

3.4 *Dynamics and the refutation of occasionalism*

Leibniz's dynamics was central to his program for physics. In the next section we shall see how his account of force is connected with his conception of the world of the mechanical philosophy and the mathematical laws that govern it. But the dynamics was also connected with an important theme in Leibniz's metaphysics, the rejection of occasionalism.

The doctrine of occasionalism was central to seventeenth-century metaphysics, particularly among the Cartesians. In this widely held view, the changes that one body appears to cause in another upon impact, the changes that a body can cause in a mind in producing a sensation, or a mind can cause in a body in producing a voluntary action are all due directly to God, moving bodies or producing sensations in minds on the occasion of other appropriate events. The doctrine of occasionalism is sometimes presented as having been primarily a solution to the problem of mind/body interaction; since it is inconceivable how minds and bodies can interact, it is argued, seventeenth century philosophers held that it is God who connects the motion of the sensory organs with the sensation in the mind, and the volition in the mind with the voluntary motion of the body. But in reality, the motivation for the doctrine among most seventeenth-century philosophers is somewhat different.⁷⁰

For many of Descartes' later followers, what is central to the doctrine of occasionalism is the denial of the efficacy of finite^{*1/} causes simply by virtue of their finitude. Clerselier, for example, argues for occasionalism by first establishing that only an incorporeal substance can cause motion in body. But, he claims, only an infinite substance, like God, can imprint new motion in the world "because the infinite distance there is between nothingness and being can only be surmounted by a power which is actually infinite."⁷¹ Cordemoy argues similarly. Like Clerselier, he argues that only an incorporeal substance can be the cause of motion in a body, and that this incorporeal substance can only be infinite; he concludes by saying that "our weakness informs us that it is not our mind which makes [a body] move," and so he concludes that what imparts motion to bodies and conserves it can only be "another Mind, to which nothing is lacking, [which] does it [i.e., causes motion] through its will."⁷² And finally, the infinitude of God is crucial to the main argument that Malebranche offers for occasionalism in his central work, *De la recherche de la vérité*. The title of the chapter in which Malebranche presents his main arguments for the doctrine is "The most dangerous error in the philosophy of the ancients."⁷³ And the most dangerous error he is referring to is their belief that finite things can be genuine cause of the effects that they appear to produce, an error that, Malebranche claims, causes people to love and fear things other than God in the belief that they are the genuine causes of their happiness or unhappiness.⁷⁴ But why is it an error to believe that finite things^{*2/} can be genuine causes? Malebranche argues as follows:

As I understand it, a true cause is one in which the mind perceives a necessary connection between the cause and its effect. Now, it is only in an infinitely perfect being that one perceives a necessary connection between its will and its effects. Thus God is the only true cause, and only he truly has the power to move bodies. I further say that it is not conceivable that God would communicate to men or angels the power he has to move bodies.⁷⁵

For these occasionalists, then, God must be the cause of motion in the world because only an infinite substance can be a genuine cause of anything at all.

Leibniz's dynamics is intended as a direct challenge to occasionalism; rather than inert extended bodies shuffled about by a God

who is the only source of genuine activity in the world, Leibniz posits genuinely active bodies,⁷⁵ bodies that are the source of their own activity, bodies, in short, that genuinely embody forces.⁷²

Leibniz offers a number of arguments to this conclusion.⁷⁶ One of them was discussed in section 3.1, in connection with the refutation of the Cartesian conception of body as extension. There, Leibniz argues that God gave bodies forces, that is, the ability to act because otherwise he would always have to carry out his commands himself. More generally, Leibniz argues that occasionalism involves a perpetual miracle insofar as on that doctrine, God must carry out his own commands. Leibniz writes to Arnault:

Properly speaking, God performs a miracle when he does something that surpasses the forces he has given to creatures and conserves in them. . . . Thus . . . we must say . . . that if continuing motion exceeds the force of bodies, then the continuation of the motion is a true miracle. But I believe that corporeal substance has the ability [*force*] to continue its changes in accordance with the laws God put into its nature and conserves there.

(Letter to Arnault, 30 April 1687, G II 93; AG 83)

Leibniz also argues that placing force and activity in bodies is necessary for them to exist as genuine entities, independent of God. And so, he writes in section 8 of "On Nature Itself" (1698):

The very substance of things consists in a force for acting and being acted upon. From this it follows that persisting things cannot be produced if no force lasting through time can be imprinted upon them by the divine power. Were that so, it would follow that no created substance, no soul would remain numerically the same, and thus nothing would be conserved by God, and consequently everything would merely be certain vanishing or unstable modifications and phantasms, so to speak, of one permanent divine substance.⁷⁴ Or, what comes to the same thing, God would be the very nature or substance of all things,⁷¹ a sort of doctrine of ill repute which a recent writer, subtle indeed, though profane, either introduced to the world or revived.

(G IV 508–9; AG 159–60; cf. G IV 396–97; AG 253–54; G IV 567–68; L 583; SD part I, par. 12, GM 242; AG 125)

The argument is obscure, to be sure. But Leibniz is attempting to argue here that unless we follow him away from the occasionalist and toward the dynamical conception of body that he is arguing for, we will find ourselves in Spinoza's camp, where everything exists only as a mode of God, a doctrine he regarded as both false and dangerous.

It is certainly too much to say that Leibniz's physics constitutes a "scientific" refutation of the doctrine of occasionalism; though connected with his dynamics, the arguments against occasionalism have a definite metaphysical flavor. But it is true that the dynamical world of primitive and derivative forces is deeply intertwined with a central aspect of Leibniz's metaphysical program, returning to the world the activity that the Cartesians had improperly removed. //