

Leibniz and Newton on Space, Time and the Trinity

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Abstract:

G. W. Leibniz was a philosopher caught up in both the scientific and theological disputes of his day. Here I argue that a set of common concerns underlay his engagement within two seemingly very different disputes: that with Newton over the nature of space and time, and that with Socinians over the Christian doctrine of the Trinity.

First, Leibniz's objections to Newton's conception of space and time were linked to his objection to Newton's model of the mind with which they was linked because of Newton's attempt to find support for his notions of absolute space and time by treating them as attributes of an infinitely extended immaterial God. Significantly, Newton had himself been a defender of the anti-trinitarian heresy of Arianism, and Leibniz's alternative model of mindedness was in turn tied to his trinitarian theology, as he saw the idea of three persons in one God as providing a model for human self-consciousness in which the identity of the reflecting and reflected upon thinking subject must be maintained. We can see within Leibniz's triune model of self-consciousness the kernel of later intersubjective models of human intentionality developed within the period of German Idealism.

Gottfried Wilhelm Leibniz, who was born in 1646 just before the end of the Thirty Years War and who died 1716, is surely one of the most bizarre and interesting of the early modern philosophers. He was an astonishing polymath, and responsible for some of the most advanced work in the sciences of his day—he was, for instance, the co-inventor along with Newton, of differential calculus, and is generally recognized as the greatest logician of the early modern period, responsible for advances in logic not rivaled until the mid-nineteenth century. But this progressive aspect of Leibniz's thought is paired by one that was more backward looking, deeply engaged with pre-modern forms of thinking that referred back through Medieval culture to the philosophy of ancient times. And alongside of his scientific advances, he is known for having created one of the most baroque and puzzling metaphysical systems in the history of philosophy—the so-called “Monadology”. For much of his life he was also absorbed in theological disputes that have now been long been forgotten, and generally thought of as alien to modern scientific modes of thought.

But it is easy to fall into anachronistic assumptions here. First, historians of the early modern period point to the degree that scientific and theological issues were virtually inseparable during much of this period. Even in the case of Newton, it would seem, he was forced to trade in ideas of very questionable provenance in order to come up with his revolutionary achievements in natural science. But if we further concentrate not on the development within formal or empirical sciences but on questions of a distinctly philosophical nature, Leibniz seems to further complicate assumptions about the unidirectional nature of intellectual progress. While many of his contemporaries saw progress as involving a break with the past, and especially the Aristotelianism that came from the scholastic period, Leibniz did *not* see the task as one of breaking with ancient philosophical thought, but as integrating it with modern scientific advances.

Today I would like to attempt to bring some of the ways in which Leibniz's scientific, philosophical and theological views were bound up with each other by briefly examining his roles within two *apparently* different disputes in the late 17th and early 18th centuries: first his dispute with Newton over the nature of space and time; and next his dispute with the “Socinian” followers of Faustus Socinus (1539-1604), (a religious movement that later came

to be called “Unitarianism”), over the doctrine of the trinity.¹ These may seem to be unrelated, but they might be connected in interesting ways. First, Leibniz’s dispute with Newton over space and time had, as we will see, *overtly* theological aspects. Furthermore, as we now know, Newton had himself been a secret critic of the doctrine of the Trinity.² We might then wonder if there is a relation between Leibniz’s attitude to Newton on the issue of space and time on the one hand, and his relation to the Socinians on the trinity, on the other. I’ll suggest that indeed there could be a relation there, and that the connection has to do with rival conceptions of the mind and its operations implicit in both disputes. Leibniz’s critique of a certain conception of *God* common to Newton and the Socinians signaled a challenge to the prevailing conceptions of divine mindedness, and as humans were, after all, conceived as made in God’s likeness, changes in conceptions of the divine mind were going to be reflected in conceptions of the human. But it was a backward-looking challenge that appealed to older conceptions. Despite this, I believe, we can see within Leibniz’s thought anticipations of some later, more progressive accounts of the mind as found in post-Kantian idealists like Fichte and Hegel. These accounts were to take the approach to human mindedness beyond standardly “immaterialist” and “materialist” alternatives of the early modern era.

Leibniz & Newton on Space and God³

In histories of the early modern scientific revolution, it is often pointed out how the emerging modern approach to the universe was held back by the lack of adequate conceptions of space and time—here for simplicity’s sake I’ll generally confine myself to the discussion to space.

St. Augustine had famously said of “time” that although we all know what it is, it is very difficult to *say* what it is, and much the same could be said of the notion “space”—especially the notion of empty or “void” space. Aristotle, for example, had simply denied the existence of space in the sense of “void space”. Aristotle’s basic spatial concept was that of *topos* or *place*, which gets employed in the explanation of movements of terrestrial elements—earth, water, air, and fire—each having a natural “place” to which it would move if unimpeded. As the derivative term, space was *just* the totality of differentiated *places*, and beyond that the concept was held to be meaningless.

¹ For a recent, comprehensive account, see Maria Rosa Antognazza, *Leibniz on the Trinity and the Incarnation: Reason and Revelation in the Seventeenth Century*, trans. Gerald Parks, (New Haven: Yale University Press, 2007).

² Conjectures about Newton’s attitude to the Trinity doctrine seem to have been resolved when John Maynard Keynes acquired many of Newton’s non-scientific writings at auction in 1936. These papers convinced Keynes that Newton had been a secret Arianist since a young man. See, J. M. Keynes, “Newton the Man” in *The Royal Society Newton Tercentenary Celebrations 15-19 July 1946* (Cambridge, 1947), 27-34. This is also the view of Newton’s recent biographers. See Richard Westfall, *Never at Rest: A Biography of Isaac Newton* (Cambridge, 1980), p. 315, and Gale E. Christianson, *In the Presence of the Creator: Isaac Newton and his Times* (New York: Free Press, 1984), pp. 253–5. In, “Was Isaac Newton an Arian?” (*Journal of the History of Ideas* 68.1 (1997) pp. 57-80), Thomas C. Pfizenmaier argues that Newton came to change his early Arianist views to a limited acceptance of the trinity idea understood on the monarchical model of dominion of the Father over the Son. Pfizenmaier, “Was Isaac Newton an Arian?”, p. 71.

³ The following section is based on my *Continental Idealism: Leibniz to Nietzsche* (London: Routledge, 2009), chs 1 & 2.

His argument here was a simple and intuitively plausible one. Space, he claimed, was *nothing* rather than *something*. (He was, in the terms of Henry More, a “nullibilist” about space itself.) Consider some concrete object, take it away, and “space” is what is left, i.e., nothing. Thus he denied the idea of any space *beyond* the outer sphere of the heavens. “It is clear,” Aristotle puts it in *On the Heavens*, “that there is neither place nor void nor time beyond the heavens.”⁴ And if there is no space itself, there are no properties of space, such as tri-dimensionality. But in developing his physics, Newton required a *realistic* conception of an *infinite* void space. From *his* point of view, the *Aristotelian* finitist and differentiated conception of cosmological space as an ensemble of *places* was useless because it could not be easily represented in a geometric model. (Newton needed the idea of distinct *places* in absolute space—real addresses, as it were—but these had to be homogeneous and differentiated merely mathematically as in geometry). As the historian of science, Max Jammer, asks: “How could Euclidean space, with its homogeneous and infinite lines and planes, possibly fit into the finite and anisotropic Aristotelian universe?”⁵ Thus, for the project of mathematizing the universe Newton had to have available to him an adequately de-Aristotelianized conception of space. The sources of this concept, it is usually argued, were diverse and peculiar, and heavily influenced by the neoplatonist tradition. Among the most immediate Platonic influences on Newton for his conception of space, however, would seem to have been the “Cambridge Platonist”, Henry More,⁶ and the relevance of his concept of space extended well beyond the science of physics.

Henry More, an Anglican minister, had dedicated much of his life to combating what he saw as the atheistic view of the world implied within the writings of contemporaries like Hobbes and Spinoza.⁷ While attracted to the new philosophy of Descartes, he was nevertheless concerned about Descartes’ denial of the existence of void space. (Descartes reasons for denying void space were different to Aristotle’s. For Descartes, all *matter* was extended, but equally all *extension* was material.) This, thought More, had atheistic implications as the denial of void space implied *either* that God *was* a material body (an inference drawn by Spinoza) or that God *was nowhere* and, hence, was *nothing*. And so while More agreed with Descartes’ division of the world into material and immaterial substances (body, and mind), he argued against Descartes, claiming that spirits were, like bodies, *extended*. While extended material substance (body) was *impenetrable palpable, divisible, and mortal* extended mental substance was *penetrable impalpable, indivisible and immortal*.⁸

⁴ Aristotle, *On the Heavens*, trans. W. R. C. Guthrie, in *Loeb Classical Library* (Cambridge, Mass.: Harvard University Press, 1960), 279a12.

⁵ Max Jammer *Concepts of Space: The History of Theories of Space in Physics*, (Cambridge, Mass.: Harvard University Press, 1954), p. 26.

⁶In their biographies of Newton, both Christianson and Westfall emphasise More’s general influence on Newton’s understanding of the role of God in the world. (Christensen, *In the Presence of the Creator*, Westfall *Never at Rest*.) The importance of More’s influence has also been supported in the more general accounts of Alexandre Koyré, *From the Closed World to the Infinite Universe* (Baltimore, Johns Hopkins Press 1957), pp. 159–68, and Edward Grant, *Much Ado About Nothing: Theories of Space and Vacuum from the Middle Ages to the Scientific Revolution* (Cambridge: Cambridge University Press 1981) pp. 244–5, 252–4. For a dissenting view, see A. Rupert Hall, *Henry More and the Scientific Revolution* (Oxford: Blackwell, 1990).

⁷ See for example, Henry More, *An Antidote Against Atheism, or, an appeal to the naturall faculties of the minde of man, whether there be not a God*, London: J. Flesher, 1665.

⁸ Rupert Hall, *Henry More and the Scientific Revolution*, pp. 128–9.

Being penetrable, the mind could thereby be co-located with the body, and this, More thought, allowed us to understand how mind and body could interact.

It was this attribution of spatial extension to *immaterial spirits* that had allowed More to think of void-space in a new way. Apparently taking the idea from cabbalistic writings,⁹ he conceived *space itself* as the extension of an infinite non-material substance, God. *Contra* Aristotle, space could now be conceived realistically as *infinite* and as *singular* because it was an *attribute of an infinite and singular immaterial Being*. Such an understanding of space and time now answered Newton's need for a *realistic* conception of void space, and Newton signaled the link between theology and physics in various places in his writings. Thus, in the "General Scholium" of the *Principia (Philosophiæ Naturalis Principia Mathematica)*, God is described as "eternal and infinite, omnipotent and omniscient . . . by existing always and everywhere, *he constitutes duration and space.*"¹⁰ Edward Grant sums up the relation between Newton and More: "Newton's public utterances on the relationship of God and space would appear to link him clearly with Henry More. Does this signify, then, that for Newton, as for More, God is an extended and dimensional being? It would appear so. If Newton conceived infinite, extended, void space as God's attribute, it surely follows that God is an extended being."¹¹ Leibniz was opposed to both the idea of the *reality* of space and the idea of God as an *extended immaterial substance*.

So, Newton's realism about space and time was thus simultaneously a realism about an immaterial substance—the divine mind. For him, the most fundamental reality was a spiritual being, God, and the material world that exists *in* space and time is dependent on God as both its creator and as its ruler. First, as dependent on its creator, matter has no necessary existence: it was within God's power to have *not* created the material world, that is, to have *not* put matter *into* space and time—a space and time which, reflecting divine attributes, pre-existed the material world. Next, neither does matter have the autonomous power to *act*: it is an inert, "dead" stuff moved around by a force external to it—the force of gravity. This force just *is* the will of God. The laws according to which matter moves—the laws we know as Newton's laws—are laws decreed by God analogous to the laws decreed by a king. God can act *on* matter because he is present everywhere throughout the absolute space within which matter moves. And just as this omnipresence in the world secures his omnipotent capacity to act, it secures his omniscient capacity to know what happens at every point in the extended world.¹² Leibniz's opposition to these interlinked issues about the nature of space and time on the one hand, and the nature of God on the other are expressed in his famous correspondence at the end of his life with the philosopher-

⁹See, for example, Jammer *Concepts of Space*, p. 41. On the idea that for Proclus space itself is an immovable, indivisible, and *immaterial* body, see Lucas Siorvanes *Proclus: Neo-Platonic Philosophy and Science*, (New Haven: Yale University Press, 1996), p. 133.

¹⁰ Isaac Newton, *Newton's Philosophy of Nature: Selections from his Writings*, edited and arranged with notes by H. S. Thayer (Mineola, New York: Dover Publications, 1953), p. 43 (final emphasis added). See also "Question 28" from his *Opticks*, *ibid.*, p. 156.

¹¹Grant, *Much Ado About Nothing*, p. 244.

¹²For an account of the systematic links between Newton's theological, metaphysical and scientific beliefs, see, for example, James E. Force, "Newton's God of Dominion: The Unity of Newton's Theological, Scientific and Political Thought". In James E. Force and Richard H. Popkin, (eds), *Essays on the Context, Nature, and Influence of Isaac Newton's Theology* (Dordrecht: Kluwer, 1990).

theologian, the Reverend Samuel Clarke—the parish priest, friend and supporter of Isaac Newton.¹³

In his correspondence with Clarke, Leibniz's criticisms of the absolute status of space and time are based on one of his two fundamental principles, the principle of non-contradiction and the principle of sufficient reason, as he mentions in his second letter.¹⁴ Consider the objection to Newton's conception of absolute space that Leibniz makes in his third letter to Clarke that runs along the following lines. If God had created the material universe in a preexisting infinite space, then God would have had to place it *somewhere* in that infinite space, but "it is impossible that there should be a reason why God, preserving the same situations of bodies among themselves, should have placed them in space after one certain particular manner and not otherwise."¹⁵ The argument is repeated in terms of *time*. "Supposing anyone should ask why God did not create everything a year sooner, and the same person should infer from his that God has done something concerning which it is not possible that there should be a reason why he did it so and not otherwise."¹⁶ In short, if God had created the world in *some particular place* and at *some particular time* he would have needed a *reason* for doing it there and then rather than at some other time in some other part of the universe. But, thinks Leibniz, there can be nothing here that could *count* as a reason, and to think of God as acting arbitrarily is to impugn his rationality.

Clarke's response was typical of a certain *voluntarist* mode of thought from the Middle Ages—an approach often associated with *nominalism* in which stress was placed on the omnipotence of God's will placing God's acts beyond human understanding. No reason is needed for any act of God *other than* his having willed it so. But Leibniz refused to accept this *as* a reason. God is rational because in thought and act he adheres to *rational norms* that, in turn, cannot be simply taken as expressions of his will. Leibniz's intended lesson is that this whole way of thinking of space and time that leads to this conundrum is misguided, and he puts forward his own *relational* theory of space as a way of avoiding it. Space should not be thought of as if an absolute container; rather what we conceive of as space (or void space) is just an abstraction from the totality of thinkable relations existing among objects that we, as creatures with finite minds, represent as existing "in" space. The idea of a pre-existing space or time into which God could have created the material world is a sense-based idea that dissolves with further intellectual analysis.

The strongly voluntaristic version of a spiritualistic metaphysics lying beneath Newton's revolutionary natural philosophy, with its picture of an omniscient, omnipotent and omnipresent divine ruler, issuing laws for the material world in acts of the divine will, was not without political significance for a society that had emerged from a protracted civil war at the centre of which was the execution of a king, i.e., God's purported representative on earth. In the mid 17th century, radical republicans had been attracted to various ideologies in which the material world was differently pictured.¹⁷ Among the heterodox dissenters during this period were those attracted to various pantheistic and vitalistic conceptions of the material world as somehow intelligent and self-organizing, an ideology

¹³ See G. W. Leibniz and Samuel Clarke, *Correspondence*, edited, with Introduction, by Roger Ariew (Indianapolis: Hackett, 2000). The correspondence, which took place between November 1715 and October 1716, consisted of 5 letters by Leibniz and 5 replies by Clarke. It was terminated by Leibniz's death on November 14, 1716.

¹⁴ Leibniz and Clarke, *Correspondence*, Leibniz's second letter.

¹⁵ *Ibid.*, Leibniz's third letter, p. 15.

¹⁶ *Ibid.*, p. 15.

¹⁷ Margaret Jacob, *The Radical Enlightenment: Pantheists, Freemasons and Republicans*, second revised edition (Lafayette, LA: Cornerstone Books 2006).

that fitted a republican outlook. Among these various views, some tended towards the type of pantheism found in Spinoza, which abjured any kind of personalistic God and could be thought to blend into a type of materialistic *atheism*. A different direction, however, could be found in England among groups such as the “Behmenists”, apparently well-represented among Cromwell’s supporters, so-called because inspired by the writings of the German mystic Jakob Böhme.¹⁸ For Böhme, God was immanent within, not transcendent to the material world, which was created “ex deo” rather than “ex nihilo”, (in the rhetoric of the time, the material world was an emanation of God). Böhme represented a Neoplatonic type of Christianity that had been influential in south-west German-speaking parts of Europe prior to the Reformation and largely spread by the Dominican order, and traceable back to Thomas Aquinas, Albert the Great and Meister Eckhart. These were all thinkers strongly attracted to the metaphysics of Aristotle, who had come to be opposed by the more voluntaristic and nominalistic thinkers of the 14th century. For such an outlook, the doctrine of the *trinity* had special relevance as it represented a type of divinization of man.

Leibniz thought highly of Böhme and was apparently well versed in the German Christian mystical tradition.¹⁹ While his own version of “Christian Platonism” had affinities with this type of thought, he was not attracted to the type of millenarian versions of political dissent linked to that tradition, but nevertheless shared the dissenting sects’ opposition the type of “voluntarist” theology found in Newton, with its conception of matter as dead and moved about in accordance with the will of a radically immaterial and transcendent God—an idea rooted in the nominalistic theology of the 14th century. The most direct Neoplatonic influences on Leibniz seem to have been via the writings of the so-called, “Herborn Encyclopaedists,” J. H. Alsted and J. H. Bisterfeld.²⁰ From Bisterfeld, in particular, he had taken over the principle of “immediation” according to which the state of each substantial form in the universe is ultimately coordinated with that of *every other* such that a change in the state of *any one* will be reflected in the state of *all others*. It was this idea that was added to the Aristotelian idea of substances as informed matter, which it in turn modified. The resulting “monads” of Leibniz’s monadology were thus conceived as radically self-moving, rather than moving in accordance with some external “commands.” Like Aristotelian

¹⁸ On the spread of Böhme’s ideas among the radical protestant sects during the time of the English Civil war, see Serge Hutin *Les disciples Anglais de Jacob Boehme aux XVII^e et XVIII^e siècles*, Paris: Editions Denoël 1960: ch 3. Later in the century, Henry More’s correspondent and “pupil”, Anne Conway, who developed his own ideas in an anti-dualist direction showing similarities to Leibniz, had been influenced by the writings of Böhme. See Sarah Hutton, *Anne Conway. A Woman Philosopher* (Cambridge: Cambridge University Press, 2004).

¹⁹ In his study, *Leibniz et L’Organisation Religieuse de la Terre [Leibniz and the Religious Organization of the Earth]*, (Paris: Félix Alcan. 1907), Jean Baruzi claims that Leibniz was “nourished on mystic literature. He was familiar with Jacob Böhme, [John of] Ruysbroeck, John of the Cross, [Valantin] Weigel and [Johann Angelus] Silesius, as well as Saint Terèrèse and Angela of Foligno”. *Ibid.*, p. 436n1. While seeming tolerant of the types of millenarian groups linked to the ideas of Böhme and others, Leibniz did not agree with their strongly anti-ecclesiastical views, as he seemed to think of a “universal church” as an organized community of thinkers allowing the progress of the mind. This same interest in the institutional organization of the life of the mind fuelled his commitment to the establishment of scientific organizations, for example. See, Baruzi, *Leibniz et L’Organisation Religieuse de la Terre*.

²⁰ See, for example, Leroy E. Loemker (1961) “Leibniz and the Herborn Encyclopedists”, *Journal of the History of Ideas* 22 (1961): pp. 323-338.

substantial forms they had independent (“per se”) existence,²¹ were the intrinsic sources of action to which appeal is made in all explanations, endured through change, had true unity (unlike armies, or herds), and were to be characterized by some “complete concept”. But inflected with properties deriving from the neoplatonist tradition, each monad was conceived as “pregnant with its own future” and said to “express the entire universe” in its own internal representational and appetitive states.

To capture the distinction between the limitedness of the knowledge possessed by finite minds and the infiniteness of God’s knowledge, Leibniz on occasions appealed to the metaphor of “perspective”. Thus, while a finite monad neither exists “in” space nor has extension, it nevertheless represents the universe as if from a *point of view* “rather as the same town is differently represented according to the different situations of the person who looks at it”.²² The difference between the apparent spatial “locations” involved here is cashed out in terms of the specific relations among representations and appetitions making up the states of each monad. In contrast, he distinguishes the “view” of God from that of each finite monad in the following way. “God, so to speak, turns on all sides and considers in all ways the general system of phenomena which he has found it good to produce in order to manifest his glory. And as he considers all the faces of the world in all possible ways—for there is no aspect which escapes his omniscience—the result of each view of the universe, as looked at from a certain position, is, if God finds it good to actualize his thoughts and to produce it, a substance which expresses the universe in conformity with that view.”²³ Each perspectival finite monad is thus like a “mirror of God” in this regard, this being a familiar christian Platonist trope found in Eckhart and Cusa to capture the relation of human and divine intellects. The underlying idea of the orderly harmonization of individual perspectives in the mind of God seems to come from Bisterfeld,²⁴ however, the idea is at the heart of Nicholas of Coosa’s Neoplatonic image of “infinite sphere.”²⁵

This backward-looking, neo-Platonic inflection of Aristotelian substances, gave Leibniz an alternative model for the conception of the human mind, and the conception of God on which human subjectivity was modeled, than the more common one shaped by the more recent voluntarist and nominalist tendencies of the later middle ages.

²¹ I will refer to Aristotelian substances with the alternate term “substantial forms” to preserve the distinction with the non-Aristotelian conception of substance that can be qualified with the adjectives “material” or “immaterial.” For Aristotle there are no unformed material substances, and, in contrast to Plato, nor can form be separated from matter. There is, of course, much controversy about the details of Aristotle’s hylo-morphic account of substance that I will not go into here.

²² G. W. Leibniz, “Discourse on Metaphysics” in *Philosophical Texts*, trans. and ed. R. S. Woolhouse and Richard Francks (Oxford: Oxford University Press, 1998), §9.

²³ *Ibid.*, §14. Earlier, Leibniz had described each substance as “like a whole world, and like a mirror of God, or indeed of the whole universe, which each one expresses in its own fashion—rather as the same town is differently represented according to the different situations of the person who looks at it” (*Ibid.*, § 9). See also G. W. Leibniz, “Monadology” in *Philosophical Texts*, trans. and ed. R. S. Woolhouse and Richard Francks, Oxford: Oxford University Press, 1998), §57.

²⁴ See, Antognazza, *Leibniz on the Trinity and the Incarnation*, and Donald Rutherford, *Leibniz and the Rational Order of Nature* (Cambridge: Cambridge University Press, 1995), pp. 36–44.

²⁵ For an extended account of this topic, see especially Karsten Harries, *Infinity and Perspective* (Cambridge, Mass., MIT Press, 2001).

Possible Models for the Mind in the Early Modern Period

We might think of early modern thought as having available a variety of possible conceptions of human subjectivity. The first is Descartes' view of the mind as a *non-extended* thinking substance, evidence for the existence of which is supposedly served up by consciousness of oneself as a thinker. But this has insuperable difficulties for explaining how the body and mind interact, since the body is in space and time, and the mind is not.

This problem was meant to be addressed in the variation of Cartesian dualism found in Henry More, in which to be a human subject is thought of as an immaterial substance *with* extension and that could thereby be co-located with a body, and in which God provides an infinite version of such an extended immaterial substance.²⁶ More had thought that the co-location of spiritual and material substances could overcome Descartes' problem of the interaction mind and body, but such a conception is riddled with conceptual problems. In the eighteenth-century a version of this view was to be found in the pre-critical writings of Immanuel Kant, but by the mid 1760s Kant seems to have come to realize that mere co-locatability was inadequate to give a picture of how mind and body actually interact. Moreover, he came to regard this picture as having very irrational consequences, and saw the wild views of the mystic Emanuel Swedenborg, as its "reductio ad absurdum". In fact, even Henry More had happily helped himself to the "empirical" evidence concerning ghosts and all sorts of paranormal phenomena to support the view.

A further possibility for thinking of the nature of mind and its relation to the body is that found in the radical *immaterialism* that Bishop George Berkeley developed at the start of the 18th century.²⁷ Starting from the Cartesian conception of inner subjective life, the problem of how to be assured of the *reality* of the external material world was circumvented by simply abandoning the idea of such a material world as an unjustifiable assumption. On this view everything is reduced to either mind itself or the "ideas" which constitute its subjective states and of which it has direct knowledge. The independence possessed by any finite mind's *ideas* that was taken as evidence for an external material world is now explained by their being located within that greater more encompassing omnipotent mind within which the finite mind exists—the encompassing mind is, of course, God's mind.

Another possibility, one to become increasing popular in the 18th century, was what we might think of as the *materialist* converse of Berkeley's immaterialism. If Berkeleian immaterialism results from eliminating the material side of Descartes' dualism, a materialist approach to the mind results from eliminating the *immaterial* side. One then is left with a

²⁶ More's conception of the immaterial but extended soul resembles the "ghosts" of the popular imagination. Thus he uses ghost stories as "evidence" against materialist atheism in *An Antidote Against Atheism* of 1665.

²⁷ Berkeley referred to his philosophical position as "immaterialism," but it is commonly, and unhelpfully, referred to as "idealism". Those who *did* call themselves "idealists", in particular Kant and the post-Kantian idealists such as Fichte, Schelling, and Hegel, were clearly *not* "immaterialists" of a Berkeleian stamp. In *Continental Idealism: Leibniz to Nietzsche* (London: Routledge, 2009), I argue for the continuity of those *non-immaterialist* aspects of Leibniz's form of idealism with that of Kant and the German idealists. The degree to which Leibniz was, if at all, an immaterialist ("idealist" in the terminology I'm here criticising) is subject to much contemporary dispute. For a defence of the "idealist" (actually, "immaterialist") reading of Leibniz see Robert Merrihew Adams, *Leibniz: Determinist, Theist, Idealist* (Oxford: Oxford University Press, 1994), and for a thorough-going critique, see Pauline Phemister, *Leibniz and the Natural World: Activity, Passivity and Corporeal Substances in Leibniz's Philosophy* (Dordrecht: Springer, 2005).

mechanical conception of the mind which, according to one common complaint, provides no apparent way to capture what many think of as essential features of the mind, such the phenomenal “what it is like” of consciousness, or normative features associated with mental states and processes.²⁸

A further possibility was that of the “dual-aspect” conception of thought and extension as *different modes of a single infinite substance*—the possibility paradigmatically found in Spinoza. This “dual-aspect” conception, or, as it was also came to be called, psychophysical parallelism, became popular, especially within the medical sciences, in the 19th century, becoming the main rival to materialist conception of mind. (William James and the early Freud, for example, were both psychophysical parallelists.) Of these alternatives Leibniz had clearly been attracted to aspects of Spinoza’s account, but thought it ultimately incompatible with individual human freedom, or even with the existence as individual humans as *genuine* unities, and not just limited extensions to be absorbed into the one ultimate substance—Spinoza’s pantheistic and impersonal God. Moreover, Leibniz seemed to find in the trinitarian conception of god, conceptual resources for an alternative conception of the mind to that of Spinoza—an approach that was, like his approach to space and time—fundamentally relational rather than substantialist.

One thing common to Leibniz’s various critiques of the various possible positions I’ve mentioned is his criticism of the common conception of a uniform *substance*—material or immaterial, or that a single substance with opposed material and mental aspects, as in Spinoza’s account. It was his innovative notion of “monad,” a modified version of the Aristotelian idea of a “substantial form,” that replaced this common notion of a uniform substance. Drawing on Neoplatonic ideas of the relation of the one and the many, and Bisterfeld’s idea of “immediation”, Leibniz in his metaphysics attempted to account for human subjects as simultaneously embodied and thereby individuated, and yet as *essentially* relational, given the harmonization of all monads by God. As such, this relationality is dependent on “the mind of God” which is *not*, however, as with human minds, itself confined to a body. This sounds as if Leibniz resorts to a conception of God as an infinite immaterial substance—and he often does express himself in these terms—but this seems undercut by the conception of substantial forms harmonized by God. More akin to the ancient Neoplatonists, who had attempted to synthesize Plato and Aristotle with the more systematic thinking of the later Stoics, Leibniz thinks of the divine as “the One” which is *by necessity* broken up into a plurality of particular beings, and which is not itself to be thought of in terms of the notion of “being”: “God, or the Mind of the Universe is” Leibniz writes in one place, “nothing but the

²⁸ Leibniz’s argument against this materialist view is well-known. In the *Monadology* Leibniz argues that if one imagines a large machine that purportedly can perceive or think, and imagines oneself entering it, like one enters a windmill, one would “find only parts pushing one another, and never anything by which to explain a perception” (Leibniz, *Monadology*, § 17). This is a familiar type of argument found in modern philosophy of mind. For example, if we are attempting to explain an intentional state, such as believing that such and such is the case, looking for, say, the causes of this state is looking to the wrong sort of thing. As a rational being I will usually, and at least on reflection, believe that a belief is something that I can have reasons for holding, but such rational relations seem to disappear when I adopt the materialist outlook. I’ll only find parts “pushing one another” and not parts “grounding one another”—standing as reasons for one another. This is the problem of finding a place for normative factors within the “realm of causes.” Or alternatively Leibniz’s complaint could be put in terms of how the materialist construal leaves the “what it is like” of perception out of the picture.

harmony of things.”²⁹ An expression of this alternative can be seen in his construal of the Trinitarian doctrine of the co-existence of the divine “persons” in one God, and the related doctrine of the incarnation of God in Christ. His reading of the trinity clearly starts with the 13th century “Dominican” account which stresses the relationality of the persons of the trinity, but it seems to drop the idea of an underlying “substance” required to think the ultimate “unity” of God.

Leibniz on the Trinity

Leibniz is often portrayed as an enlightenment rationalist whose exercise of reason constantly takes him in the direction of a modern secularised picture of the universe which he refuses to acknowledge. Recent scholarship, however, has presented a very different picture, and in particular, Maria Rosa Antognazza has shed helpful light on the relation between Leibniz’s public and private engagements with theological disputes and their relations to his metaphysical and epistemological views.³⁰ As mentioned, Newton himself had been an “Arianist” denier of the divinity of Christ, a view in keeping with his voluntaristic conception of a radically transcendent immaterial God.³¹ Leibniz, a Lutheran, was often representing the Catholic point of view of his employers, but this pro-Catholic stance seems to have been consistent with his desire for the re-establishment of a universal church. Moreover, his defence of trinitarianism in particular can also be seen as relating him to the type of heterodox, strongly *anti-voluntaristic* dissenting forms of Protestantism of thinkers like Böhme, and traceable back to the pre-nominalist, more Aristotelian-inflected approach of the 13th century and transmitted by the Dominicans. It was this approach to the trinity and the incarnation that could be read in quasi-pantheistic ways to signify the *immanence* of God in nature and thereby in humankind—Jesus standing in some sense as a representative of humans in general. Thus the doctrine of the incarnation could be taken as implying some sort of divinization of humans at the same time as the humanization of God. This conception clearly threatens to compromise God’s properties of omniscience, omnipotence and omnipresence at the same moment that it attributes to humans a greater degree of knowledge, freedom than as found in the voluntarist theological framework of Newton.

The doctrine of the Trinity had been elaborated during the first centuries of the Christian era by incorporating aspects of Greek neo-Platonic philosophy into a theology that came out of the Old Testament. The official version, institutionalised in the Council of Nicea in the 4th century was a rather shaky compromise, attempting to steer between various heresies. Followers of Arius, for example, had thought the trinity idea incompatible with monotheism, and so denied the divinity of Christ and the Holy Spirit. Followers of Sabellius, on the other hand, watered down the trinity idea to the “modalist” claim of the three persons as just different aspects or faces or “masks” or “modes”—of a single substance. Just as “triangle” and “trilateral” can be thought of as two names for the same geometric object, so too could the names of the three “persons” of the trinity. The official view shaped by early

²⁹ Quoted in Antognazza, *Leibniz on the Trinity and the Incarnation*, p. xxi.

³⁰ Antognazza, *Leibniz on the Trinity and the Incarnation*. For the most part I follow Antognazza’s account here.

³¹ Arius was an early Christian for whom Jesus was, while the highest of God’s creations, not God, as the doctrine of the trinity had proclaimed. He was declared a heretic at the First Council of Nicea in 325, but such anti-trinitarian doctrines had a revival in the 16th and 17th century. The renewal of this dispute was effectively an extension of the earlier disputes of the reformation over such “mysteries” as the transubstantiation. For an overview, see William Rusch, *Trinitarian Controversy* (Philadelphia: Fortress Press, 1980).

theologians like Augustine and Boethius tried to utilize ideas from Aristotelian philosophy like “essence” and “relation” to try to reconcile the idea of three “persons” in the one God, and with the re-birth of intellectual inquiry in the thirteenth century, and the rediscovery of Aristotle’s philosophy, the task of making the notion of the Trinity intelligible became a central problem. Two opposed ways seem to have emerged, supported by Dominican and Franciscan thinkers respectively. The Dominicans followed Thomas Aquinas in positing the fundamentally *relational* nature of the divine “persons” modeled on familial relations such as “father of” and “son of”. But Aristotle had used the idea of being the father of as also exemplifying a certain sort of causal property—that of being a generative cause of something else, and the Franciscans thought of the “relational” status of paternity as reducible to an underlying causal property”. The idea was that a father was a father not simply in virtue of the fact of standing in relation to an offspring, but because he had *generated* that offspring. But, the Franciscans also employed an interesting *psychological* model for understanding the trinity. Since Jesus had been characterized as the “word” of God, the relation of Jesus to God was thought of along the lines of the relation of the function of cognition of the mind to the mind itself. Similarly, the Holy Spirit was then thought of in terms of the mind’s volitional dimension. In any case, the Franciscans veered towards a nominalist dismissal of talk of *essences* and tended to favour putting the solution to the problem *beyond* human powers. Dominicans, wedded more to Aristotelian philosophy, were accused of overrating the power of the human intellect and underrating the power of Gods will. After the Reformation in particular there had been a revival of ancient criticisms of the doctrine of the trinity on the basis of its irrationality.

From his early years Leibniz had apparently tried to link considerations from the philosophy of mind to the doctrine of the trinity. Before going to Paris in 1672, Leibniz had written to Antoine Arnauld, trying to interest him in his own approach to the mind because of the *consequences* it had for understanding the notion of the trinity. Leibniz was in fact employing the psychological model that nominalists had taken from Augustine in which the trinity was meant to stand in an analogical relation to the human mind.³² With this backward-looking view, then, Leibniz had a model of the mind that was in stark opposition to other early modern views like that of Descartes, who portrayed the mind as a type of self-transparent, uniform and unitary immaterial substance.

As we have noted, theologians had attempted to identify the different “persons” of the trinity with different psychological attributes—cognition, will, and so on. Leibniz applies the trinity idea to give a different account of human mindedness, however. As an adumbration of the trinity-structure, any individual, finite self-conscious mind is *necessarily* split up into different aspects—but now rather than this being thought in terms of component faculties or functions, it is centered on to the idea of the mind’s *self-consciousness* or *self-relatedness*. From this point of view, what is distinctive about the mind is its capacity to reflect upon itself, taking itself as its own object. This is the idea from which Descartes, of course, starts, but, for Leibniz, this idea is taken in a far more complex way than that found in Descartes. When I self-consciously reflect, I can think of *myself* as occupying different roles: I can think of myself as the *subject of the act of thinking*, or as the *object that’s thought about*, or finally as *this very act of thinking* itself, in which the poles of subject and object are separated, and yet, in some way, identified. “Now, the way in which different persons can be observed in a thing one in number is nowhere better illustrated, as far as I know, than by the Mind understanding itself. It is in fact clear that there is a certain

³² Antognazza, *Leibniz on the Trinity and the Incarnation*, pp. 41–7, 80–3. See also, Samuel Powell, *the Trinity in German Thought* (Cambridge: Cambridge University Press, 2001), ch. 2.

distinction between that which understands and that which is understood, one of which has the power of perceiving, the other the power of manifesting. Either of the two is the same mind one in number; and nevertheless it cannot wholly and in every respect be said that one is the other, since they are correlated entities.”³³ The trinitarian correlates of this idea of the mind are apparent. The mind in subject position stands to itself *as object* akin to the way that God the father stands to the Son. This model of self-othering in thought, to use a somewhat awkward phrase, can find application in all sorts of ways. For example, think of intending to act in a certain way and then so acting. In acting I make *actual* what was originally a subjective state of myself—I give my intention an objectivity that can now be known and reflected on in a different way, known and reflected on by others, for example. One might think of this according to the metaphor of giving birth to some future state of oneself. Of course I remain the same person throughout this process: the “father” and the “son” are, as it were, united in the “holy spirit.”

Some of the consequences of this rather complex way of thinking of the mind on the analogy of the trinity would later unfold in the periods of German idealism and early romanticism. The fundamental development, I suggest, would be to make good on Leibniz’s suggested de-substantializing the notion of mind itself, and rather to conceive of it more as some type of self-relating process or activity immanent within the body—in Fichte’s words, a “*Tathandlung*” rather than a “*Tatsache*” an “action-fact” rather than a “thing-fact”. This was not totally unprecedented. Already around the middle of the 18th century David Hume had attacked the idea of the mind as a type of thing or substance. One might think of the mind as a type of theatre, he wrote, “where several perceptions successively make their appearance; pass, repass, glide away and mingle in an infinite variety of postures and situations.”³⁴ But, he warns, we should not get misled by the metaphor as is no analogue of the theatre as the place in which these things occur: “They are successive perceptions only, constitute the mind; nor have we the most distant notion of the place where these scenes are represented, nor of the material of which it is composed.”³⁵

So the idea of de-substantializing the mind was not new. In fact, the denial that the *divine* mind is a substance was to be found in the philosopher *Proclus*, who had criticized *Plato himself* for implicitly attributing “being” to “the one.”³⁶ What the idealist followers of Leibniz did was to add to it the idea that the successive perceptions constituting the mind not be treated as linked like natural events. Rather, they were treated as linked by acts which constituted the thinker, even if these acts were just acts of endorsements of what was made present in sensation as knowledge of the external world. Importantly, these acts differed from merely natural events by their being subject to evaluation as justified or

³³ Leibniz, *De Deo Trino*, quoted in Antognazza, *Leibniz on the Trinity and the Incarnation*, p. 80. In various notes, Leibniz, following Augustine, attempts to link the persons of the trinity to aspects, or dimensions, of the mind—for example, the three persons are respectively linked to the mind’s “being,” “knowledge,” and “will.” *Ibid.*, p. 221, note 26.

³⁴ David Hume, *A Treatise of Human Nature*, Ed. D. F. and M. J. Norton (eds), (Oxford: Oxford University Press, 2000), Vol. I, Book I, part iv, section vi.

³⁵ *Ibid.*

³⁶ In his *Commentary on Plato’s Parmenides*, Proclus criticises Plato for regarding being as “superior” to non-being. But to consider something as “being” is to consider it as the subject of assertion, and one should not regard “the one” in this way as it is “above form, and it is not suitable to apply to it any of those attributes which are proper to secondary things, nor to transfer to it attributes proper to us”. Proclus, *A Commentary on Plato’s Parmenides*, trans. John M. Dillon and Glenn R. Morrow (Princeton, NJ: Princeton University Press, 1987), p. 426.

unjustified—acts conceived as in some sense governed by norms or rules. Within this framework, the original “trinitarian” model of the mind is discernable. For Fichte, the mind or the “I” keeps actively reproducing itself—keeps giving birth to itself, as it were—in such a series of these acts.³⁷ In this sense, Fichte’s model seems to draw upon the Franciscans’ way of thinking of the persons of the trinity in terms of the primacy of the idea of generation. Hegel, however, gave this model a “Dominican” twist, by focusing on the “relational” parts aspects of the trinity idea. Hegel’s basic idea here, was that immediate self-reflection is in fact empty: Self-consciousness cannot be direct, I can only become a conscious object of my own thought through a presupposed consciousness of things that are not me, and paradigmatic among those objects are other beings like me whom I treat as having minds. So, for example, I can only get a sense of myself as an acting subject by recognizing intentions that I have and act upon as expressed in the actions of others. And this too, is internally complex. First, I see analogues of my action-intentions in the worldly actions of others, actions that are already, as it were, objectified, but these actions include ones which refer to me, or acknowledge me as an agent in the same world as those others. I recognize others, recognizing me, and so on. For Hegel, the mind cannot be extricated from these complex forms of cognitive interaction. You cannot peel away the layers of relations within which my mind is inserted, and find anything distinctively me at the core. The mind is just not a thing, entity or substance, the identity of which can be perceived underneath its properties and relations. To have a mind is to have a type of normative status, that doesn’t exist independently of its being recognized by oneself and others.³⁸

The roots of all this, I’m suggesting, are to be found in Leibniz’s original formulations. Nicholas Jolly has stressed the organizing role for Leibniz’s thought of a neoplatonist image of the divine is something ultimately reflected in the interrelated finite minds of humans as in a mass of mirrors.³⁹ This image from the German mystical tradition is linked to the theologically radical idea in Böhme that God, as essentially self-knowing, is in some way *dependent* upon such mirrors so as to be able to recognize his own features in an inverted way in those finite reflections. But the capacity of mirrors to reflect God just is their capacity to reflect the contents of *each other* in a way that harmonizes all the differences. It was this structure that was exemplified in the idea of the trinity itself as an indeterminate unity dispersed into three persons who recognize their unity in their differences. The relational unity in which the three persons exist is not something of the same kind as those constituted by the persons themselves, but neither is it some higher independent substance of which the persons are accidents as “modalism” suggests.

As a model for the mindedness of human beings, Leibniz’s monadology opened up directions in philosophy within which notions of the human and the divine and the natural and the normative domains that they signify could be gradually detached from a traditional metaphysics of substances. As such it promised ways of taking conceptions of human subjectivity beyond the materialist-immaterialist dichotomy that enframed debate in the seventeenth century and that has continued to enframe it for much of the period since.

³⁷ For an account of Fichte’s philosophy of mind see my *The Logic of Affect* (Ithaca: Cornell University Press, 1999), ch 5.

³⁸ The *locus classicus* of Hegel’s socially cognitive account of the mind is to be found in the famous “master-slave” dialectic in G. W. F. Hegel, *Phenomenology of Spirit*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), ch 4.

³⁹ Nicholas Jolly, *Leibniz* (London: Routledge, 2005).