall we go about doing this? Leibniz speaks of “discovering something useful in physics and in medicine”¹⁴—words that, coming from a man so resolutely opposed to Cartesian reductionism and ethical minimalism,¹⁵ are oddly reminiscent of the project Descartes himself announced in the *Discourse on Method* and *Principles of Philosophy*.¹⁶ Indeed, for Leibniz, the “mechanical philosophy” deserves to be “purged [...] of the impiety with which it is charged”¹⁷; transformism through technological progress is more than legitimate, it is our *duty*. In *A New System* he goes so far as to say: “There would be many other resuscitations [of seemingly dead things], and greater ones, if men were in a position to restore the machine.”¹⁸ An amazing passage from another work, *On the Ultimate Origination of Things* (1697), underlines the inevitability of progress:

¹³ *Ibid.*

¹⁴ *Discourse*, §22 (AG: 54).

¹⁵ In a letter that can be dated ca. 1679 (some 30 years after the publication of Descartes’s *Passions of the Soul*), Leibniz wrote: “Descartes’s God, or perfect being, is not a God like the one we imagine or hope for, that is, a God just and wise, doing everything possible for the good of creatures. Rather, Descartes’s God is something approaching the God of Spinoza [...]. That is why a God like Descartes’s allows us no consolation other than that of patience through strength” (AG 242). And further: “It is impossible to believe that this God cares for intelligent creatures any more than he does for the others; each creature will be happy or unhappy depending on how it finds itself engulfed in these great currents or vortices. Descartes has good reason to recommend, instead of felicity, patience without hope” (*ibid.*). This *Letter on God and the Soul* may be found in AG 240–45.

¹⁶ See Part VI of *Discourse on the Method of Rightly Conducting One’s Reason and Seeking the Truth in the Sciences*, in *The Philosophical Writings of Descartes*, trans. J. Cottingham, R. Stoothoff, and D. Murdoch (Cambridge: Cambridge University Press, 1985), I: 141–151, esp. 142–143; Preface to the 1647 French edition of the *Principles of Philosophy*, *ibid.*, 179–190, esp. 186.

¹⁷ *Discourse*, §23 (AG: 55).

¹⁸ *New System* (AG: 141).

In addition to the beauties and perfections of the totality of the divine works, we must also recognize a certain constant and unbounded progress in the whole universe, so that it always proceeds to greater development, just as a large portion of our world is now cultivated and will become more and more so. And while certain things regress to their original wild state and others are destroyed and buried [...] this very destruction and burying leads us to the attainment of something better, so that we make a profit from this very loss, in a sense.

And there is a ready answer to the objection that if this were so, then the world should have become Paradise long ago. Many substances have already attained great perfection. However, because of the infinite divisibility of the continuum, there are always parts asleep in the abyss of things, yet to be roused and yet to be advanced to greater and better things, advanced, in a word, to greater cultivation. Thus, progress never comes to an end.¹⁹

Consistently with such a view, he asserts elsewhere, in a treatise significantly entitled *Principles of Nature and Grace, Based on Reason* (1714):

Thus our happiness will never consist, and must never consist, in complete joy, in which nothing is left to desire, and which would dull our mind, but must consist in a perpetual progress to new pleasures and new perfections.²⁰

In this way, the rational substance in particular, like all substances in general, will (returning now to the *Discourse on Metaphysics*) “extend its power over all the other [substances], in imitation of the creator’s omnipotence.”²¹ So far, this is as pure a doctrine of man’s conquest of nature by intellect and invention as could be imagined. The central motif is unceasing progress towards a better world, and the inherent potential of the world to be thus improved. A certain optimism that Voltaire was later to ridicule seems to go hand-in-hand with the praise of human-powered transformation.

Yet the entire account is riddled with problems. First, Leibniz insists on a “separate worlds” doctrine, which, in emphasizing the splendid isolation of

¹⁹ *On the Ultimate Origination of Things* (AG: 154–55).

²⁰ *Principles of Nature and Grace, Based on Reason* (AG: 213).

²¹ *Discourse*, §9 (AG: 42).

each individual agent, promises invulnerability for souls placed in a perfectly harmonious universe; yet he also says that “there is nothing in the universe which does not affect us”²²—“in fact, every change affects all of them [i.e., substances],”²³ and this, apparently, in virtue of providential fiat. Second, the reality of free will is continually tottering on the edge of determinism: every predicate that is destined to belong to a given subject belongs to

a sequence based on God’s first free decree always to do what is most perfect and on God’s decree with respect to human nature, following out of the first decree, that man will always do (although freely) that which appears to be best.²⁴

Even if we grant some truth to the proposition, it is difficult to explain what it means for man to be free in a world where nothing can go wrong, or where the evils that do happen are so built by the wise architect into the metaphysical structure of reality that they cannot *not* happen. Leibniz clearly states that every mind “*must always behave* in the way most proper to contribute to the perfection of the society of all minds, which is their moral union in the City of God.”²⁵

What, then, is this “universal order” or “general harmony”? It should be evident that there are problems in the way Leibniz explains it. God is the excellent geometer, the good architect, the good householder, the skilled machinist, the learned author²⁶; everything he does is wise and perfect, all phenomena (and, it would seem, all substances) are “always in conformity with the universal law of the general order.”²⁷ To put it simply, Leibniz constructs the entire *Discourse* around an *a priori* declaration that there is a perfect and general order or harmony among all things; this he derives from the absolute perfection of the Deity, to whom Leibniz considers it

²² *Discourse*, §19 (AG: 52).

²³ *Discourse*, §15 (AG: 48).

²⁴ *Discourse*, §13 (AG: 46).

²⁵ *New System* (AG: 144–145), emphasis added.

²⁶ Cf. *Discourse*, §5.

²⁷ *Discourse*, §16 (AG: 48).

repugnant and blasphemous to attribute any kind of indifference, lack of skill, or failure—even, one is tempted to believe, on the part of his free creatures, whose very sins are cleverly woven into the beauty and goodness of the whole. In some ways, we are not far from St. Thomas Aquinas and the scholastics, for whom sin *does* fit into the providential plan of God; but in other ways, we are worlds removed from traditional theology, for there is a rich doctrine of free will in the Christian tradition and an equally rich explanation of why the world is not the best of all possible worlds but rather a free expression (necessarily imperfect because *created*) of the outpouring of God's love—a love that creatures, both angelic and human, have freely spurned by sin, and a world that such sin has caused to *fall*, with divine permission. For the Apostle Paul, it is just a fact that the world is all out of order, “in bondage,” and cries out for redemption, for a savior who can restore its original freedom and integrity.²⁸

One might also contrast Leibniz's views with Aristotelian cosmology and theology. While Aristotle finds the world highly structured and orderly, he nevertheless recognizes that there are natural defects (failures of matter) and moral defects (vices and crimes), for which he does not even think to propose God as a justification. Such is the way things are: sometimes the matter is defective, sometimes human character is defective. The “greatest good” of the universe is simply that the species of things endure through reproduction, attaining a faint likeness to the immutable eternity of God,²⁹ and that men—who are capable of living justly in society and can rise to the contemplation of God—should perfect themselves by a life of moral and

²⁸ Cf. Romans 8:14–23 and surrounding context, with 5:12–13 and 11:15.

²⁹ See *De Anima* II, ch. 4 (415a27–415b8): “For any living thing that has reached its normal development and which is unmutated, and whose mode of generation is not spontaneous, the most natural act is the production of another like itself, an animal producing an animal, a plant a plant, in order that, as far as its nature allows, it may partake in the eternal and divine. That is the goal towards which all things strive, that for the sake of which they do whatsoever their nature renders possible. [...] Since then no living thing is able to partake in what is eternal and divine by uninterrupted continuance (for nothing perishable can for ever remain one and the same), it tries to achieve that end in the only way possible to it, and success is possible in varying degrees; so it remains not indeed as the self-same individual but continues its existence in something like itself—not numerically but specifically one.”

intellectual virtue.³⁰ This entirely naturalistic vision is consistent with the Aristotelian view that not everything turns out perfectly; only the few or the best exemplify what everything else is supposed to be. God acts on all things as their ultimate final cause, the good for which they strive, either instinctively or knowingly.³¹ There is no *obvious* doctrine of creation,³² far less a doctrine comparable to the account of creation and the fall in the book of Genesis; neither is there an *a priori* justification of the general harmony of every single detail that transpires in the universe. The hierarchy of species, and the behavior natural to their forms, is sufficient to explain the orderliness we experience, while the difficulty of achieving plenitude or excellence in a world of competing agents and goods is sufficient to explain why so many individuals fall short of actualizing their full potential.

What is most curious in Leibniz is the way in which his metaphysics depends entirely on *a priori* claims about the general order as it emanates from a God who *seems* to have no range of choices about what he will make or do, since everything must be “perfect” in the most rigorous sense. Yet even though he reiterates this foundational principle dozens of times, he *also* senses the incredulity of the reader confronted with undemonstrated claims. As a result, he is forced to restrain the boldness of his optimism. Note the following passages:

We cannot always explain the admirable economy of this choice [that the sinner should be created and should sin] while we are travelers in this world; it is enough to *know* it without *understanding* it.³³

³⁰ See the *Nicomachean Ethics*, passim.

³¹ See *Metaphysics* XII, chs. 7 and 10.

³² That there is a properly *philosophical* idea of creation, and that both Aristotle and (to some extent) Plato had this idea, are views characteristic of St. Thomas Aquinas, who maintained that the core idea of creation is not the temporal finitude of the cosmos but the derivation of the “be-ing” or fundamental actuality of finite essences from a first source that is pure actuality. See Lawrence Dewan, O.P., “St. Thomas, Aristotle, and Creation”, *Dionysius* 15 (1991): 81–90 and “Thomas Aquinas, Creation, and Two Historians”, *Laval théologique et philosophique* 50 (1994): 363–387; cf. Mark F. Johnson, “Did St. Thomas Attribute a Doctrine of Creation to Aristotle?”, *New Scholasticism* 63 (1989): 129–155.

³³ *Discourse*, §30 (AG: 61).

Again:

It would be best to say with Saint Paul, that God here followed certain great reasons of wisdom or appropriateness, *unknown to mortals and based on the general order*, whose aim is the greater perfection of the universe.³⁴

But to know in detail the reasons that could have moved him to choose this order of the universe [...] surpasses the power of a finite mind.³⁵

But I do not claim to explain in this way the great mystery upon which the entire universe depends.³⁶

In the end, might it not seem that we are left with an unsatisfying *fideism*, a *belief* in overarching harmony or order, resting in turn upon a belief that everything, down to the last detail, is actively intended and willed by God? How this fits in with man's technological aspiration to ever-greater dominance over the surrounding world is hard to say, and Leibniz does not, in the end, answer this question. Imperative transformism rooted in declarative quietism is one of his strangest legacies.

At this point, I must make room for a legitimate criticism that may be advanced against my claim that a belief in the overall harmony and perfection of the world is an example of *fideism*. For some, *fideism* means a theoretical claim that one's elementary premises cannot be justified and must be accepted without evidence, on "blind faith." This meaning of 'fideism' surely does not apply to Leibniz's system, which is designed to be rational through and through, since Leibniz is persuaded that one cannot avoid assuming, as elementary presuppositions of rationality as such, the principle of non-contradiction and the principle of sufficient reason. By Leibniz's lights, acceptance of the principle of sufficient reason is tantamount to belief in rationality as such; hence, it may be seen as a matter of transcendental consideration (in the Kantian sense), an *a priori* foundation of unassailable security for his entire project, rather than of mere *fideism*. However, no

³⁴ *Discourse*, §31 (AG: 63).

³⁵ *Discourse*, §5 (AG: 38).

³⁶ *Discourse*, §6 (AG: 39).

matter how one interprets this foundational point, tensions remain in the project, as I hope to show in the remaining sections.

2. THE DEFINITION OF THE HUMAN

In connection with the foregoing, it will be valuable to see how Leibniz evaluates the position of the human knower and willer within the scheme of nature. Since Leibniz cuts off the path to sense-based knowledge, a human being would be left with no way to obtain knowledge of the natural world—except that, for him, (1) our thoughts already *precontain* the rest of nature and therefore we do not *depend on* sense-perception, (2) God coordinates our perceptions with what’s “out there,” and (3) the only thing we *can* say for sure about other things is that they observe definite mathematizable laws.

The fact that he leans upon our inner awareness of the ‘I’ or *ego*—“that word so full of meaning”—links him up to a long tradition of Christian speculation, particularly Saint Augustine and medieval thinkers influenced by him, many of whom the young Leibniz, with his famously eclectic reading habits, was able to peruse in his father’s library. For Augustine, we find God most of all by “turning within,” where his image and likeness are stamped on the soul.³⁷ The very fact that we can give a definition of man (“rational animal”) but not of any other animal stems from the fact that we have not only sense experience of ourselves as we do of other bodies, but also *consciousness* of what we do—our thinking, wondering, willing, contemplating. But there are significant, and in the end irreconcilable, differences between Leibniz and the Christian tradition before him.

What is most troubling in Leibniz’s “complete concept” doctrine³⁸ is that it gives no assurance of the reality of human freedom or even of human intelligence—or if these are preserved, it is at the cost of man’s relationship

³⁷Cf. the probing chapters on Augustine in Denys Turner, *The Darkness of God: Negativity in Christian Mysticism* (Cambridge: Cambridge University Press, 1995).

³⁸Namely, “the nature of an individual substance or of a complete being is to have a notion so complete that it is sufficient to contain and to allow us to deduce from it all the predicates of the subject to which this notion is attributed” (*Discourse*, §8).

to any other body, including his own. God can deduce from any substance everything that will ever happen to it; no other mind is powerful enough to do so. Try as he may to explain how man's acts are "determined" by God's will but not "necessitated" by it,³⁹ Leibniz's general doctrine of substance leaves us with a thoroughgoing determinism, at least on the physical level. Not even the most perversely irregular line you could scrawl on a page is *lacking in intelligibility*; Leibniz is persuaded that an equation governs that line as much as any other, for nothing can be irrational—which means that nothing can be left up to chance, luck, or nature (in the Aristotelian sense), but all phenomena must belong to a tightly closed system of bodies-with-forces which, when they interact, never disturb the total harmony of the system. Seen from this point of view, all substances are equal and equally determined, each one expressing the whole universe and augmenting the glory of God.⁴⁰ But there are no manifest forms or qualities in things whereby they can be distinguished from one another⁴¹; the world and everything in it is like the clock, which has to be taken apart, broken down to its smallest components, before we can say *what it is*. And Leibniz does not hesitate to tell us what he thinks of the usual view of sense-knowledge:

We have a bad habit of thinking of our soul as if it received certain species as messengers and as if it has doors and windows. We have all these forms in our mind; we even have forms from all time, for the mind always expresses all its future thoughts and already thinks confusedly about everything it will ever think about distinctly.⁴²

The connection between sensation and discovering the "natures" of things, central to Aristotle's epistemology, has been discarded altogether, and replaced by a radical divide between intelligence (which functions as an instrument for calculating the behavior of bodies according to intelligible laws) and the "physical" world of tiny bodies mechanically interacting with

³⁹ Cf. *Discourse*, §30.

⁴⁰ Cf. *Discourse*, §9; §15.

⁴¹ Cf. *Discourse*, §10.

⁴² *Discourse*, §26 (AG: 58).

one another. This explains why Leibniz, wishing to give an example of how *final causality* operates in nature, does not choose birds building nests or spiders weaving webs, but Snell's Law of Refraction.⁴³

The result is that Leibniz *cannot* look to the physical world in any way when defining man. Note, then, what he says:

Yet the souls and substantial forms of other bodies are entirely different from intelligent souls, which alone know their actions. Not only don't intelligent souls perish naturally, but they also always preserve the basis for the knowledge of what they are; this is what renders them alone susceptible to punishment and reward and makes them citizens of the republic of the universe, whose monarch is God.⁴⁴

Leaving aside for the moment the interesting ethical doctrine in the statement, it seems clear that Leibniz is sharply dividing the "interior" in man (his knowledge, his self-consciousness and memory of deeds) from everything "exterior" (including his body, which is no different than any other physical body, and his passions, which are no different in principle than the temperature or texture of a brick near the fire). Thus, "the notions I have of myself and of my thoughts, and consequently of being, substance, action, identity, and of many others, arise from an internal experience"⁴⁵—and *only* from there. Moreover, in many places Leibniz emphasizes that men are peculiar because they belong, *in virtue of mind*, to the great republic of God, in whose blessedness and governance only minds can share.⁴⁶ Furthermore, as was suggested earlier in this lecture, man has dominion over all things because he can understand the laws of motion and thereby *utilize matter* as a great prince uses gunpowder⁴⁷—this is the Cartesian side of Leibnizian

⁴³ *Discourse*, § 22. Snell's Law, in Leibniz's words: "when, in the same media, rays observe the same proportion between sines (which is proportional to the resistances of the media), this happens to be the easiest or, at least, the most determinate way to pass from a given point in a medium to a given point in another" (*ibid.*).

⁴⁴ *Discourse*, § 12 (AG: 44).

⁴⁵ *Discourse*, § 27 (AG: 59).

⁴⁶ Cf. *Discourse*, § 12; §§ 35–37; etc.

⁴⁷ Cf. *Discourse*, § 19.

man, and it fits nicely with Leibniz's insistence that the intelligent creature has the privileged role of governing lower things, which exist in totality *for its sake* alone: "the other beings only furnish minds the matter for glorifying him."⁴⁸ As he puts it in *A New System*, "everything else is made only for" minds.⁴⁹

What conclusions may we draw from these propositions? Man, for Leibniz, is distinguished by three main features: (1) he is self-conscious, aware of his inner mental states, unlike other creatures who blindly obey the laws of matter; (2) he is in control over matter, he can govern it and manipulate it for "new pleasures and new perfections"; (3) he is a *moral* being in virtue of his *memory* and thus his consciousness of past deeds, according to which he shall be judged. He is in no sense a "rational animal"; he is a *mind*. He is not part of the whole of nature (i.e., a species at the top of the hierarchy of animate things); he is rather its *lord and prince*, in absolute transcendence over nature (that is why, strictly speaking, nothing affects him but God). He is moral, not because of his virtues and vices, but because he *remembers* what he has done—and, of course, everything he does is done necessarily in line with the great law of God that every man must do what appears best to him (which makes it extremely difficult to see how man can sin, or rebel against God's will, or, for that matter, deserve punishment).

From these three points, one gathers that man, far from being *one distinct thing*—at least as we naively think of and experience ourselves—is radically two: with his body, he belongs to the predetermined, necessarily well-behaved universe of corporeal actions and reactions; with his mind, he belongs to the Kingdom of God by piety, and rules over everything else by physics. The unity of man, of course, is threatened by this bifurcation. Why should my body be considered "mine," as opposed to being something else entirely different from my mind? Why should your body be *you*, such that if I cause harm to your body, I offend you and sin against you?

⁴⁸ *Discourse*, §36 (AG: 67).

⁴⁹ *New System* (AG: 140).

3. LEIBNIZ'S "TELEOLOGY" OF THE HUMAN

I come now to my third part: Leibniz's "teleology" of the human. In light of the first part of this lecture, in which were quoted three clear statements of the mastery of nature theme in Leibniz, and the second part, where it was observed that man, for Leibniz, is above all a mental and moral being who exercises a certain dominion over physical reality, the answer to the question "What is man's final end or perfection?" comes into focus.

It is in this arena that we can see, most of all, Leibniz's hesitation to speak the radical doctrine he seems to want to utter. In order to avoid the impression that he is abolishing final causality altogether (as other materialistic early modern philosophers had already done), he often speaks of reconciling the modern way of efficient causality with the ancient-medieval way of final causality, purged of its supposed errors. He refers rapturously to Plato's *Phaedo*, which contains some of the clearest statements ever made in defense of goodness in things and in their ends.⁵⁰ He says in the *Discourse*:

I advise those who have any feelings of piety and even feelings of true philosophy to keep away from the phrases of certain extremely pretentious minds who say that we see because it happens that we have eyes and not that eyes were made for seeing [...]⁵¹

—a statement reminiscent of Aristotle's discussion in the *Physics* about which position is true: are we equipped with teeth for the sake of chewing, or do we simply manage to survive because we happen to have teeth? (Aristotle there mentions the example of rain, too: does it rain for the sake of the crops, or do the crops survive because water vapor gets too heavy for the clouds and it happens to rain?) In other words, Leibniz seems to want

⁵⁰In the *Phaedo* Socrates recounts his youthful fascination with natural science, which led in the end to disgust at the failure of the "pre-Socratic" philosophers to account for the one thing most evident to him: the primacy of the good in accounting for why things act as they do and why they are constructed as they are. The larger context of these remarks in the dialogue (95a–107b) is also worth attending to, since it describes also his turning toward a method of dialectical reasoning that endeavors to isolate the *logoi*, the distinct intelligible aspects, of reality.

⁵¹*Discourse*, §19 (AG: 52–53).

no fellowship with Empedocles, who is Aristotle's nemesis in the defense of final causality.⁵²

Yet Leibniz is equally insistent that efficient causality, taken in the (modern) sense of the interaction of particular bodies in accordance with mathematizable laws, is more than sufficient, is indeed the "deeper" way,⁵³ of explaining what happens around us in the world. And there would be no need for an elaborate doctrine of pre-established harmony, whereby substances somehow manage to cooperate with one another, if things were made in the first place to act for their ends, and if things were adequately designed to accomplish their ends by instinct or intelligence. He does not hesitate to say that "all the particular phenomena of nature can be explained mathematically or mechanically by those who understand them"⁵⁴; metaphysical principles are necessary only to launch the project of analyzing the behavior of bodies and harnessing their potential. If final causality enters into the picture at all, it will do so in a strange fashion: the "ends" envisaged by Leibniz are nothing other than the laws and mechanisms of matter by which their behavior follows a regular, predictable, and utilizable pattern. It is not the bird or the acorn that has a *telos* within it to reproduce other birds or oak trees, but rather the tiny bodies of which all things are actually constituted that cooperate in keeping birds and oak trees around, because these miniscule natural substances—not perceived in any way by ordinary sensation—are in fact indestructible lives which the ugly business known as division or corruption only *apparently* destroys on an organic level. Thus, the survival built into nature is not a survival of species striving to reproduce themselves, but of indestructible primary substances created by God and only perishing if he wills to annihilate them.

Clearly, by this point the notion of final causality has undergone such radical revision that it no longer bears resemblance to the *philosophia perennis*. The world as we experience it outside of us bears no resemblance to its real structure, which is accessible only by the interior route of the mind doing

⁵²See *Physics* II, ch. 8.

⁵³*Discourse*, §22 (AG: 54).

⁵⁴*Discourse*, §18 (AG: 51).

physics—and doing physics “with piety,” not like the blatant materialists who blaspheme God by declaring that good things come about indifferently or chaotically. If, then, there is a doctrine of final causality in Leibniz, it must be identified with the universal and particular laws of motion and matter as established by a beneficent God; the “ends” we are speaking of will be nothing other than the mechanisms God has set up so that everything will keep on ticking like a clock in perfect condition. And, just as a watchmaker can take apart the clock and understand its workings, so man can do the same with the universe: there is no barrier, in principle, to man’s mastery of the whole of the material world. It is all a question of time and research.

What, then, is left *for man*? What is *his* perfection or final cause? It will not help us to consider his body and its characteristic passions, needs, or inclination to sensible goods; in this realm, man’s body is no different from any other body, be it rock or plant or animal. The answer can be found in one place alone: his *mind*, as it participates in the Kingdom of God; his mind, as it rules over the world in imitation of the omnipotence of God. Leibniz’s anthropology seems always to bear this twofold sense, the theological and the technological, although it is difficult to see which is the more important one in the end, and whether Leibniz tells us everything he wants to say.

The concluding thoughts of the *Discourse on Metaphysics* could not be more resonant with religious fervor: the universe of minds is the most perfect republic, revealed to us by Jesus Christ, and “neither our senses nor our mind has ever tasted anything approaching the happiness that God prepares for those who love him.”⁵⁵ We have here a traditional statement of man’s perfection, which consists in the beatific vision; the good shall be rewarded and the wicked punished. But how do we harmonize this sentiment with another sentiment cited earlier: “our happiness will never consist, and must never consist, in complete joy, in which nothing is left to desire, and which would dull our mind, but must consist in a perpetual progress to new pleasures and new perfections”?⁵⁶ When he insinuates in *On the Ultimate*

⁵⁵ *Discourse*, §37 (AG: 68). These are the concluding lines of the treatise.

⁵⁶ *Principles of Nature and Grace, Based on Reason*, §18 (AG: 213).

Origination of Things that man's purpose in the world is to establish Paradise so far as may be, the echo of Descartes is clearer than ever—the Descartes who wrote in his *Discourse on Method*:

This [mastery of nature] is desirable not only for the invention of an infinity of devices which would facilitate our enjoyment without pain of the fruits of the earth [...] but also, and most importantly, for the maintenance of health, which is undoubtedly the chief good and the foundation of all the other goods in this life.⁵⁷

The tension between medieval and modern is never so apparent as it is here in Leibniz, caught between a pietistic, even quietistic theology of divine grace and glory, and an impassioned plea to master physical laws and harness matter for the profit and pleasure of men here below. Both of these features are somehow essential to man's perfection, and together they constitute—perhaps incompatibly—his *telos*. What might disturb us is the fact that the *former* end (divine grace and glory) renders everything in the physical world utterly irrelevant to us, since the doctrine of God and substance in the *Discourse on Metaphysics* effectively strips the mind of any direct relationship to the world; while the *latter* end (mastery of nature) renders *God* irrelevant to *our* designs and makes the mind, that glorious image of God, no more than a glorified calculator.

It would be no exaggeration to say that the Leibnizian dichotomy between mind and matter, substance and form, metaphysics and physics, technology and theology, has left us in an insoluble quandary: are we to serve God by mastering nature, or master nature by serving God? Is our primary occupation spiritual, having to do with mind and eternity, or temporal, having to do with matter and progress? Are some men supposed to be saints for whom there is “only God and me,” while other men act as the Francis Bacons who manipulate God's creation for their utilitarian aims? Is there any way for man to integrate himself with the rest of God's creation, except by the pragmatic and indefinable avenue of “perpetual cultivation”? These and similar difficulties arise from the very axioms of his system.

⁵⁷ *Discourse on Method*, Part VI, in Cottingham et al., *Philosophical Writings of Descartes* I: 143.

4. SUGGESTIVE PARALLELS BETWEEN LEIBNIZ AND KANT

The parallels between Leibniz and Kant are many and diverse. In this last part, I will briefly illustrate some of the ways in which philosophical issues “solved” in a famous and influential manner by Kant had already received the same or a similar treatment from Leibniz, albeit in a sketchy form. If we can glimpse how indebted Kant’s positions are to Leibniz, we can also better grasp the depth of the problems and tensions these positions carry within them—a depth not always well served by Kant’s untroubled, “scientific” manner of exposition.

In the Preface to the Second Edition of the *Critique of Pure Reason*, Kant gives a famous explanation of experimental method. If we are to investigate nature, we cannot sit around and wait for her to reveal herself; we must *interrogate* her, force her to answer our questions, that we may put intelligible content *into* her.⁵⁸ Although Leibniz does not speak in such violent terms, there is a sense in which he, too, carries on the project begun by Francis Bacon: when nature is stripped of arcane forms and mysterious barriers, we shall see the naked material components whose interaction yields all the phenomena we observe. Natural science shifts away from *natures*, towards laws and the law-like behavior of bodies. Because of the *success* they had in extrapolating mathematical principles from observed phenomena, Leibniz and Newton, more than Descartes and Bacon, stood as models and evangelists of the new science, for which Kant strove to furnish a theoretical basis, both in the *Critique of Pure Reason* and the *Critique of Judgment*.

In the same place, Kant states that “metaphysics is a completely isolated speculative science of reason, which soars far above the teachings of experience, and in which reason is indeed meant to be its own pupil. Metaphysics rests *on concepts alone*.”⁵⁹ A more radical departure from the heritage of philosophical realism could hardly be imagined; yet it is present implicitly or explicitly in everything Leibniz writes. The smooth path from physics to

⁵⁸ See *Critique of Pure Reason*, trans. Norman Kemp Smith (New York: St. Martin’s Press, 1965), 20.

⁵⁹ Cf. *ibid.*, 21.

metaphysics in Aristotle is definitively rejected. Henceforth, our experience of things, of their unity and behavior, is merely phenomenal, a “well-ordered dream” possessed of little if any epistemological value. Because Leibniz rejects the Aristotelian “mystery of form” in explaining particular phenomena, he must base his entire system on a series of axiomatic jumps or leaps into the beyond—transcendent suppositions, however improbable or bizarre, thrown under the phenomena. The abyss between experience and concepts must be crossed by means of rationally constructed, self-referential axioms of pure thought. In Leibniz, these principles are still obscurely connected to the world of things, inasmuch as physical laws and their companion, calculus, are hypothesized to be rooted in certain necessary features of *force* and *matter*. By the time we get to Kant, such principles seem to be part of the natural equipment of Reason, which it brings *to* the phenomena in order to make them intelligible (hence the Transcendental Aesthetic, in which space and time are deduced as a mental framework for cognition of things inaccessible in themselves). Just as there seems to be a leap of faith in Leibniz’s theodicy, German idealism will henceforth base itself upon leaps of reason, where “reason is its own pupil,” giving authoritative conceptual rules like a judge handing down laws from the bench.

In keeping with this development, we may also observe in Leibniz the beginnings of the phenomenal-noumenal distinction that was later to play so central a role in Kantian epistemology. In Leibniz, it takes the form of inner-outer or internal-external, not in the Aristotelian sense of the inside and the outside of bounded material bodies, but rather the inside and the outside of *mind*. The phenomena are fundamentally unrelated to mind except in virtue of some intervening synthesizing factor. For Leibniz, it is God; for Kant, it is Pure Reason with its equipment. For both, there is an insurmountable wall between experience as it comes through the senses and concepts as they are known in the mind.

The ethical parallel, too, is clear. Leibniz initiates a long German tradition of motivational or deontological ethics, which will culminate in Kant’s *Foundations of the Metaphysics of Morals*. Leibniz says many times that intelligent souls “preserve the basis for the knowledge of what they are; this is

what renders them alone susceptible to punishment and reward and makes them citizens of the republic of the universe.”⁶⁰ And: “It is also because they [non-rational substances] lack reflection about themselves that they have no moral qualities.”⁶¹ The knowledge of one’s *self*, and its past actions, renders the *mind* capable of reward and punishment. The “moral qualities of their personhood”⁶² pertain to men only as *wills* that operate in a vacuum, as it were, always desiring and choosing what appears to be best. We are to be judged only on the basis of our intentions: “we must act in accordance with what we presume to be the will of God, insofar as we can judge it [...] since he is the best of all masters, he never demands more than the right intention.”⁶³

For Thomas Aquinas, as for Aristotle, ethics is a complex science; acts are to be judged virtuous or vicious on the basis of many components, including the object, the circumstances, the intention, the passions, and the ultimate end. For Leibniz, and still more for Kant, intention alone matters: the only good thing in the world is the good will. Because the metaphysical self (a thing that can be and be understood independent of matter and motion) is *not* an Aristotelian soul (which animates a body and is only understood with reference to it and the world in which it dwells), the ethics constructed on such a basis will not have any reference to circumstances or outcomes in the physical world or even in one’s own body. A new type of ethics emerges from Leibniz, one that is based not on soul as a natural principle but exclusively on the will of the intellectual substance, which does not pertain to the world outside. Man’s holistic nature, and the world as given, are no longer the framework of values. In Kant, this position will take on the extreme form of a radical conflict between the will and everything else—particularly one’s desires and needs, as well as the state of the world outside.

⁶⁰ *Discourse*, § 12 (AG: 44).

⁶¹ *Discourse*, § 34 (AG: 65).

⁶² *A New Science* (AG: 141).

⁶³ *Discourse*, § 4 (AG: 38).

Finally, there are striking parallels between Leibnizian and Kantian theology. For Leibniz, God plays an indispensable role in setting up the world with which physics will busy itself, and man cannot understand the ground of anything apart from faith in his providential governance. Kant, on the other hand, claims to show by reason alone that there is no way to overcome the antinomies of theism and atheism; one must make a leap of faith—one must “deny knowledge to make room for faith.” However, if I am right in discerning a strong current of unestablished assumption in Leibniz, then the Leibnizian, too, must make a blind leap to the unprovable assertion of the general order and harmony of all things, on the basis of a few (perhaps ambiguous) examples in the world, along with plenty of counter-examples. In Kant, it is not *pure* reason that gives justification for belief, but *practical* reason; practically speaking, it’s *better* to believe than not to believe. Morality and freedom would collapse if there were no ultimate reality such as God. A similar “pragmatism” seems to be operative in Leibniz.

It is no surprise, then, that the “modern scholasticism” of the German universities should culminate in the three preoccupations of Kant: God, freedom, and immortality. “What can I know? What should I do? What may I hope for?” The difficulty of finding coherent answers to these questions when physics or natural philosophy, metaphysics or natural theology, and ethics have been sundered from each other at their roots seems already to haunt the pages of Leibniz, as if it were the ghost of William of Ockham. It is a difficulty Leibniz bequeathed to all of his Germanic successors. Through them, by a route long and circuitous, the same questions—accompanied by the same difficulty—reach us here and now. Those who wish to formulate the questions as accurately as can be and to answer them with greater success might well turn to the *philosophia perennis* of the ancient Greeks, particularly Aristotle, and to its great medieval exponent Thomas Aquinas, as Pope John Paul II, a professional philosopher himself prior to his election to the papacy, recommended in his encyclical *Fides et Ratio*. Going beyond John Paul II, one might simply credit scholasticism in general with a strength of argumentation and wisdom of insight into the whole of reality that responds to the weaknesses pointed out in this paper’s analysis of

Leibniz, which could be extended to similar weaknesses in other modern rationalists. But obviously, a full justification of the claim that our solutions will be found in the ancients and in the medievals would require not merely another paper, but many books, and my claim will have to stand, for now, as an unsubstantiated challenge.



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SUMMARIUM

Sapientia divina, ordo naturalis, actio humana sive de theologiae, teleologiae, technologiae in Leibnitii doctrina intersectione

In libro suo cui titulus Discursus de metaphysica Leibnitiu quaestionem movet, quomodo homo in mundum harmonia gaudentem praestabilita agere debeat eiusque bonitatem, quo melius se explicet, adiuvare. Responso ab eo allata vero discrepantiam quandam prae se fert ad docendum valde utilem. Una ex parte enim Leibnitiu docet dari ordinem naturalem a Providentia firme constitutum, altera ex parte tamen suae aetatis doctrinam profitetur, scil. mundum agentibus humanis, ut technologiae cultoribus, infinitas praebere possibilitates. Aliorum Leibnitii textuum perscrutatio necnon eorum cum Aristotele, S. Thoma, I. Kant comparatio revelat, quam acriter Leibnitii in mente veneratio antiquae et a maioribus traditae rationis philosophiam naturalem colendi, quae est scientia pure speculativa, pugnat cum ipsius dedicatione ad modernam notionem naturae dominationis, quod propositum e contra est valde pragmaticum ac transformativum.

ABSTRACT

Divine Wisdom, Natural Order, and Human Intervention Leibniz on the Intersection of Theology, Teleology, and Technology

In the Discourse on Metaphysics Leibniz addresses how human beings ought to intervene in a preharmonized world and contribute to the unfolding of its goodness. His view exhibits an instructive tension between belief in a providentially fixed natural order, on the one hand, and, on the other, a characteristically early modern belief in a world of infinite possibilities for human actors, that is, developers of technology. Other texts in Leibniz, as well as comparison with Aristotle, Aquinas, and Kant, helps to reveal the extent to which Leibniz is torn between venerating the ancient tradition of natural philosophy, a purely “contemplative” discipline, and embracing the modern project of mastery of nature, a pragmatic and transformative enterprise.

KEYWORDS: Leibniz; Descartes; Aristotle; Kant; Aquinas; technology; teleology; Providence; progress; determinism; substance; mechanism; transformism; metaphysics; cosmic order; perfection; fideism; rationalism; dualism; mathematical physics; mastery of nature