# 1

# The Scholastic Context

In his 1696 *Doubts concerning the Physical System of Occasional Causes* (*Doutes sur le systeme physique des causes occasionnelles*), the then-future perpetual secretary of the Paris Académie des sciences, Bernard le Bovier de Fontenelle, offered an introductory *histoire des causes occasionnelles*. There he claims that "occasional causes are not ancient," but in fact derive from the dualism of Descartes. Descartes's view that mind as thinking substance is really distinct from body as extended substance introduced "an extreme disproportion between that which is extended and that which thinks." Given this disproportion, the question arose "how bodily motions cause thoughts in the soul" and "how thoughts in the soul cause motions in the body." Recognizing that motion and thought "have no natural connection" and therefore cannot "be regarded as real causes," Descartes "invented" the theory of occasional causes, according to which "God on the occasion of bodily motion, could imprint a thought in the soul, or on the occasion of a thought of the soul, imprint a motion in body" (Fontenelle 1989–2001, 1:529–30). Here is an early source for the old textbook view that occasionalism arose from the problem in Descartes of explaining how substances as different in nature as mind and body could interact.

In fairness to Fontenelle, it must be said that he does not endorse the suggestion in the textbooks that occasionalism is merely an ad hoc solution to the Cartesian problem of mind–body interaction.[1] He notes in the *Doubts*, after all, that Descartes appealed to the "occasional causes that owed their birth to the system of the soul" in order to provide an explanation of how motion can be communicated in collision.

1. For the textbook view, see also the English-language literature cited in Nadler 1997, 75–76, n.1, and the German- and English-language literature cited in Perler and Rudolph 2000, 15, n.1. The authors of the texts including these citations are themselves critical of this view.

According to Fontenelle, Descartes made "God the true cause that, on the occasion of the collision of two bodies, transported the motion of the one into the other" (1:530). To an extent, then, Fontenelle anticipates the recent objection that early modern occasionalism addressed problems concerning the physics of force, as well as those concerning the metaphysics of dualism.[2]

Even so, the view common to Fontenelle and the textbooks that occasionalism originated in Descartes is, in a word, false. In fact, the theory was quite ancient by the time of Descartes's birth. Occasionalism owes its origins not to Cartesian metaphysics and physics, but rather to a view of divine omnipotence that was prominent within a certain group of medieval Islamic theologians. Islamic occasionalism was subject to attack during the High Middle Ages, when a consensus was reached that settled on the position that God as "primary" cause communicates his power to "secondary" causes in nature. Later thinkers proposed importantly different accounts of secondary causality, but by the beginning of the seventeenth century occasionalism was all but a dead theory. So much so, in fact, that one early modern scholastic—to be discussed below—could find no recent author who unequivocally endorsed the view that "created things do nothing but that God instead effects all things in their presence" (*MD* XVIII.1, ¶1, 1:593).

At best, then, problems in Descartes led to the revival of an old and, by the start of the early modern period, largely discredited theory of occasionalism. The question of whether Descartes himself endorsed a version of occasionalism is one that we will address in due course. Before taking up his views concerning causation, however, we need to consider the context in which these views were developed. This context is provided by Aristotelian scholasticism, which at the beginning of the early modern period was a dominant intellectual force in Europe. The importance of scholasticism is particularly evident given Descartes's own appeals in his discussions of causation in the *Meditations* and elsewhere to scholastic axioms such as that the effect must be contained "formally or eminently" in its cause and that the continued existence of the world depends on a divine act not distinct from his creation of that world (see chapter 2). Closer consideration reveals that the axioms to which Descartes appealed were in fact linked to profoundly anti-occasionalist theories of causation. By itself, this fact does not reveal that Descartes himself rejected occasionalism. There remains the possibility that he had a revolutionary understanding of the old scholastic concepts. But to see what he did in fact think, we need to consider how he stood in relation to scholastic accounts of causation.

In §1.1, I begin my consideration of the scholastic context of Descartes's theory of causation with the medieval rejection (or, better, rejections) of occasionalism. I turn first to the most prominent form of occasionalism in the medieval period, which derives from the Islamic tradition. My somewhat selective survey of Islamic occasionalism focuses on the discussion of this position in two important medieval sources. Then I examine two different alternatives to this theory in the work of Thomas Aquinas (1225–74), the Dominican church father, and of his Dominican

2. For this objection, see, for instance, Nadler 1997. Cf. the similar anticipation in the views in Smith 1902 considered in the introduction.

critic, the theologian and bishop Durandus of Saint Pourçain (†1334). Thomas held against the occasionalists that though all operations in nature involve the operation of the divine will, nonetheless God acts with "secondary causes" to bring about natural effects. He concluded that the divine operation that results in such effects is compatible with the genuine efficacy of these secondary causes. Here Thomas offered a view that Dominik Perler and Ulrich Rudolph, in their comprehensive study of medieval and early-modern occasionalism, have labeled "causal compatibilism."[3] Durandus later protested that Thomas's response to the occasionalists deprives creatures of their causal power, and claimed that occasionalism can be resisted only if the divine contribution to creaturely causality is limited to God's creation and conservation of secondary causes. Durandus's "mere conservationism," as Alfred Freddoso has called it,[4] was widely rejected in later scholasticism, and it may seem to provide no more than a footnote to the story of the medieval rejection of occasionalism.[5] However, we will discover that his position is surprisingly relevant to Descartes's theory of causation.

In §1.2, though, I move to an account of causation in closer temporal proximity to Descartes, namely, the one in the work of the prominent early modern scholastic, the Spanish Jesuit Francisco Suárez (1548–1617). In singling out Suárez, I do not mean to suggest that his position is representative of scholasticism in general. In fact, it has become increasingly clear to scholars that early modern scholasticism was not a monolithic doctrine, but involved different mixtures of nominalist, Ockhamist, Scotist, or hard-line Thomist positions with basic Aristotelian doctrines.[6] But though Suárez was merely one scholastic among many, he is particularly important for our purposes, since he wrote what is perhaps the most comprehensive treatment of causality in the early modern period. In this treatment, which he included in his massive *Metaphysical Disputations* (*Disputationes Metaphysicæ*) (1657), Suárez follows Aristotelian orthodoxy in distinguishing four main causes, namely, material, formal, efficient, and final.[7] Yet he anticipates Descartes's views in taking efficient causality to provide the paradigmatic instance of causation. Moreover, as part of his treatment of efficient causality, Suárez offers a sophisticated account of God's causal contribution to the course of nature. In particular, he develops positions in Thomas by arguing not only that divine conservation is required for the world to remain in existence, but also that this act of conservation does not differ from God's initial act of creation *ex nihilo*. He further articulates Thomas's causal compatibilist alternative to occasionalism in terms of the position that God contributes a "concursus" to the action of secondary causes that is distinct from his act of conserving such causes in existence.

I close in §1.3 with a brief consideration of the path from the scholastic account of causality in Suárez to Descartes's theory of causation. Descartes's theory is coupled

3. See Perler and Rudolph 2000, 154, which refers to Thomas's position as "Kompatibilismus als Gegenmodell zum Occasionalismus."

4. See Freddoso 1991.

5. As it is, indeed, in Perler and Rudolph 2000, 245, n.1.

6. For two recent discussions of early modern scholasticism that draw attention to its complexity, see Des Chene 1996 and Menn 1997.

7. But see note 31.

with a spare ontology that does away with many of the forms and qualities that are prominent in Suárez's account. Nevertheless, I have indicated that Suárez's emphasis on efficient causality prepares the way for Descartes. Moreover, the discussions in Suárez of divine creation and conservation are linked to Descartes's own treatment of these notions, which are central to his theory of causation. Far more than the position of the medieval Islamic occasionalists, Suárez's views provide an appropriate standard against which to measure what Descartes has to say about causation.

## 1.1. MEDIEVAL REJECTIONS OF OCCASIONALISM

### 1.1.1. Medieval Islamic Occasionalism

Medieval Islamic occasionalism is an extraordinarily complex historical phenomenon, involving various debates among Islamic theologians and philosophers dating from the eighth century. I cannot hope in my brief survey here to provide an exhaustive discussion of its development.[8] However, I would like to present some basic features of the position by means of a consideration of two medieval sources, the first a late-twelfth century discussion of Islamic occasionalism from an outsider, and the second an insider's account of this position dating from the end of the eleventh century. The former is found in the *Guide of the Perplexed* (*Dalālat al-Hā'irīn*) (c. 1190), a text of Rabbi Moshe ben Maimon, better known by his Greek name, Maimonides. Chapter 73 of the first part of the *Guide* concerns the views of the Mutakallimūn, a group of "dialectical theologians" within medieval Islam. At the time Maimonides wrote, there were two main schools within this group, the first the Basrah School of Mu'tazila, and the second the Ash'arite School associated with the former Mu'tazilite, the tenth-century theologian As'arī (Abū l'Hasan al-As'arī). There are various methodological and doctrinal differences between the two schools,[9] but the one most important difference for our purposes concerns the issue of causality. In particular, Maimonides notes that whereas most of the Mu'tazilites allowed that created powers can produce effects, the majority of the Ash'arites regarded as "abhorrent" the view that such powers displace God as the cause of effects in nature (Maimonides 1963, 1:203). The Ash'arites were thus the main medieval proponents of the occasionalist doctrine that God is the only real cause.

In chapter 73, Maimonides offers twelve "premises" that he took to be common to the Mutakallimūn. Given the disagreement over occasionalism, he understandably did not include this doctrine in the list. However, the issue of occasionalism is

8. But see the thorough treatment of medieval Islamic occasionalism in Perler and Rudoph 2000, 23–124.

9. For instance, the Mu'tazalites tended to emphasize more the power of natural human reason to discover moral and political truths, whereas the Ash'arites tended to emphasize its limitations with respect to the grasp of such truths. Moreover, members of the former school tended to emphasize the indeterministic freedom of the human will, whereas members of the latter school tended to emphasize God's predetermination of all events, including human action.

broached in Maimonides' discussion of the sixth premise, namely, that an accident cannot "endure for two units of time" (Maimonides 1963, 1:194). The third premise attributed to the Mutakallimūn has it that these units are discrete indivisible instants that compose time. Maimonides claims that it was a view of "the majority" that in order for a certain type of accident to endure over time, God must create at different instants numerically distinct accidents of the same species (1:200).[10] Moreover, when there is any change in accidents, it is God who brings about this change. Thus, "when we, as we think, dye a garment red, it is not we who are by any means the dyers; God rather creates the color in question in the garment when the latter is in juxtaposition with the red dye" (1:201). In general, the view attributed to the Mutakallimūn is that "God creates at every one of the instants—I mean the separate units of time—an accident in every individual among the beings, whether that individual be an angel, a heavenly sphere, or something else" (1:203).

The evidence that the Mutakallimūn endorsed an atomistic conception of time seems to be rather thin. One commentator has claimed that the only clear endorsement of such a conception is found in a single text of one of Maimonides' Islamic contemporaries, Fakhr al'Dīn al-Rāzī, who was in fact not a typical Mutakallim (see Schwartz 1991, 177).[11] However, Maimonides may well have thought that the conclusion that time is atomistic simply follows from other doctrines that predominate in the writings of the Mutakallimūn. Indeed, in the *Guide* he claims that such a conception follows merely from the first premise he attributed to these thinkers, according to which every body is composed of indivisible atomic parts. If this conception does follow from the premise, then there would be good reason to attribute it to the Mutakallimūn, since almost all such thinkers accepted an atomistic account of matter (see Schwarz 1991, 169). Maimonides' argument that it does so follow appeals to the result in Aristotle that distance, time, and local motion must be proportionate (Maimonides 1963, 1:196).[12] Given this result, if time were infinitely divisible, the particles that these thinkers took to be atomic would have to be infinitely divisible as well.

One problem for this argument is that the infinite divisibility of time seems to require the infinite divisibility not of the particles themselves, but only of the distance they travel. However, another option for Maimonides would be to link the atomistic conception of time to the sixth premise that accidents cannot endure through time. This proposition can be found in Islamic texts dating back to ninth century, and was indeed, as Maimonides reports, a view popular among the Ash'arites, who formed the majority of the Mutakallimūn (see Schwarz 1991, 194).[13] Given this opinion, it would seem

10. Maimonides mentions the minority view of the Mu'tazilites that certain accidents can endure through time.

11. Indeed, Schwarz's conclusion is that of the twelve premises mentioned in the *Guide*, the evidence confirms a source in the writings of the Mutakalimūn only for "Maimonides' premises 1, 6, 7, 8, 9, and 11. For the rest of the premises the evidence seems partial at best" (Schwarz 1991, 172).

12. This result follows in turn from the Aristotelian definition of time as the measure of motion.

13. Schwarz notes that the Ash'arite Bāqillānī (†1013) defined an accident as that which cannot exist longer than an instant (Schwarz 1991, 185).

to follow that accidents cannot endure through any divisible portion of time, and so can exist only at an indivisible instant.

Of course, the atomistic conception of time does not itself entail that God alone can be a cause of the accidents that exist at any given moment. Maimonides indicates that Islamic occasionalists attempted to rule out the claim that accidents can cause other accidents by appealing to the premise that "an accident does not go beyond its substratum" (Maimonides 1963, 1:202). This premise seems to derive from the thought that an accident is something that merely inheres in its substance, and thus that is incapable of bringing about anything other than this inherence. Such a premise still seems to leave open the possibility that the substance produces the accident that inheres in it. However, one reason to rule out the substance as a cause is suggested by the view, which Maimonides attributes to the Mutakallimūn, that earlier and later accidents are linked by means of a "habit" that God imposes (1:201). We can understand this habit to consist in a lawlike correlation between the accidents. Even if a substance could produce its own accidents, it does not follow that it can institute the law that serves to connect these accidents to other accidents. Indeed, the assumption among the Mutakallimūn is that only God could establish a lawlike correlation that holds for all of the relevant accidents. Thus in the case of a human agent moving a pen, it must be that "God has instituted the habit that the motion of the hand is concomitant with the motion of the pen, without the hand exercising in any respect an influence on, or being causative in regard to, the motion of the pen" (1:202). God institutes the habit operative in this case by producing in successive instants the accidents that constitute the motion of the pen.

In the medieval Islamic philosophical tradition, there was an alternative to this account of the lawlike habits that hold in nature. Drawing on a mixture of Aristotelian and Platonic (or Neoplatonic) positions, philosophers such as Farābī (Abū Nasr Muhammad al-Farābī), in the tenth century, and Avicenna (Abū 'Ali al-Husayn ibn Sī-nā), in the eleventh century, insisted that the natural course of events derives necessarily from certain "forms" that though emanating ultimately from God through pure intelligences, nonetheless exist in created objects. Perhaps the most direct response among the Ash'arites to this position in "the philosophers" was provided by Ghazālī (Abū Hā mid al-Ghazālī). In his *Incoherence of the Philosophers* (*Tahāfut al-Falāsifah*) (c. 1095)—our second medieval source for Islamic occasionalism—Ghazālī offers refutations of the purported demonstrations in the work of the Islamic philosophers of twenty propositions concerning metaphysics and the natural sciences. The discussion of propositions concerning the natural sciences begins with the seventeenth proposition, according to which any departure from the natural course of events is impossible. To defend the possibility of miraculous events, Ghazālī argues that the relations between natural causes and their effects are not absolutely necessary since they derive ultimately from the divine will. The sort of causes and effects of concern in the natural sciences "are connected as the result of the decree of God (holy be his name), which preceded their existence" (Ghazālī 1958, 185).

In contrast to what one might expect from Maimonides' remarks in chapter 73 of the first part of the *Guide*, the section on causation in the *Incoherence* emphasizes neither the atomistic conception of time nor the restriction of accidents to a single

instant.[14] Rather, this section opens with what we could call (following Nadler 1996) the "no necessary connection argument." In particular, the argument is that the relations between what we take to be causes and their effects cannot be necessary given that the affirmation of the existence of the one does not logically require the affirmation of the existence of the other, nor the denial of the existence of the one the denial of the existence of the other (Ghazālī 1958, 185). It may seem a bit of a leap to Ghazālī's subsequent claim that cause and effect "are connected as a result of the decree of God" (185). Why couldn't there be some other source of the necessity? However, Ghazālī argued earlier in the *Incoherence* that the action involved in causation can be attributed only to the will of an agent.[15] Moreover, it seems that an effect can follow necessarily only from the will of an omnipotent being. To be sure, Ghazālī's claim that God acts either directly or "through the intermediacy of angels" (186) seems to leave open the possibility that the wills of finite beings necessitate effects. I return to this complication presently. However, it is significant that even in the case in which angels serve as intermediaries, God is said to be the agent responsible for causal relations in nature.

Given the strong claim in the *Incoherence* that causal relations hold only because God "has created them in that fashion, not because the connection in itself is necessary and indissoluble" (Ghazālī 1958, 185), it is not surprising that this text is standardly read as a defense of occasionalism. However, there are some complications for such a reading. I have just noted the complication deriving from the suggestion in the text that God can act through "the intermediacy of angels." Yet there is the further complication that Ghazālī presents in the *Incoherence* not one but two alternatives to an account of causation that precludes miraculous events. In addition to the suggestion that God produces the causal correlations either directly or through the intermediacy of angels, he offers a second position that concedes the point of the philosophers that objects have certain attributes in virtue of which they "habitually" produce certain effects, and merely insists that God can miraculously impede or change the speed of natural processes (see Ghazālī 1958, 190–91). In the *Incoherence of the Incoherence* (*Tahāfut al-Tahāfut*) (c. 1180), Ghazālī's twelfth-century critic Averroes (Ibn Rushd) takes the fact that he offered this second account to indicate his abandonment of the strong occasionalist denial of real causal efficacy in nature, and others have insisted more recently on a non-occasionalist interpretation of his views on causation.[16]

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14. It is unclear whether Maimonides read Ghazālī's work (as indicated in the editorial comments in the introduction to Maimonides 1963, 1:cxxvii). Even if he did read it, however, the fact that he did not take note of Ghazālī's innovations may be explained by the fact that, as Perler and Rudolph have observed, what twelfth-century Ash'arite theologians had to say about causality "kingt vielmehr ganz konventionell" than what is found in the *Incoherence* (Perler and Rudolph 2000, 109; cf. 115).

15. In particular, he argued for this conclusion in a discussion of the third proposition of the philosophers, according to which the created world follows necessarily from God's nature (see Ghazālī 1958, 63–64).

16. For this charge, see Averroes 1969, 1:316–33. For a more recent example of an interpretation that questions Ghazālī's commitment to occasionalism, see Frank 1992.

Nevertheless, there is some reason to think that Ghazālī offers the second account merely for the sake of argument, and not to indicate a shift in his position. After all, his main concern in offering this account is to show that miracles are intelligible even given certain aspects of the view of causation offered by the philosophers.[17] Admittedly, the reference to the intermediary action of angels cannot be explained away in this manner. However, I believe that Michael Marmura has shown that when Ghazālī speaks of angels as intermediaries, he means to indicate only "that they are the locus of divine action" (Marmura 1995, 99). This would seem to be in line with the emphasis in the text—which I noted previously—on the fact that the agent ultimately responsible for causal connections in nature is God rather than the angels. In any event, there is in the *Incoherence* a forceful statement of the occasionalist position that natural causes do not necessitate their effects, but are merely linked to them by divine decree. Moreover, the defense of this position is distinctive in the context of medieval Islamic thought, since it focuses not on the nature of time or of qualities, but rather on the lack of a necessary connection between perceived causes and their effects and the need for a grounding of causal relations in the omnipotent will of God. On both points Ghazālī anticipated the later argument for occasionalism in the work of Nicolas Malebranche. Thus, in his discussion in the 1674/75 *Search after Truth* (*Recherche de la vérité*) of the "error of the philosophy of the ancients," and particularly of the Aristotelian philosophy, regarding causation, Malebranche insists that a true cause by definition "is one such that the mind perceives a necessary connection [*liaison nécessaire*] between it and its effect," and that the mind perceives such a connection "only between the will of a necessary being and its effects" (bk. VI-2, ch. 3, Malebranche 1958–84, 2:316/Malebranche 1997, 450). The occasionalist challenge to causal realism that emerges from Ghazālī's *Incoherence* is to explain how the doctrine that creatures have real causal power can be reconciled with the result that all connections in nature that do not involve logical necessity derive from acts of the divine will that alone can suffice to establish their effects. A relevant question for us—broached by the remarks in Fontenelle's *Doubts* that I considered at the outset of this chapter—is whether Descartes joined Malebranche in issuing this sort of challenge.

### 1.1.2. Thomas's Causal Compatibilism

In a thirteenth-century text, *Questions on the Power of God* (*Quaestiones de Potentia Dei*), Thomas Aquinas devotes an article to a defense of the claim that "God operates in the operations of nature." However, he is concerned there to distinguish his view from the position reflected "in the law of the Moors, as Rabbi Moses [Maimonides]

17. For this argument, see Marmura 1981. Marmura also emphasizes that the point of the *Incoherence* is merely to refute the strong views of the philosophers, and not necessarily to defend the final truth on the matters discussed (see Marmura 1981, 98–99). Marmura also responds to Frank's more revisionist interpretation (see note 16) in Marmura 1995. But cf. the discussion of the Marmura-Frank exchange in Perler and Rudolph 2000, 71–73, which is critical of some features of Marmura's position.

relates," according to which all natural forms are mere accidents that God creates in objects. Thomas's initial response is that this position is "manifestly repugnant to the senses," since the senses merely passively receive the effects of sensible objects (*QPG* III.7, *TA* 13:58–59). Ghazālī anticipated this response when he noted in the *Incoherence* that sensory effects "are observed to exist *with* some other conditions," but we do not see that such effects "exist *by* them" (Ghazālī 1958, 186). Yet Thomas adds that it is "repugnant to the divine goodness" that God does not communicate to creatures the power to produce effects. Thus, he insists that "the operations of nature" follow from various created forms.[18] Moreover, he responds to the view of the Moors that everything in substance is a mere accident by drawing on his Aristotelian ontology of material substance, according to which such substances possess not only accidental forms, such as that of heat, that inhere in them, but also substantial forms that unite with matter to constitute the substances (*TA* 13:59). In this view, both kinds of forms serve as principles of natural operations, and thus are not merely passive effects of divine creation.[19]

Given Aquinas's position that natural operations derive from accidental and substantial forms, there may seem to be no room for his thesis that God operates in these operations. As we will discover, this was in fact the objection that Durandus later leveled against this thesis. However, Aquinas responds to this line of objection in *On the Power of God* by insisting that the operation of God in producing effects in nature is compatible with the operations of "secondary causes" in producing those same effects. He appeals here to the fact that we can understand a certain effect to be produced both by an instrument and by an agent who uses that instrument. An example he commonly uses to illustrate the nature of instrumental causality is that of an agent who uses a pen to write. The pen is a real cause of the written words, but is able to be efficacious in this way only because the agent uses it to produce this effect. Similarly, Aquinas holds that though contrary to the view of the Islamic occasionalists, secondary causes can produce effects, nonetheless they cannot produce these effects through their own power (*per virtutem propriam*), but must participate in the power of a "primary" or "principal" cause, namely, God. In this way, a secondary cause is "the instrument of the divine power of operating" (*instrumentum divinæ virtutis operantis*) (*QPG* III.7, *TA* 13:60).

To understand the nature of this "power of operating," we need to compare it to the other two divine powers of operation that are essential for the existence of the world, namely, creation and conservation. In his *Summa Theologiae*, Thomas claims that any being that does not exist by its own nature and thus is a being only "by

18. This response assumes that God can communicate his power to creatures, and thus seems to beg the question against the die-hard occasionalist who insists that it is not possible for God to so communicate, and thereby that his failure to do so does not detract from his goodness. Aquinas offers various other arguments against occasionalism, but these additional arguments also arguably (though I cannot argue here) employ premises the occasionalist would reject. For a discussion of these other anti-occasionalist arguments, see Perler and Rudolph 2000, ch. 4.

19. I say more about the details of Suárez's version of this position in §1.2.1. See also the remarks concerning Suárez's metaphysics in §§1.3 and 3.2.1 (iii).

participation"—that is, any being other than God—can exist in the first place only because of a creative act of God (*ST* I.44.1). Since all being by participation depends on this creative act, moreover, the act must involve the creation of being from nothing, that is, creation *ex nihilo* (*ST* I.45.1).

Thomas also holds that just as all beings by participation depend on God's act of creating *ex nihilo* to exist in the first place, so they depend on his act of conservation to continue to exist. In arguing for the need for this additional dependence on God, he appeals to the distinction—which, as we will discover in due course, later became important for Descartes[20]—between *causae secundum fieri*, or causes of becoming, and *causae secundum esse*, or causes of being. Thomas notes that though a house can continue to exist without its builder, this is only because the builder is a *causa secundum fieri* that directly produces not the being of the house and its material, but only its coming to be a house through a certain arrangement of the material. Even in cases of natural operations that involve more than mere arrangement, such as when accidental or substantial forms act to produce similar forms in matter, the former are not causes of the very being of the latter. If they were, the forms would have to cause their own being, which they share with the being of what they produce. Rather, the producing forms merely "educe" produced forms similar to them that are contained potentially in matter (*ST* I.104.1).

In contrast, Thomas claims that in cases where the cause is "more noble" than the effect, it can be a cause *secundum esse* that produces the being of the form itself. He appeals to the fact that the sun does not merely educe light from the air, but rather creates a new form that "has no root" (*non habet radicem*) in the nature of air.[21] Because the air alone cannot support the existence of this new form, light depends essentially on the continuing action of the sun. Thomas claims that creatures depend on God in the same manner, and thus that without the continued action of God, creatures would cease to exist (*ST* I.104.1). It is important to emphasize the point here that conservation involves merely the *continuation* of God's act of creation. For Thomas himself responds to the objection that conservation cannot add anything to the creature not already provided by creation by noting that God conserves creatures in existence "not by a new action, but by a continuation of that action whereby he gives being" (*ST* I.104.1, ad 4).

In *On the Power of God*, Aquinas recognizes as an objection to his own position that the only operation of God involved in the operations of nature is that by which he "either makes or conserves in being a natural power" (*QPG* III.10, *TA* 13:57). However, he responds that "God is not only the cause of the operations of nature that conserve natural powers in being, but in other modes, as has been said." What was said in particular is that secondary causes depend on God not only for their initial

20. See the remarks concerning Descartes's appeal to this distinction in §2.2.1. See also the discussion below of the relation of this distinction to views in Durandus (§1.1.3) and Suárez (§1.2.2 (ii)).

21. Thomas is assuming here that light is a quality that depends essentially on the action of the substantial form of a body that is self-luminous (see *ST* I.67.4 and ad 1). It is because air is not a self-luminous body that light can have no "root" in it. Cf. chapter 2, note 66.

and continuing existence but also for the action by which they bring about their effects. A secondary cause "acts as an instrument of a superior power; whence, exclusive of the superior power, the inferior power has no operation" (*TA* 13:61).

The appeal here to instrumental causality in explaining the divine power of operating provides a further reason to distinguish the acts of this power from divine creation and conservation. For when God creates or conserves a secondary cause, he is not using that cause as an instrument, since that cause contributes nothing either to the divine act of creation *ex nihilo* or to the continuation of that act in conservation. It is only when God is using an already existing secondary cause to bring about an effect in nature that this cause contributes something to the action. Indeed, Aquinas holds that in this case the very same action derives both from God as primary agent and from secondary agents (see, e.g., *ST* I.105.5, ad 2). Admittedly, this claim would be nonsense if an action were something in the agent. But in fact Aquinas claimed, in line with many later scholastics, that the action is something external to the agent, and so is distinct from the principle in the agent from which the action issues.[22] In this scholastic view, action is not that which produces an effect, but rather the actualization of that effect, which actualization occurs in the patient. Thus, the fact that God as primary agent and secondary agents act by means of distinct principles need not imply that the actions deriving from those principles are distinct.

The premise that a single action can proceed from both God and creatures is key to Thomas's causal compatibilism, since without this premise the causal activity would have to be attributed either to God alone, thus resulting in occasionalism, or to the creature alone, thus overturning the conclusion in Thomas that God operates in all operations of nature. We have seen already a willingness among the Mutakallimūn to embrace the occasionalist horn of this dilemma. But there also was a member of Thomas's own Dominican order who was willing to embrace the other horn, and so to restrict the divine contribution to natural operations to creation and conservation. In §1.2 we will explore the further development of Thomas's causal compatibilism in the work of the early modern scholastic Suárez. Before making the transition to the early modern period, however, we need to consider the more radical medieval rejection of occasionalism in a text of Thomas's Dominican critic, Durandus of Saint Pourçain.

### 1.1.3. Durandus's Mere Conservationism

Durandus was a controversial fourteenth-century figure whose critique of certain theological doctrines in Thomas earned him two censures from Dominican authorities eager to identify the order with Thomism.[23] However, we are concerned here with his challenge to Thomistic metaphysics, and in particular with the critique

22. But see note 58.

23. In particular, Durandus was censured in 1314 and 1317 for rejecting more orthodox Thomistic views on the nature of the distinctions among and the processions of the persons of the Trinity. For more on the theological dispute that Durandus triggered in the Dominican order, see Iribarren 2005.

of Thomas's causal compatibilism that he offers in the second book of *On the Theological Sentences of the Commentary of Peter Lombard in Four Books* (*In Sententias Theologicas Petri Lonmbardi Commentariorum Libri Quattuor*). The fifth *quaestio* of the first *distinctio* of this section of Durandus's *Sentences* is devoted to Thomas's claim in the *Summa Theologiae* that "God acts immediately in all actions of creatures" (*S* II.1.5, 1:130, citing *ST* I.103.6 and 105.5). Durandus there agrees with Thomas that "the being of a secondary cause . . . is the immediate effect of the primary cause, which is an immediate cause not only in bringing it into being, but also in conserving it in being" (*S* II.1.5, ¶17, 1:131). He also concurs in Thomas's rejection of occasionalism, holding that "this view is now rejected by everyone as improbable, because it denies of things their proper operations and also denies the sensory judgment by which we experience that created things act on one another" (¶4, 1:130). What he cannot accept, however, is Thomas's view that the claim that God acts immediately in all actions of secondary causes is compatible with the attribution of real efficacy to those causes. For Durandus, the only acceptable alternative to occasionalism is the "mere conservationist" position that God contributes only the creation and continued conservation of a secondary cause to the production of an effect by that cause.

Durandus's initial point against Thomas is that one who holds that God acts immediately in every action of a creature cannot say merely that God is responsible for a certain feature of an effect. In the case of the generation of a material substance, for instance, it would not be sufficient to claim that God produces the matter of that substance, whereas the secondary cause produces its form. For then God would not be acting immediately in the production of the form by the secondary cause (*S* II.1.5, ¶6, 1:130). Thus, defenders of the Thomistic position must go further in claiming that the effects of secondary causes "are from God as wholes and immediately, but not totally, that is, not in every way" (¶7, 1:130). The effects must be from God "as wholes and immediately" to avoid what we could call "the problem of the divided effect," according to which God is responsible for one part of the effect, the secondary cause for another. But if the effects were from God "totally, in every way," then the secondary cause would seem to be doing no work, just as the occasionalist contends.[24] So there needs to be some sort of complementary contribution to the production of one and the same effect.

What Durandus cannot comprehend is how an effect could be from God as a whole and immediately but not totally. He considers the suggestion, deriving from Aristotle's remarks in the *Physics*, that universal aspects of an effect can be traced back to a universal cause, whereas particular aspects of the same effect can be traced back to a particular cause (*S* II.1.5, ¶8, 1:130). And Thomas himself suggested

24. One might think that there is the possibility of causal overdetermination. Durandus's response to this possibility is that since actions are individuated by their effects, diverse actions cannot result in numerically the same effects (*S* II.1.5, ¶13, 1:131). Suárez later countered that though an effect cannot have more than one total cause in a certain order, it can have different total causes in different subordinated orders (*MD* XXVI.4, 1:929–35*). For more on this response in Suárez, see §1.2.3 (ii).

this model of God's contribution to natural operations when he claimed in *On the Power of God* that "instances of the causing of absolute being [*entis absolute*] are traced back to the first universal cause, whereas the causing of the other things that are superadded to the *esse*, or are that by which the *esse* is made specific, pertains to the secondary causes" (*QPG* III.1, *TA* 13:38). However, Durandus insists that in a living thing, for instance, *esse* and the determination of that *esse* as something involving life differ only "by reason" (*ratione*), that is, merely conceptually and not in reality. Since the effects in this case differ only by reason, it would seem that the causes differ only by reason as well (*S* II.1.5, ¶10, 1:130). By the same token, according to Durandus, "it is impossible for numerically the same action to be from two or more agents in such a way that it is immediately and completely from each, unless numerically the same power is in them" (¶11, 1:131). Numerically the same power cannot be present in God and creatures insofar as God's power is infinite, whereas the power in creatures is limited in nature. Thus, for Durandus, it cannot be said that the very same effect derives immediately and completely from both God and creatures. For God and creatures to cooperate in producing an effect, it must be the case that the power in God is responsible for one feature of the effect, whereas the power in creatures is responsible for another feature of the effect that is distinct in reality from the feature God produces.

It might be thought that this line of response simply begs the question against Aquinas in assuming that distinct powers cannot produce the same effect. Indeed, Aquinas offered instrumental causality as an example of a case where the same effect issues from both the instrument and the agent using that instrument. Why couldn't the same be true in the case of God's action with secondary causes?[25]

Durandus objects to the comparison to instrumental causality by appealing to the possibility that an action derive principally from a secondary cause. Since "an action that does not exceed the power [*virtute*] of the species of the agent is sufficiently elicited by just the power of the species," in this case "it would be superfluous to posit another immediate principle eliciting such an action" (*S* II.1.5, ¶11, 1:131). We will discover presently that Suárez attempted to address this objection by drawing a distinction between instrumental and principal causality that nonetheless provides room for God's "concursus" in the case of the action of principal secondary causes (see §1.2.3 (ii)). However, Durandus could argue that there is an additional problem with the analogy to instrumental causality. In particular, he could point out that in the case of the use of the pen, the fact that the words are black and the fact that there are certain words rather than others pick out distinct effects. On the Aristotelian view common to Thomas and Durandus, the color and the shape of the words are different accidental features of it. Durandus thus could argue that in this case these distinct effects derive from distinct causes.

This line of argument does not establish that there are no cases in which the same effect derives from different powers. Indeed, it is not clear to me that Durandus has an argument for this conclusion that does not rely on the assumption that distinct

25. For this line of objection to Durandus, see Freddoso 1994, 148–50.

causal powers cannot issue in the very same effect. In the *Summa Theologiae*, Thomas allows there cannot be more than one complete cause of a single effect that belongs to the same causal order, thus ruling out a kind of causal overdetermination. However, he also claims that such an illicit overdetermination is not present in the case of God's cooperative action with secondary causes, since these causes belong to a different causal order than God (*ST* I.105.5, ad 2).[26] Given that Durandus failed to address this distinction between total causes of the same order and total causes of different orders, his argument for the impossibility of Thomistic causal compatibilism cannot be regarded as conclusive.

Nevertheless, it will turn out that the question of whether Durandus succeeded in refuting Thomas is less important for our purposes than the question of whether his mere conservationism is itself a tenable position.[27] Thus, it is appropriate that we now switch from offense to defense, as it were, and consider Suárez's argument against Durandus that the conclusion that God acts "immediately in every action of the creature" simply follows from the claim, on which Durandus himself insisted, that all beings depend on God immediately for their conservation in existence once they are produced. For Suárez, creatures are no less dependent on God for their initial production than they are for their subsequent conservation. As he expresses the argument,

> [I]f it is not the case that all things come to exist immediately from God, then neither is it the case that they are conserved immediately, since a thing is related to being [*esse*] in the same way it is related to becoming [*fieri*]. For the being of a thing cannot depend more on an adequate cause after it has been made than it did when it was made. (*MD* XXII.1, ¶7, 1:803)

This argument is strengthened by Suárez's doctrine that the act by which God conserves a being in existence is merely a continuation of the act by which he causes that being to exist in the first place (see §1.2.3 (i)). Given this doctrine, it would be natural to conclude that if God is not the immediate source of the existence of an object, he cannot conserve that object by continuing the act by which he immediately produced it. However, there is a way of expressing the point of Suárez's argument that does not rely on his particular account of divine conservation. For one basic objection here is that given that a secondary cause can immediately and completely produce the *esse* of an object on its own, there seems to be no reason to deny that it can immediately and completely conserve that *esse*. Suárez notes that it is as obvious to the senses that there are conserving secondary causes as it is that there are productive

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26. Cf. the remarks in note 24.

27. I would just mention, however, Freddoso's proposal that one can make sense of the fact that God and secondary causes make different contributions to the effect not by splitting the effect, as Durandus requires, but rather by distinguishing different states of affairs that concern a unitary effect (Freddoso 1994, 150). As Freddoso himself admits, this proposal is in need of further articulation and defense, and it is not entirely clear that when these are provided we will have a viable alternative to Durandus's position. But it also is not clear from what Durandus has said that no such alternative proposal could succeed.

secondary causes. To expand on an example he used, the senses reveal not only that fire produces the quality of heat in water, but also that heated water itself conserves this quality after the fire has ceased (*MD* XXII.1, ¶8, 1:804). Yet if the water were a secondary cause in Durandus's sense, namely, one that produces its effects immediately by itself, then it could not be the case that God immediately conserves the heat in the absence of the fire. It therefore would not be the case, contrary to what Durandus claimed, that God immediately conserves all beings in existence.[28]

There may be a way around this objection that draws on the distinction in Thomas between causes *secundum fieri* and *secundum esse* (see §1.1.2). Durandus suggests the strong view that God cannot be in any way an immediate cause of the effects of secondary causes. But we could perhaps modify this view to say only that God cannot be the immediate cause both *secundum fieri* and *secundum esse* of such an effect. This modification would allow for the position that God is the sole cause *secundum esse* of an effect that secondary causes produce as its sole causes *secundum fieri*. Thus, for instance, God alone would be the cause of the *esse* of forms educed from matter, whereas secondary causes alone would be the cause of the educing of forms with that *esse*. This proposal would clearly seem to allow for conservationism given that Thomas had introduced the distinction between the two causes in the first place to defend the thesis that all creatures need to be kept in existence by God (*ST* I.104.1).

Durandus's claim against Aquinas that the *esse* of a particular object is only conceptually distinct from the determinate form of its *esse* (see *S* II.1.5, ¶6, 1:130) perhaps requires that the secondary cause of the *fieri* of this determinate form also be the immediate cause of its *esse*. If so, he could not in the end allow for the division of causal labor in the production of the object that my modification of his view requires. But whether or not Durandus could accept it, there seems to be at least some conceptual room for the position that God as primary cause is responsible for what is actual in causal interactions, namely, the *esse* of both cause and effect, whereas secondary causes are responsible for changes in what is actual, namely, what Thomas called the *fieri* of the effect. If the fact that God alone is the cause *secundum esse* of all natural effects is compatible with the fact that secondary causes alone are causes *secundum fieri* of those same effects, we would seem to have a version of mere conservationism that sidesteps one of Suárez's main objections to Durandus. More to the point, given the topic of this book, we may well have a version of this position that Descartes could accept.

To determine whether Descartes could accept this sort of mere conservationism, however, we must settle the question of whether he even allowed that secondary causes can produce changes in objects and, if so, whether he held that such causes can produce these changes immediately and completely by themselves, without any assistance from God that goes beyond his creating and conserving activity as the cause *secundum esse* of the world. A positive answer to the first part of this question would reveal that he followed the vast majority of scholastics in rejecting occasionalism. A positive answer to the second part would indicate that he deviated from most scholastics, and in particular from

28. I borrow here from the discussion of this Suárezian objection to Durandus in Freddoso 1991, 566–69.

Suárez, in accepting a form of Durandus's mere conservationism. I will be concerned to address these issues in the course of the discussion in the following chapters of various aspects of Descartes's theory of causation. Before turning to Descartes, though, I need to consider Suárez's account of causality, since such an account is a particularly important part of the scholastic context of that theory.

## 1.2. SUÁREZ ON EFFICIENT CAUSES AND CONCURSUS

Suárez's *Metaphysical Disputations* includes a "mini treatise" on causality that spans disputations XII through XXVII and covers a total of 590 pages in the Vivès edition, or about a third of the total work. This treatise concerns the familiar quartet of Aristotelian causes—material, formal, efficient, and final.[29] However, disputations XVII through XXII, which cover a total of 263 pages, or close to half of the treatise on causality, concern exclusively the case of efficient causes. This imbalance reflects Suárez's conclusion at the start of his discussion of causation that "the whole definition of the cause is most properly suited to efficient [causes]" (*MD* XII.3, ¶3, 1:389*). Such a conclusion in fact provides a bridge from a traditional Aristotelian account of the four causes to Descartes's restriction of explanations in natural philosophy to efficient causes.[30] Moreover, we will discover that Suárez's discussion of efficient causes is particularly relevant to Descartes's theory of causation, since the former includes his treatment of the nature of God's efficient causality in creation, conservation, and concurrence.

Before turning to the particular features in Suárez that serve to link his account of causality to what we find in Descartes, however, I pause to consider Suárez's general project in the *Disputations* of renovating scholastic metaphysics. I provide a sketch of the context of this project that, though very rough, hopefully serves to indicate the significance of Suárez's contributions to scholastic metaphysics as well as the relevance of these contributions for Descartes's views (§1.2.1). Then I take up the account of causality in the *Disputations*, beginning with a discussion of Suárez's treatment of the four main Aristotelian causes that highlights his view that efficient causes have a special kind of priority (§1.2.2).[31] Finally, I consider his account of the

29. Following an initial disputation, entitled *De causis entis in communi*, disputations XIII and XIV are devoted to material causes, disputations XV and XVI to formal causes, disputations XII to XXIV to final causes, and disputation XXV to exemplary causes (see note 31). The section on causation closes with disputation XXVI, concerning the relation between cause and effect, and disputation XXVII, concerning the relation of causes among themselves.

30. But see the discussion in §2.1.2 of the complications for this view in Descartes.

31. As indicated in note 29, Suárez also devotes a section of his treatise on causation to exemplary causes, which involve the influence of ideas in the production of an effect, a category of cause that, as he emphasizes, derives from the Platonic rather than the Aristotelian tradition (see *MD* XXV.1, ¶1, 1:899*). We can set aside this non-Aristotelian category of causes given Suárez's own endorsement of the view of "those who deny that the exemplary cause constitutes a proper genus of cause, but who say that it pertains to the efficient cause" (*MD* XXV.2, ¶8, 1:913*). For a discussion of Suárez's reasons for this endorsement, Carraud 2002, 150–52.

distinctive sort of efficient causality exhibited in the three main divine contributions to causation in nature, namely, creation, conservation, and concurrence (§1.2.3). Drawing on views in Thomas that we have considered, Suárez not only denies that divine conservation is distinct in reality from God's act of creation *ex nihilo*, but also concludes that in addition to creation and conservation God contributes a distinct "concursus" to the action of secondary causes.

### 1.2.1. Renovating Scholastic Metaphysics

Suárez belonged to a metaphysical tradition that Stephen Menn has labeled "liberal Jesuit scholasticism" (Menn 1997).[32] As with most labels, this one requires some explanation and qualification.[33] An initial point is that though Iberian Jesuits were most prominent in this tradition, one of its main pioneers during the mid–sixteenth century, more than a generation before Suárez, was the Dominican Domingo de Soto.[34] Soto is distinguished from his hard-line Thomistic contemporary Cajetan by his acceptance of the voluntarist axiom, deriving from the Paris Condemnation of 1277, that God can produce any creature in separation from any other creature really distinct from it.[35] The significance of this departure from orthodox Thomism is indicated by Descartes's appeal in the course of his Sixth Meditation argument for mind–body distinctness to the principle that God can create separately what we can clearly and distinctly understand apart from each other (AT 7:78).

What is "liberal" about the view of Soto and the later Jesuits is the way in which the voluntarist axiom that later appeared in Descartes led them to deny the more "conservative" view that the Aristotelian categories faithfully reflect real distinctions in being. For the hard-line Thomists, the category of substance and the nine categories of the predicamental accidents (viz., quantity, quality, relation, action, passion, time, place, position, and having) pick out non-overlapping kinds of really distinct *res*. In contrast, the liberal opponents of Thomistic orthodoxy held that the impossibility of conceiving of members of certain categories as existing apart from members of other categories reveals that the former are in fact not *res* really distinct from the latter.

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32. Though I suggest some refinements of Menn's characterization of this tradition, my remarks in this section are indebted to his exemplary discussion of it. For a general study of Suárez's metaphysics, see also Courtine 1990.

33. Menn himself notes some concerns about his label in Menn 2000, 120.

34. Soto (1494–1560) influenced the work of such prominent Jesuits as Pedro da Fonseca (1528–99), Francisco de Toletus (1534–96), Luis de Molina (1535–1600), and the Spanish school of the Conimbricenses.

35. Though the axiom is not explicitly endorsed in the Condemnation, there is a repeated condemnation in this text of propositions that seek to limit divine power. Included are condemnations of purported implications of the teachings of Aquinas, such as the claim that God cannot multiply individuals of the same species without matter (see props. 42, 43, 110, and 116 in the reorganized and translated version of the Condemnation in Lerner and Mahdi 1995, 335–54). As indicated in Menn 1997, 229, Cajetan rejected the axiom and held that any anti-Thomistic elements of the Condemnation were revoked when Thomas was made a saint (in 1323).

We can illustrate this difference in terms of what was, for the scholastics, the particularly problematic case of shape. On the Aristotelian view that the scholastics inherited, shape belongs to the fourth species of the category of quality, a category that itself is distinguished from the category of quantity.[36] The "conservative" line of the *Thomistae* was that the mere distinction of these categories suffices to reveal that shape is a *res* distinct from quantity, even though not even God can create a shape apart from quantity.[37] However, many Jesuit scholastics took the voluntarist axiom to show that shape cannot be a *res* distinct from quantity, and thus that it does not follow from the fact that shape and quantity belong to distinct categories that they are distinct beings.

In denying that shape and quantity are distinct *res*, Suárez and other "liberal Jesuit scholastics" agreed with the view of the nominalists that derives from the work of the fourteenth-century scholastic William of Ockham. For the nominalists accepted both the voluntarist axiom and the claim that shape cannot exist apart from quantity. However, these thinkers also endorsed the Thomistic principle that the only alternative to a real distinction is one drawn "in reason," and so concluded that shape is merely rationally distinct from quantity. Indeed, they radically reduced the number of distinct *res* in holding that only substance and its affective qualities (e.g., in material substances, sensible qualities such as colors, sweetness and bitterness, heat and cold) are distinct in this way. The nominalist conclusion is that the other predicamental accidents are merely rationally distinct from substance and its qualities.

The Jesuit scholastics who followed Soto were concerned to provide a middle way between this sort of deflationary nominalism and the extreme form of realism in the work of the Thomists.[38] So instead of speaking of their liberal scholasticism, perhaps it is better to refer to their metaphysical position as "moderate realism," that is, a realism that accepts the limitations on distinctions in being that follow from the voluntarist axiom but that attempts to avoid the extremes of nominalism. To forge this middle way, the (primarily, though not exclusively) Jesuit moderate realist scholastics required metaphysical distinctions that stood between the real and rational distinctions that both Thomists and nominalists took to be exhaustive. Prior to Suárez, other scholastics had proposed various possibilities. In the fourteenth century, for instance, the Franciscan John Duns Scotus introduced intermediate formal and modal distinctions. Scotus embraced the principle that "things one of which can remain without the other are really distinct," but also held that even inseparable items may differ sufficiently to be more than merely rationally distinct.[39] Thus inseparable items that have different defining features are said to be "formally" distinct, whereas a certain qualification of a quality is said to be "modally" distinct from that quality. Though the

36. See *Categories* §8, 10$^{a}$11–24, in Aristotle 1984, 1:16. The four species of quality are, first, *habitus* or *dispositio*, which assists the actualization of a *potentia*; second, *potentia* or *impotentia* (i.e., the privation of a *potentia*); third, the affective qualities; and fourth, shape or form.

37. Thus in a passage cited in Menn 1997, 243, n. 22, Cajetan offered the example of the relation of quantity to shape as a counterexample to the voluntarist axiom.

38. Though, as Suárez notes (*MD* VII.1, ¶9, 1:252–53), Soto was inconsistent on the question of whether there are intermediate distinctions between the real and the merely rational.

39. See the passage from Scotus cited in Menn 1997, 234, n. 13.

human intellect and will are inseparable, they are formally distinct insofar as what it is to have an intellect differs from what it is to have a will, and vice versa. And though a particular degree of intensity of whiteness and the whiteness that has that degree of intensity are inseparable, the former is modally distinct from the whiteness insofar as it must be understood through the nature of whiteness, but not the nature of whiteness through it.[40]

The Scotistic notion of formal and modal distinctions reappeared in the work of later Iberian Jesuits such as Fonseca, who took them to be a means of accepting the voluntarist axiom without falling into the nominalist trap.[41] According to Suárez, however, the Scotistic distinctions are unclear and in need of fundamental renovation. As a first move away from Scotus, Suárez insisted that one-way separability is not sufficient for a *distinctio realis*, that is, a distinction of *res* from *res*. What is required, rather, is mutual separability.[42] Moreover, he held that where there is mutual inseparability, there can be only a *distinctio rationis*, that is, a distinction merely in reason and not in reality. In this case, there is simply a single *res* that is conceived in different ways. Finally, Suárez transformed Scotus's modal distinction into a distinction of a *res* from a *modus* that cannot exist apart from it, though it can exist apart from the *modus*. In contrast to a distinction of reason, a modal distinction marks some distinction in reality, albeit not a distinction of *res* from *res*. Whereas those influenced by Scotus tended to hold that shape is formally distinct from quantity, Suárez claimed that the former is distinct in reality from the latter insofar as there is a modal distinction between the two.[43]

It is clear that Descartes had some knowledge of Suárez's *Disputations*, since at one point in the Fourth Replies he appealed to a passage from this text in support of his conception of "material falsity" (AT 7:235).[44] However, this one relatively minor point of contact hardly exhausts the influence of Suárez's views on Descartes's system. I have already indicated that the voluntarist axiom that was central to Suárez and other Jesuit moderate realists reappears in Descartes. Moreover, Suárez's specific form of metaphysics is reflected in the theory of distinctions that Descartes offers in his *Principles of Philosophy*. For following Suárez, Descartes holds in this

40. For discussion of Scotus's account of formal and modal distinctions, see King 2003, 22–26.

41. On Fonseca, see Menn 1997, 242–50.

42. Menn shows that Scotus's more permissive criterion for a real distinction lands him in difficulties with respect to the transcendental relation of inherence. Given his view that an accident can exist (if only miraculously) without inherence, it follows that the accident and its inherence must be really distinct *res*. But since he was committed to the voluntarist axiom, Scotus must hold that the inherence can exist apart from the accident as well, and so without its inhering in the accident. By the same line of reasoning, however, the inherence's inherence must be really distinct from that inherence, and we are on our way to an infinite regress (see Menn 1997, 234–35). In denying that one-way separability entails two-way separability, Suárez was able to avoid this regress.

43. For Suárez's theory of distinctions, see *MD* VII, 1:250–74.44.

44. Descartes cited *MD* IX.2, ¶4, 1:322*, in defense of his remarks concerning material falsity in the Third Meditation, at AT 7:41. On material falsity in Descartes, see chapter 2, note 44.

text that there is a threefold distinction tied to the separability of the objects being distinguished. Thus for Descartes, as for Suárez, two-way separability results in a *distinctio realis*, one-way separability in a *distinctio modalis*,[45] and mutual inseparability in a *distinctio rationis* (*PP* I.60–62, AT 8-1:28–30).[46]

Further evidence of a Suárezian influence is provided in a 1643 letter to Mersenne, in which Descartes is concerned to deny the scholastic view that "there are any *real qualities* in nature, which are attached to substance, as little souls to their bodies, and which can be separated from it by divine power" (26 Apr. 1643, AT 3:649).[47] Here Descartes has in mind the scholastic claim—common to Thomistic extreme realists, Jesuit moderate realists, and nominalists—that sensible qualities are really distinct from the material substances in which they inhere. In contrast to such a view, he insists that there is "no more reality either in motion, or in all these other variations of substance that one calls *qualities*, than the philosophers commonly attribute to shape, which they call not *qualitatem realem*, but only *modum*" (*To Mersenne*, 26 Apr. 1643, AT 3:648–49). But the "philosophers" who call shape a mode rather than a real quality are not the scholastics in general, or even the Jesuit moderate realists as a group, but Suárez in particular, who offered as an alternative to various other scholastic views the technical concept of mode and the accompanying theory of distinctions that Descartes incorporated into his metaphysics.[48]

Even if he recognized this connection to Suárez's renovated metaphysics, which is perhaps questionable, Descartes did not draw attention to it. Nor did he acknowledge any specific debt to Suárez's account of causation. But my brief consideration of the impact of Suárezian metaphysics on Descartes should warn us against taking his indifference to the details of this account to indicate its irrelevance for his concerns. Indeed, it will turn out that the Suárezian account is distinguished by claims concerning efficient causality and God's causal contribution to natural interactions that are directly relevant to Descartes's theory of causation.

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45. There is admittedly a complication in this case given Descartes's admission in the *Principles* that there can be a modal distinction between different modes of the same substance, even though such modes can exist apart from each other (*PP* I.61, AT 8-1:29–30). However, Descartes indicates that this case counts as a modal distinction only because both modes are inseparable from the same substance. He notes that in the case where the modes belong to really distinct substances, the distinction between them is more properly a real than a modal one (AT 8-1:30). Thanks to Eric Watkins for bringing this complication to my attention.

46. In the First Replies, Descartes follows the lead of his critic Caterus by invoking the view in Scotus that there is a formal distinction between any items that can be conceived through different concepts (AT 7:120–21; cf. First Objections, AT 7:100). Whereas he identifies formal and modal distinctions in this text, however, Descartes notes in the *Principles* that the formal distinction between thoughts of attributes that are only rationally distinct is itself a *distinctio rationis*, not *modalis* (*PP* I.62, AT 8-1:30).

47. I return to the (mis-)characterization of the scholastics as positing tiny souls attached to bodies in §2.1.2 (ii.b) and toward the end of §2.1.3 (ii).

48. For more on Suárez's understanding of the Aristotelian categories and its relation to Descartes's views, see the remarks in §1.3.

### 1.2.2. The Priority of Efficient Causes

Suárez begins his treatise on causation in the *Disputations* by addressing the question of whether there is any *ratio* common to all cases of causality. After considering and rejecting various suggestions drawn from Aristotle's texts, he settles on the claim that "cause is a *per se* principle from which being flows into another" (*causa est principum per se influens esse in aliud*) (*MD* XII.2, ¶4, 1:384*). Practically every term in this sentence requires explanation. In saying that a cause is a principle, Suárez means to indicate that it is the thing that causes (*res quae causat*), as opposed to the causality itself (*causalito ipsa*) or the relation grounded in that causality (¶1, 1:384*). Thus, it is the heat in the fire that produces heat, rather than its production of heat or its relation to the heat it produces, that serves as the principle of this production. By holding that the principle is *per se*, Suárez means to exclude those things that are not *res* properly speaking or that are *res* but are linked merely *per accidens* to the cause of an effect. Thus, the fact that fire is not cold or the fact that it is yellow is linked only *per accidens* to its production of heat: in the first case, since the lack of cold is a privation and not a *res* at all, and in the second case, since the heat derives from the heat in the fire rather than from its color. Finally, the fact that the cause *influit* being into the effect indicates that it "communicates" or "gives" being to another (*dandi vel communicandi esse alteri*), a being of a sort that the cause itself somehow "contains" (¶4, 25:384*).[49]

Suárez admits, however, that this definition does not apply equally to all members of the Aristotelian quartet of material, formal, efficient, and final causes. The definition applies least well to the first two, which he called "intrinsic causes," since such causes communicate being to "another" only in an attenuated sense. It is only in the case of the latter two, which he called "extrinsic causes," that being is straightforwardly communicated to something external to the cause. However, even in the case of the latter the definition applies in the strictest sense only to efficient causes insofar as most final causes communicate being not directly by means of "an action," but only indirectly by means of a "metaphorical motion."[50] To fully understand these conclusions, we need to delve a bit into Suárez's account of the metaphysics of causality.[51] I consider first the case of material and formal causes, then efficient causes, which for Suárez provide the gold standard for causation, and finally the complicated case of final causes.

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49. As I indicate in §2.1.3, Suárez holds that this being is contained in its cause "formally" when it is the same kind of being as what produces it and is contained in its cause "eminently" when what produces it is "more noble."

50. As we will see in §1.2.2 (iii), however, Suárez makes an exception for God's final causality, since he held that this causality produces its effects by an action and so is not distinguishable from God's efficient causality.

51. For a more detailed consideration of Suárez's account of the four causes that emphasizes the priority of efficient causality, see Carraud 2002, 145–63 (in a section appropriately titled "La reduction des causes à l'efficience"). There is a complementary discussion of Suárez's account in Olivo 1997.

### *(i) Material and Formal Causes*

Suárez's account of intrinsic causes assumes the hylomorphic view basic to scholasticism, according to which the basic elements for composition of bodies are prime matter and various substantial and accidental forms. Prime matter is a material cause that is the recipient of change, whereas forms are formal causes that are the active principles of change. The distinction between substantial and accidental forms serves to distinguish the formal causes of the generation of composite material substances (viz., substantial forms) from the formal causes of accidental changes in such substances (viz., accidental forms).

On these points, most scholastics were agreed. However, the details of Suárez's account of material and formal causation were more controversial. For instance, orthodox Thomists held that matter, as pure potentiality, does not have any being of its own apart from form. Such scholastics therefore could not accept Suarez's view that the material cause fits the definition of a cause that "inflows" its being into the effect. But Suárez insists that even though prime matter is merely potential, it has its own essence apart from form, namely, the essence of a potential recipient of change. It is this essence that matter contributes to the effect (*MD* XIII.4, ¶9, 1:411*).[52] There is no similar dispute over the status of formal causality, since Suárez agrees with the Thomists that forms are principles of activity, and thus have their own being. Nevertheless, Suárez's view is distinguished from that of earlier scholastics by his claim that a formal cause is not a cause in a full and proper sense, since it acts merely by means of "a formal and intrinsic union" with matter (*MD* XV.6, ¶7, 1:520). The "influx" of both the material and the formal cause thus involves merely an "internal composition" to which matter contributes the "mode of potentiality" and form the "mode of activity" (*MD* XII.3, ¶9, 1:391*). Suárez's conclusion is that since such an influx is not precisely the same as the influx that occurs when a cause produces an effect external to and distinct from itself, material and formal causes can be called causes only "by analogy." The analogy, in particular, is to the efficient cause, which "most properly inflows being" (*MD* XXVII.1, ¶10, 1:952*).[53]

### *(ii) Efficient Causes*

Suárez starts his discussion of efficient causality with a consideration of Aristotle's definition of an efficient cause as that "whence there is a first beginning of change or rest." He rejects this definition on various grounds, including the fact that it does not exclude material and formal causes, which in some sense also provide a principle for the beginning of change or rest, and the fact that it does not include divine creation, which does not involve a beginning of change or rest in an already existing

52. Here Suárez was under the influence of the Scotist position that prime matter is a *res* really distinct from substantial form. For discussion of this position, see Des Chene 1996, §5.1.

53. As we will discover in §2.1.2 (ii.a), Descartes also allowed for formal causes that are merely analogous to efficient causes, though his account of formal causality differs substantially from the account the account in Suárez that I have just considered.

subject (*MD* XVII.1, ¶¶2–4, 1:581–82).[54] The alternative definition he proposes is that an efficient cause is "a principle from which the effect flows forth, or on which it depends, by means of an action" (*principium a quo effectus profluit seu pendet per actionem*) (¶6, 1:582).

The definition of an efficient cause as that which involves a "flowing forth" of the effect may not seem to be less than entirely clear. Indeed, Leibniz complained in his preface to a 1670 edition of Nizolius's *On the True Principles of Philosophy* (*De veris principiis . . . philosophandi*) that Suárez's definition "is rather barbarous and obscure, . . . more obscure than what it defines: I would hope to define cause more easily than this term *influxus* taken so monstrously" (Leibniz 1978, 4:148). However, Suárez indicated that in a general sense *influxus* means simply "giving or communicating being to another" (*dandi vel communicandi esse alteri*) (*MD* XII.2, ¶4, 1:384*). Leibniz also had difficulties with the notions of giving or communicating being, most of which rested on the fact that he could not conceive of the literal transfer of some feature of the cause to the effect.[55] Yet when Suárez speaks of the efficient cause as involving the flowing of an effect, he should not be understood to claim that a feature of the cause is literally transferred to the effect. His view in fact requires that an efficient cause is extrinsic for the very reason that it does *not* communicate "its own proper and (as I will put it) individual *esse* to the effect." Rather, what occurs in the case of efficient causality is "some other [being] really flowing forth [*profluens*] and proceeding [*manans*] from [an efficient] cause by means of an action" (*MD* XVII.1, ¶6, 1:582). In either creating or educing an effect, an efficient cause produces an *esse* that is distinct from, though in some manner similar to,[56] the *esse* that it possesses.

Suárez claims that an efficient cause not only produces a new *esse*, but also produces it by means of an "action," where this consists in "the emanation or dependence of an effect on its extrinsic cause, from which it receives being." Suárez himself admits that this definition may seem to be uninformative, since it makes action "almost the same" as an efficient cause (*MD* XVII.1, ¶5, 1:582). In his view, however, the action is distinguished from the cause by the fact that the former constitutes the causality of the efficient cause, whereas the latter is the principle of that causality. Suárez follows other scholastic thinkers in taking the action to be something that resides in the patient rather than the agent.[57] But drawing on his renovated form of scholastic metaphysics, he characterizes this action as a certain mode of the effect

54. For the point about creation, see §1.2.3 (i).

55. In 1696 comments on his "New System of Nature" ("Système nouveau de la nature"), for instance, Leibniz objected to "the way of influence" on the grounds that "we can conceive neither material particles nor immaterial qualities or species that can pass from one of these substances [viz., the soul and body] to the other" (Leibniz 1978, 4:499). For more on the background to Leibniz's conception of "the way of influence," or what he also called, following Suárez (see *MD* XVII.2, ¶6, 1:585), *influxus physicus*, see O'Neill 1993.

56. See note 49.

57. However, Suárez mentions Cajetan and Scotus as the main dissenters from this position; see *MD* XLVIII, ¶2, 2:888–89*.

that the cause produces, namely, the mode of depending on that cause (*MD* XVIII.10, ¶8, 1:682).[58]

In identifying the action with the causality of the cause, Suárez offers—characteristically enough—a middle way between the views of Thomistic extreme realists and nominalists. On the one hand, he holds against the nominalists that an action is something distinct in reality from the agent, its power, and the effect in the patient. On the other, he holds against the Thomists that causality is not something over and above the action of an agent, but is identical to this action, which itself exists as a mode of the effect (*MD* XVIII.10, ¶5, 1:681).

Suárez's theory of action is complicated by the fact that he recognizes two different kinds of action that efficient causes can involve, namely, transeunt action, which "has an effect outside the agent itself," and immanent action, which "has no effect outside the agent" (*MD* XLVIII.2, ¶1, 2:874*). I have noted above the case of the eduction of substantial or accidental forms from matter, which for Suárez is an example of transeunt efficient causation (i.e., efficient causation by means of a transeunt action). When the air causes the apple to become brown, the action is the dependence on the air that modifies the process in the apple of turning brown, whereas the terminus of the action is the qualified change involving the inherence of the accidental form of brownness. When worms cause the apple to decompose into its elements, the dependence on the worms that modifies the process of decomposition is the action, and the terminus of the action is the unqualified change involving the union of the matter of the apple with the new substantial forms of the elements.

The case of transeunt efficient causation is best suited to the definition of a cause as that from which being flows forth into another. The case of immanent efficient causation (i.e., efficient causation by means of an immanent action) is more problematic insofar as the distinction of the effect from the cause is less clear. Since he accepted the Aristotelian principle that motion (in the broad sense of any change) requires an external mover in the case of material objects (see *MD* XVIII.7, ¶37, 1:642), Suárez claims that the primary examples of immanent efficient causation are changes that pure intellect or will causes in an intellectual (i.e., angelic) or rational (i.e., human) soul. In the case of the cognitive acts of pure intellect, however, Suárez notes that the effect is an "intelligible species" that is really distinct from the faculty that produces this species. Here he is simply following the Thomistic position that intellectual cognition involves the impressing of this species by the "agent intellect" in the "passive intellect."[59] This way of saving the distinction of the effect from the cause is not available in the case of the will, given Suárez's position that no distinct

58. But see the discussion in Hattab 2003 of the dissenting view in the work of the early modern scholastic Charles François d'Abra de Raconis that the causality of the efficient cause is distinct from its action in the patient.

59. For more on this Thomistic view in Suárez, but also his disagreements with Thomas concerning the production of the intelligible species, see §4.2.1. Suárez notes that though there is no species involved in the angelic contemplation of its own substance, still its substance as the object of the intellectual act can be distinguished from that substance as the principle of that act (*MD* XVIII.7, ¶48, 1:646).

species are involved in this case. Nevertheless, Suárez insists that there is a distinction in the will between a "first act" involving the power of producing a certain immanent effect, on the one hand, and the "second act" consisting in the immanent effect, on the other. In producing a desire, the will in first act merely has the power to produce the quality of desiring an object, whereas the exercise of that power results in the second act of the inherence of that quality in the will (¶51, 1:647). Since desire is itself a real quality, and so really distinct from the power of the will that produces it,[60] its production involves the flowing of being into something distinct from the volitional power that serves as the principle of this effect.

In giving priority to efficient causes over material and formal causes, Suárez follows the view of the medieval philosopher Avicenna that the requirement that the effect be in some way distinct from the cause is central to the notion of causality.[61] What is distinct, in particular, is the *esse* of the effect that "flows forth" from the cause. However, in claiming that an efficient cause produces the *esse* of its effect, Suárez need not hold that it is a cause *secundum esse* as Thomas understood this notion. For recall the view in Thomas that a cause *secundum esse* brings about not only the presence of its effect, but also the fact that the effect has the nature that it does (see §1.1.2). There is no suggestion in Suárez that it is essential for something to be an efficient cause that it bring about the latter. What is essential is only that the cause produce some being, whether with the assistance of other causes (as in the case of all actions of secondary efficient causes, which depend on God's "concursus") or entirely by itself (as in the case of divine creation and conservation).[62] Before turning to Suárez's views concerning secondary efficient causality and its relation to God's causal activity, however, we need to complete our summary of his account of causation by considering his complex attitude toward what for Descartes, at least, is the most problematic of the four kinds of Aristotelian causality, namely, the causality of final causes.

### *(iii) Final Causes*

According to Suárez, final causes are the second of the two kinds of extrinsic causes. Thus, as in the case of efficient causes, the general notion of causality ("the principle from which being flows into another") fits final causes better than material or formal causes. Indeed, at the start of his discussion of final causes in the *Disputations*, Suárez even claims, in apparent conflict with his main thesis of the priority of efficient

60. Desire belongs to the third species of the predicamental category of quality, whereas the volitional power that produces it belongs to the second species of that category; see note 36.

61. As indicated in Gilson 1986, Suárez also followed Avicenna and Peter of Auvergne (†c.1310) in combining efficient causes with "motive" causes that thinkers such as Aquinas had distinguished from them. It is because he held that the divine creation of being and the production of motion/change by secondary causes both involve an inflowing of being into an effect that Suárez was able to treat both as instances of efficient causality.

62. In §1.2.3 (i), I discuss Suárez's comments on the passage from the *Summa Theologiae* that concerns the *secundum fieri*/*secundum esse* distinction.

causes, that of the four main causes, final causes "are in some manner the most principal of all, and also the first" (*MD* XXIII.1, 1:843*).[63] His reasoning here is that since even the action of an efficient cause is directed toward a terminus as its end, efficient causality involves the causal efficacy of an end, and thus final causality (¶7, 1:845*). However, Suárez admits that "the reason of the causing of [the final cause] is more obscure" than in the case of the other three kinds of cause (1:843*). This obscurity is due to the fact that there are very different kinds of causality depending on whether the action involves (a) "an uncreated intellectual agent, which is God alone," (b) "created intellectual agents, among which humans are best known to us," or (c) "agents that are natural, or lacking intellect" (¶7, 1:845*). What supports Suárez's thesis of the priority of efficient causes is both the fact that final causality in case (b) involves not genuine action but only "metaphysical motion," and the fact that when case (c) is considered in abstraction from God's causal contribution, there is no genuine final causality at all. It is only in case (a) where the final cause produces its effect through an action, and in this case only because there is no real distinction between God's final and efficient causality. Let us consider these three cases, starting with the case best known to us, namely, the one in which we as created intellectual agents act as final causes.

(b) As with other created intellectual agents, final causality enters into only the immanent actions of our will. Earlier we noted the distinction in Suárez's account of such action between the first act involving the power to produce an internal effect and the second act identified with the attainment of this effect. The ends of action that we cognize are final causes insofar as they incline the will in first act to pursue these ends as opposed to others. The "motion" associated with this inclination is merely "metaphorical" insofar as we do not actually pursue the particular ends toward which we are inclined in first act.[64] The pursuit is actual, and thus the ends are efficacious, only when our will produces by means of an immanent action the desire for or love of those ends. Thus, even though the cognized ends as final causes are "in some manner the most principal" and "the first" insofar as they incline the will to act in a particular manner, it is the will itself rather than these ends that is the efficient cause that directly produces the relevant second acts.

The insistence on the merely metaphorical nature of the motion involved in the first act is particularly important for Suárez in the case of our free actions, since he was deeply committed to the position that such actions do not derive necessarily from our will in first act.[65] In his view, this first act can be free, and thereby elicit a second act that is free, only if it is "an active faculty that has control over its own action in such a way that it has within its power to exercise that act and not to

63. In this subsection I am following the helpful treatment of Suárez's views on final causality in Carraud 2002, 152–61. See also the more general discussion of the relevant scholastic background in Des Chene 1996, ch. 6.

64. Suárez cites Aristotle (*On Generation and Corruption* I.7, 324$^{b}$14–15, Aristotle 1984, 1:530) and Thomas (*ST* I-II.1.1) as sources for his account of metaphorical motion. See also the development of this notion in texts from Scotus cited in Carraud 2002, 158, n.1.

65. I return to this position in Suárez in §1.2.3 (ii) and then again in §5.1.1.

exercise it and, consequently, to elicit one action or another—that is, opposite—action" (*MD* XIX.2, ¶18, 1:698). Suárez identifies this lack of determination to a particular action with the "indifference" of the free active faculty of will. He further distinguishes two kinds of indifference, namely, indifference with respect to the exercise of an act, which is required for our freedom to act or not to act, and indifference with respect to the specification of an act, which is required for our freedom to elicit one action as opposed to other contrary actions (*MD* XIX.4, ¶9, 1:708–9). Given these kinds of indifference, the cognized end cannot be said to produce in the will an actual motion (in the broad Aristotelian sense of a change) that, if unimpeded, necessarily terminates in a particular second act. Rather, it merely entices the will to freely produce this act, that is to say, it serves only as a final and not as an efficient cause of that effect.[66]

(c) I have noted the passage from the 1643 letter to Mersenne in which Descartes caricatures the scholastics as holding that bodies have real qualities attached to them as little souls (AT 3:649). Around the same time, in the Sixth Replies, he reports that in his youth he was under the sway of the scholastic view that the free fall of bodies is explained by the fact that they possessed the real quality of heaviness (*gravitas*), one that "carried bodies toward the center of the earth as if it had some knowledge of the center within itself" (AT 7:442). In effect, the proposal here is that the final causality of heaviness is to be understood on the model of the scholastic account of the final causality of created intelligent agents. For just as Suárez takes such agents to be directed by cognized ends to act in a particular manner, so the real quality of heaviness is supposed to be directed by its cognition of the center of the earth to carry the body to which it is attached to that location.

The suggestion in Aristotle is that final causality is not restricted to cases involving cognition, but rather derives in general from the forms of composite substances, including those substances that lack intellect.[67] However, Suárez is concerned to deny that any natural being—that is, any being that does not act by means of will—can be a final cause at all. This is clear from his claim in the *Disputations* that in the case of "those actions, that are from natural agents, there is properly no final causality, but only an inclination toward a certain terminus" (*MD* XVIII.10, ¶6, 1:887). Even when created intellectual agents act by some means other than will, according to Suárez, they are merely natural agents, and so are not true final causes (*MD* XXIII.3, ¶18, 1:857*). The finality of the actions of natural agents thus cannot be explained by appeal to the nature of these agents alone, who serve merely as efficient causes. Rather, Suárez claims that "there is final causality in them only as they are

66. Whereas Suárez holds that there is no volitional act, in this life, at least, toward which we are not indifferent with respect to exercise, he allowed that we are not indifferent with respect to specification toward volitional acts directed to ends proposed under the concept of a universal good. In the case of such acts, Suárez's conclusion is that we perform them voluntarily but not freely; see *MD* XIX.8, 1:726–32. There is a further discussion of Suárez's views on these points in §5.1.1 (i) and 5.2.1.

67. In *MD* XXIII.10, ¶2, 1:886*, Suárez cites as the source of this view Aristotle's discussion in *Physics* II.7–8, 198$^{a}$14–199$^{b}$30 (Aristotle 1984, 1:338–40).

from God, as in God's other external and transeunt actions" (*MD* XXIII.10, ¶6, 1:887*). Thus, natural agents are directed to their ends by God, whose action is directed by his cognition of these ends. We have here one reason for Suárez to conclude that divine action is involved in the action of all natural agents. Such a conclusion is reinforced by his concurrentist position that God acts by means of the action of all secondary causes (see §1.2.3 (ii)).

(a) We have noted the position in Suárez that the final causality of created intellectual agents involves a metaphorical motion of the will. However, he holds that since the one uncreated intellectual agent is purely actual, and thus has no potentiality, this agent, namely, God, can in no way possess metaphorical motion (*MD* XXIII.9, ¶6, 1:883*). Indeed, Suárez denies that there is any final causality internal to God himself. Though God does love himself or others for the sake of his own goodness, his attribute of goodness is not a final cause of this love. Rather, it is "only the reason (as it is said) of the divine will" (*rationem tantun (ut dixi) voluntatis divinae*) ( ¶6, 1:883*). Final causality is involved only when God acts as a transeunt efficient cause, and thus produces effects by means of an action external to him (¶12, 1:885*). However, there is no real distinction here between God's final and efficient causality insofar as "the final causality of God with respect to external effects consists in this, that God produces the external effect by the intuition and love of his goodness." Thus "one and the same operation . . . pertains to God whether by reason of efficacy or by reason of end, since it is related to God both as omnipotent and as the greatest good" (¶9, 1:884). The view here that God's production of external effects involves both final and efficient causality is reflected even in Descartes, who despite his disdain for appeals to divine final causes (see §2.1.2 (ii.b)), nonetheless told a correspondent that all creatures can be said to exist for God's sake insofar as "it is God alone who is the final cause as well as the efficient cause of the universe" (*To Chanut*, 6 June 1647, AT 5:54).

As in the case of Descartes, however, Suárez's discussion of God's causal contribution to the world emphasizes more the relation to his power as efficient cause than the relation to his goodness as final cause. Thus, in the section of the treatise on causality in the *Disputations* that concerns efficient causes, disputations XX through XXII are devoted to God's activity as primary efficient cause in creation, conservation, and concurrence. There Suárez takes the first two kinds of activity to be intimately related, as shown by his thesis that divine conservation is not distinct in reality from God's act of creation, but is merely the continuation of that act. However, he insists against critics such as Durandus that there is a divine concurrence that involves a "concursus" that is distinct from God's act of creation and conservation. I have indicated that these claims are an essential part of the "causal compatibilism" that Thomas proposed several centuries prior to Suárez. However, Suárez moved beyond Thomas in explicating these claims in terms of a comprehensive theory of efficient causality.

### 1.2.3. Creation, Conservation, and Concursus

#### *(i) Creation and Conservation*

Suárez's discussion in disputation XX opens with the stipulation that creation involves the production of an entity *ex nihilo*. Since prior to this action there is nothing on which

to act, creation must be distinguished from more mundane examples of efficient causation that involve a change produced by action on an existing subject. Thus, creation differs from the eduction either of an accidental form from a material substance, as in the case of accidental change, or of a substantial form from prime matter, as in the case of substantival generation (*MD* XX.1, ¶1, 1:745). In both of these cases, the efficient causality involves a change in a patient, whereas in the case of creation, there is no such change, since it is the existence of the patient itself that is produced. Nevertheless, Suárez insists that creation can be placed in the same category with the efficient causation of accidental and substantival change, since they all fit his definition of efficient causation, namely, the flowing forth of being into another by means of an action. The difference is merely that whereas change presupposes the existence of the patient that receives the new *esse*, creation does not. Moreover, in creation as well as in the other cases of efficient causation, the action is a mode of the effect, and thus is something that is only modally and not really distinct from that effect. In particular, this action is the dependence on the cause that modifies the effect that is produced.[68]

Suárez is concerned to distinguish creation *ex nihilo* from creation *de novo*, or creation in time. He does defend the claim that creation *ex nihilo* is compatible with creation *de novo* against the objection that what is created must be eternal insofar as the divine act of creation is eternal. He responds by appealing to his position, mentioned previously, that an action is in the patient rather than the agent. His conclusion is that reason is perfectly consistent with the dictate of faith that an eternal God created the world with a starting point in time (*MD* XX.5, ¶¶5–10, 1:780–82). However, Suárez also holds that God could have created the world *ab aeterno*, and thus could have created a world that is eternal in the sense of having no beginning in time. Creation "out of nothing" thus could signify not that there was a point at which the creature did not exist, but only that the creature would not have existed were it not for the fact that from eternity *esse* had been communicated to it from another (¶¶11–12, 1:782). Suárez claims that since neither matter (and the material forms educed from matter) nor finite immaterial entities exist *a se*, that is, from their own nature, they can exist in the first place only because they have being from an efficient cause that does exist *a se*, namely, God (*MD* XX.1, ¶¶15–21, 1:783–85).[69] Divine creation would be necessary whether or not these entities were eternal.

Suárez accepts the traditional conclusion that God alone can create a being *ex nihilo*. But though most scholastics followed Thomas in holding that natural reason can demonstrate this conclusion, Durandus argued against Thomas that there is nothing in the notion of creation as such that precludes a creature from creating

68. See *MD* XX.4, 1:769–79. In this section, Suárez offers this position as an alternative both to the Thomist position that the dependence of the creature on the Creator is a *res* distinct from that creature, since such a dependence belongs to the category of relation, and the nominalist position that this dependence is only distinct in reason from the creature. His position is thus perfectly in line with his renovated metaphysics (see §1.2.1).

69. Suárez notes that even though the material substances are generated out of matter rather than directly created by God, still they depend on divine creation insofar as the matter out of which they are generated must be created (*MD* XX.1, ¶22, 1:751).

(*S* II.1, 4, 1:129–30*, responding to *ST* I.45.5). Suárez claims that there are more constraints on creation than Durandus allows. He concedes to Thomas, for instance, that only something with infinite power could have the unlimited ability to create any being whatsoever. Furthermore, Suárez's concurrentist position that God must concur in all creaturely action (see §1.2.3 (ii)) precludes the possibility of any cause other than God creating without any divine assistance. Even so, Suárez notes that it still seems possible that creatures could have a more limited power to create with the help of God's concursus (*MD* XX.2, ¶39, 1:764, also responding to *ST* I.45.5). He grants that we can know by faith that God has not in fact created any being that has the power to create. He also argues that since something with the perfection of being able to create would have added to the overall perfection of the universe if it existed, and since if it were possible God would have created this thing for that reason, the fact that no such thing exists provides grounds for thinking that no such thing is possible. Suárez concludes, however, that though the conclusion of this argument is certain for those who accept the tenets of faith, it is not evident on the basis of natural reason alone (¶12, 1:755–56).

However it is established, the conclusion that God alone can produce creatures *ex nihilo* falls short of the thesis that creatures depend on God for the continuation of their existence subsequent to their creation *ab aeterno* or *de novo*. Suárez argues for this additional thesis in disputation XXI, where he claims not only that the continuation of the existence of creatures depends on God's efficient causality, but also that this continuation depends on the very same act by which God created them in the first place. In arguing for the former point, Suárez starts with the thesis—drawn from the Thomistic distinction between causes *secundum fieri* and *secundum esse*—that when "an effect that depends on its cause directly and *per se* and primarily with respect to its *esse*, it depends on that cause not only in becoming [*fieri*] but also in being conserved [*conservandi*]" (*MD* XXI.1, ¶6, 1:787). He notes that Thomas himself explained the distinction between being a cause of *fieri* and being a cause of *esse* "somewhat obscurely" (¶8, 1:787). The obscurity here seems to derive from the fact that even a cause *secundum fieri* is a source of the *esse* of its effect, and so is not clearly distinct from the cause *secundum esse*. However, Suárez proposes that an effect is from a cause *secundum fieri* insofar as "it does not absolutely and unconditionally require that cause to exist, but instead requires it only to exist through the action or production in question." In contrast, the effect is from a cause *secundum esse* insofar as "it absolutely and unconditionally requires that cause in order to exist" (¶8, 1:787). Thus, Adam is a cause of Abel only *secundum fieri* insofar as Abel does not absolutely require Adam to exist; God could have created Abel without any causal input from Adam. In contrast, the cause *secundum esse* of Abel must be such that Abel could not exist without the activity of that cause (¶8, 1:787).

Though offered as an analysis of Thomas's distinction between causes *secundum fieri* and *secundum esse*, Suárez's alternative definitions differ in at least one important respect from those that Thomas offered. Thus, whereas Thomas's own example of the sun suggests that he allowed for causes *secundum esse* other than God, Suárez emphasizes that given his definition God alone can be such a cause. For since God can produce any effect by himself that he produces with secondary causes, God alone can be

absolutely and unconditionally required for the effect.[70] Given this strong requirement for being a cause *secundum esse*, it is perhaps clearer in Suárez than in Thomas why an effect depends on such a cause not only at the first moment of its existence, but also at every moment it exists. For it follows from this requirement that the existence of the effect, at whatever time it exists, depends absolutely and unconditionally on its cause *secundum esse*. Thus, insofar as creatures must be created by God to exist in the first place, they must also depend on God for their continued existence.

Suárez's second point above is that God conserves creatures by means of the same act by which he created them. Drawing again on Thomas's discussion of the *secundum fieri*/*secundum esse* distinction, Suárez claims that there is no more justification for saying that God conserves by means of an act distinct from creation than that the sun continues to propagate light by means of an act distinct from that by which it first produced the light (*MD* XXI.2, ¶3, 1:791). In the case of the sun, the difference between production and propagation is merely that the term for the former connotes the prior absence of the light, whereas the latter connotes the prior presence of that light. The difference here is only a difference in which one and the same act is described, and so is a mere *distinctio rationis*, and not a distinction in reality. Likewise, in the case of God the difference between creation and conservation consists in the fact that the term for the former connotes the denial of a previously possessed *esse*, whereas the term for the latter connotes the prior possession of *esse*. Here again, the difference is in the words used to describe the action rather than in the action itself.

In my discussion in §1.1.3, I noted the objection in Suárez that since there can be secondary conserving causes, a mere conservationist such as Durandus has no good reason to hold that God must conserve all beings in existence. What requires explanation here is how Suárez himself conceived of the relation between conserving secondary causes and divine conservation. In the case of secondary causes he distinguishes between the *per accidens* conservation that involves the removal of an impediment to continued existence, as when an angel conserves a human being by turning away a rock, and the *per se* conservation that involves the contribution of something needed for continued existence, as when the sun conserves life by giving light. However, even the latter sort of conservation is distinct from divine conservation insofar as it is merely "remote and mediate," whereas divine conservation is "direct and immediate." The contrast here derives from the fact that divine conservation alone involves "the persistent influx of that very *esse* that was communicated through production" (*MD* XXI.3, ¶2, 1:794). In line with my remarks toward the end of §1.1.3, however, I would simply note the possibility of a mere conservationist position according to which God alone is the direct and immediate *per se* conserving cause of objects, but secondary causes act alone as *per accidens* or *per se* remote and mediate conserving causes of those objects.

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70. For the relevance of this difference between Thomas and Suárez to Descartes's understanding of the Thomistic distinction between causes *secundum fieri* and *secundum esse*, see §2.2.1, at note 65.

### *(ii) Concursus and Secondary Causes*

At the start of disputation XXII, Suárez observes that "of the concursus of the primary cause with secondary [causes] as regards their actions, one finds that little is said by Aristotle and other philosophers" (*MD* XXII, 1:802). His conclusion in this section that God as primary cause concurs *per se* and immediately in all actions of secondary causes of course recalls the thesis of Thomas's causal compatibilism that God operates in all operations in nature. However, Suárez does not follow Thomas in equating secondary causes with instrumental ones. Moreover, he offers an alternative to an account of God's concursus with free human action in the work of some followers of Thomas that appeals to the relation of agents to instrumental causes. Though Suárez's account of divine concurrence clearly is indebted to Thomas, it also differs on important points of detail from the views of Thomas and later Thomists.[71]

We have seen that Thomas's defense of causal compatibilism relies on the analogy to instrumental causality. God's action with creatures is compared to an agent's use of an instrument. In both cases, there is a single effect that two subordinated agents produce by the same action. However, we have also seen the objection in Durandus that secondary causes are not mere instruments when they elicit their effects by means of a power that is proportioned to those effects. Thus, even though a pen does not have the power to produce words unless moved by an agent, it seems that fire has the power to heat on its own. Insofar as the fire has such a power, there would be no need to appeal to another principle of the effects of this power in God.

Suárez discusses various scholastic attempts to respond to this line of objection by distinguishing instrumental causes from "principal" efficient causes (*MD* XVII.2, ¶¶7–19, 1:585–91). Most notable is Scotus's proposal (considered in ¶¶10–12, 1:587–88) that instrumental causes merely dispose a patient to receive a form from the principal efficient cause. Scotus insisted that though even secondary principal causes must be subordinated to God, the subordination in this case differs from the subordination of an instrumental cause to a principal cause. For whereas the subordinated instrumental cause does not produce the ultimate effect, the subordinated principal cause is enabled to produce this effect by the activity of the primary cause.[72]

Suárez rejects Scotus's proposal on the grounds that some instrumental causes produce the ultimate effects directly, as when certain accidents immediately educe a substantial form (*MD* XVII.2, ¶11, 1:588).[73] However, he shares Scotus's view that the

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71. Suárez's theory of divine concursus is, however, close to the position that his fellow Spanish Jesuit Luis de Molina offered in his 1588 *Concordia*, the full title of which is *Liberi arbitrii cum gratiæ donis, divina præscientia, providential, prædestinatione et reprobatione Concordia* (*The Compatibility of Free Will with the Gifts of Grace, Divine Foreknowledge, Providence, Predestination and Reprobation*). For a comparison of the views in Molina and Suárez, see Perler and Rudolph 2000, 201–13. As we will see in chapter 5, the theory of "middle knowledge" that Molina offered in his *Concordia* is an important part of the scholastic context of Descartes's discussions of human freedom.

72. For further discussion of Scotus's proposal and Suárez's response, see Menn 2000, 131–33.

73. Suárez also provides as an example the immediate effecting of an intelligible species by a phantasm. As I indicate in §4.2.1, however, this example is problematic for him.

subordination of a secondary cause to God need not be the same as the sort of subordination involved in instrumental causality. To capture the difference between these two kinds of subordination, he offers the view that an instrumental cause is one that "concurs in, or is elevated to, the production of something more noble than itself, that is, something beyond the measure of its own proper perfection and action" (*MD* XVII.2, ¶17, 590). In the case of a secondary principal cause, the effect is not more noble than itself, and thus its subordination to God does not result in the conclusion that it is a mere divine instrument. Nonetheless, Suárez insists that this cause is subordinated to God, since it can produce the effect proportionate to it only with the help of the divine concursus.

Durandus's question, of course, is why this further assistance is needed given that the effect is proportionate to the secondary cause. The answer in Suárez, broached in §1.1.3, is that the effect has an *esse* that requires God's immediate and *per se* causality as much for its production as for its conservation. However, it might be possible to develop further the response on behalf of the mere conservationist that I offered earlier. We have considered the distinction in Suárez's metaphysics between a *res* and a *modus* of that *res* (see §1.2.1). Though there is some distinction in reality here between a mode and its *res*, the *esse* of the mode is not independent of the *esse* of the *res*, but is a mere determination of the latter. Thus, it could perhaps be said that God produces the *esse* of a mode just insofar as he creates and conserves the *esse* of the *res* that mode modifies. And such a claim seems to leave open the possibility that secondary causes alone produce modifications in an already-existing *res*. Of course, Suárez would protest that secondary causes can produce substantial and accidental forms that are not mere modes but *res* distinct from matter. But for someone, like Descartes, who rejected such qualities (see §1.3), a version of mere conservationism that allows for such a possibility would appear to be a live option.[74]

As we know, however, Durandus concluded not only that his mere conservationism is an acceptable position, but also that Thomas's causal compatibilism is an unacceptable alternative. One of his main arguments for this conclusion is that since God must produce the effect of a secondary cause by means of an action that differs from that cause, either God's action produces the entire effect, thus rendering the action of the secondary cause superfluous, or brings about only part of the effect, in which case the action of the secondary cause produces the other part without divine assistance. This dilemma is possible given Durandus's claim that God cannot produce an effect by means of the same action as that of the secondary cause, since "it is impossible for numerically the same action to be from two or more agents in such a way that it is immediately and completely from each, unless numerically the same power is in them" (*S* II.1.5, ¶12, 1:131). However, Suárez simply endorses the Thomistic line, considered above, that even though the same action cannot derive entirely from two different causes of the same order, it does not follow that it cannot so derive from causes in dif-

74. Cf. Philip Quinn's suggestion on Durandus's behalf, as reported in Freddoso 1991, 583, n.26, that God is a *per se* and immediate conserver just of substances and not of accidents (see also Quinn 1988). Freddoso objects to this suggestion on the grounds that "no full-bodied naturalist will dispute the claim that secondary causes are capable of effecting substances as well as accidents" (Freddoso 1991, 583, n.26). As I indicate in §1.3, however, Descartes at least is not a full-bodied naturalist.

ferent causal orders. Following the development of the Thomistic position in Scotus, Suárez claims that these causes are compatible in the case where one is essentially subordinated to the other. Given that the activity of secondary efficient causes is subordinated to God's activity as primary cause, a single action in the patient can derive from causes of both kinds (*MD* XXII.3, ¶4, 1:826–27, citing *ST* I.105.5, ad 2).

Suárez's identification here of the actions of secondary causes with God's concursus with those actions reveals one important difference between divine concurrence and conservation. We have noted the view in Suárez that God's *per se* and immediate conservation of an object at different times occurs by means of the same action, which itself is merely the continuation of his act of creating that object. In contrast, Suárez emphasizes the distinctness of the acts by which God concurs with secondary causes. Thus, he argues that since "the concursus external to God is nothing other than the action itself" by which the secondary cause acts, "the concursus will vary according to the variety of the actions" (*MD* XXII.4, ¶8, 1:831). Whereas God immediately conserves an object at different times by means of the same act, then, he must concur by distinct acts in the different operations of that object.

In one sense, we should expect Suárez to distinguish concurrence from conservation. After all, he is concerned to set himself apart from the mere conservationist who holds that divine creation/conservation exhausts God's contribution to secondary causality. However, it will be important in the context of a later consideration of Descartes's own views concerning God's activity as primary cause to remember this implication in Suárez that divine concurrence involves a kind of inconstancy in the effect that is not present in the case of divine conservation.

There is one final objection to concurrentism in Durandus that we have not yet considered. In his *Sentences*, Durandus appealed at one point to his mere conservationist position in support of the conclusion that though God is the "universal and primary cause" of our sinful actions, their "proximate and immediate cause" is not God but rather our free will (*S* II.38.1, ¶4, 1:192*, citing II.1.5, 1:130–31). Suárez is sensitive to this line of objection, offering as a reason to reject his concurrentism the claim that in the case of sinful free action, "it is unseemly to attribute such actions to the primary cause insofar as it is operating *per se* and immediately" (*MD* XXII.1, ¶5, 1:803).

Suárez's response to this claim depends on his account of the difference between God's concursus with "necessary" or "natural" causes, on the one hand, and his concursus with "free" causes, on the other. Necessary causes are such that, all the conditions for action being posited, the action itself follows necessarily (*MD* XIX.1, ¶1, 1:688). God's concursus with a necessary secondary cause is determined to a particular effect. Whereas Suárez claims that all natural and nonrational beings are necessary causes, he holds that there are rational volitional agents that are free causes in the sense that they are not determined to a particular action even when all the conditions for acting have been posited (*MD* XIX.2, ¶11, 1:696). As I have mentioned, his view is that free agents are immanent causes that in "first act" are indifferent with respect to which "second acts" to elicit (see §1.2.2 (iii)). Suárez holds that though there is a divine concursus identical to the second act that the free agent in fact elicits, the conditions for action include God's offer of a concursus with refraining from eliciting the second act or with eliciting other second acts, and so the agent is able either to refrain from acting (and so has "freedom of exercise") or to act differently (and so has "freedom of specification") (*MD* XXII.4,

¶21, 1:834). Since God does not offer only one concursus in the case of free sinful action, he does not determine the agent to that action, and so it is the agent rather than God who is responsible for the sin.[75]

As I indicate in chapter 5, Suárez's view that indifference is an essential element of human freedom was standard among the Jesuits but also a source of controversy in the early modern period. We also will discover in that chapter that this controversy is an important part of the context for Descartes's various discussions of human freedom and divine providence. However, there is a further feature of Suárez's account of free human action that is connected to his worries mentioned previously concerning the appeal to the case of instrumental causation in an explanation of the relation of God's activity as primary cause to the activity of secondary causes. As Suárez notes, certain sixteenth-century Thomists cited Thomas's claim that God uses secondary causes as his instruments in support of the conclusion that God concurs with free human agents by means of a "physical premotion." Just as the craftsman produces an effect by applying a tool in a particular manner, so God concurs in a free action by "premoving" the will to act in a certain way (*MD* XXII.2, ¶11, 1:813). However, Suárez claims that Thomas in fact favored the less problematic position that God's concursus with free human action is simultaneous with that action, and indeed is identical to it (¶¶16 and 49–50, 1:814 and 823–24). We need not enter here into the dispute over the interpretation of Thomas.[76] What is more relevant to our concerns is Suárez's conclusion that his theory of "simultaneous concurrence" (as it came to be called) avoids certain difficulties that confront the Thomistic theory of physical premotion.[77] One crucial difficulty is that any physical predetermination through premotion precludes genuine human freedom. For in Suárez's view, such freedom requires that the will be indifferent to an action even given the presence of all of the prerequisites for that action. But if the predetermination to a particular action is part of the set of prerequisites, then the will cannot be indifferent to that action, and so not be free in eliciting that action (¶39, 1:821).[78] Suárez admits that his theory of human freedom has implications for an interrelated set of theological

75. For further discussion of Suárez's account of divine concurrence in the case of sinful free human action, see Freddoso 2001.

76. Suárez's admitted that certain remarks in *On the Power of God* support the interpretation of Thomas offered by the *Thomistae*, but claimed that the relevant discussion in the *Summa Theologiae* does not (*MD* XXII.2, ¶52, 1:824).

77. For an indication that these were the standard labels, see the 1704 *Use of Reason and Faith* (*Usage de la raison et de la foi*) of the French Cartesian Pierre-Sylvain Regis (or Régis) (1632–1707), which includes a chapter on the dispute over divine *concours* between defenders of *la prémotion Physique* and *le* (now, *la*) *concours Simultanée* (I-2.32, Regis 1996, 383–87). The labels for these positions give the misleading impression, which Suárez in fact encourages, that the Thomists understood the divine moving of the human will to be temporally prior to the act of that will. In fact, they held that the priority is one of nature and not time, and they allowed that the premotion occurs at the very instant that the will acts. The difference from Suárez consists simply in the fact that they distinguished this instantaneous premoving from the act of the will.

78. A typical Thomist response is that the divine predetermination is not to be included in the set of prerequisites, since these include only what is required on the part of other secondary causes. There is a sympathetic discussion of this response in Osborne 2006.

issues concerning divine providence, foreknowledge, predestination, and grace, but notes that his main concern is to address the philosophical question of how God's activity as primary cause is related to the activity of free human agents (¶41, 1:821). Though Descartes was notoriously reticent to become entangled in theological disputes, he was forced to confront this philosophical question. We will consider his response to it as the last stage of our treatment of his theory of causation.

## 1.3. FROM SUÁREZ TO DESCARTES

Suárez inherited the traditional Aristotelian distinction among material, formal, efficient, and final causes. However, I have noted the view in Suárez that efficient causes best reflect the definition of a cause as that which serves as "a *per se* principle from which being flows into another" (see §1.2.2). Though we do not find in Descartes this (or, indeed, any other) formal definition of cause, the focus on efficient causality is reflected in his remarks on causal explanation. Thus, in the *Principles of Philosophy* he claims that in explaining natural events in terms of "God or nature," we should consider God "as the efficient cause of all things" (*PP* I.28, AT 8-1:16). Admittedly, Descartes is rejecting here explanations in terms of God's final causality that he found in the scholastics, and that we have seen in Suárez (see §1.2.2 (iii); cf. §2.1.2 (ii.b)). However, even in Suárez there is a decided emphasis on God's causal contribution as an efficient cause in his creation and conservation of the world and in his concursus with the action of secondary causes (see §1.2.3).

In presenting Suárez as preparing the way for Descartes, I certainly do not mean to deny that they offered efficient causal explanations that differ in fundamental respects. After all, Descartes himself insists on the importance of the fact that his causal explanations of the material world do away with the sort of theoretical entities found in scholastic explanations. Thus, in speaking of the schoolmen he challenges a correspondent to "compare all their *real qualities*, their *substantial forms*, their *elements* and countless other such things with my single assumption that all bodies are composed of parts" (*To Morin*, 13 July 1638, AT 2:200). On the scholastic view in Suárez, prime matter and substantial forms are distinct *res* that compose material substance, whereas accidental forms are *res* distinct from the material composite that inhere in it.[79] In contrast, Descartes proposes that matter is nothing more than divisible *res extensa*, and that bodily accidents are not *res* but rather modes of the parts that compose matter.[80] While Descartes's conception of a mode is drawn

79. An exception here is the case of the accidental form of quantity, which Suárez, in opposition to a more orthodox Thomistic position, takes to inhere in prime matter directly rather than in the composite. In §3.1.2 (i), I indicate that the Suárezian account of quantity is in important respects closer than the Thomistic account to Descartes's view of matter.

80. I am assuming here that Descartes takes the parts that serve as the subjects of the modes to be substantial. Cf. the alternative view, cited in chapter 2, note 9, that he is committed to the conclusion that the only material substance is the whole of *res extensa*, and that the parts of this substance are modes rather than substances.

from Suárez (see §1.2.1), his view that all bodily accidents are merely modal features of *res extensa* most assuredly is not.[81]

The differences here make a difference with respect to the particular accounts of efficient causality in the material world that Suárez and Descartes offer. Though Suárez posited the substantial form as a formal cause of a material substance (see §1.2.2 (i)), he also held in the section of the *Metaphysical Disputation* on efficient causality that such a form is required as an efficient cause of certain changes in nature. The causal role of the substantial form is particularly important in the case of substantival generation. Suárez shared with Thomas the view that such generation involves the eduction of a substantial form that is contained in the potentiality of matter (see §1.1.2). Suárez further insisted that the efficient causality of accidental forms is insufficient to account for this eduction, since a substantial form is "more noble" than an accidental form, and since the "principal cause"[82] of an effect "must be either more noble than, or at least no less noble than, the effect" (*MD* XVIII.2, ¶2, 1:599).[83]

We will discover that Descartes accepts a version of the axiom from Suárez that a cause must be at least as noble as the effect (see §2.1). Given his parsimonious ontology, however, Descartes could not accept the argument in Suárez that such an axiom requires the postulation of substantial forms as efficient causes of substantival generation. Indeed, Descartes rejects substantial forms on the basis of the fact that there can be no natural generation of a substantial *res*. As he put the point in correspondence with Regius, "[I]t is inconceivable that a substance should come into existence without being created *de novo* by God" (Jan. 1642, AT 3:505). Of course, Suárez would insist that a secondary cause cannot produce a new substance without the help of divine concursus. Moreover, he could protest that the eduction of a substantial form does not amount to the creation of a substance insofar as a substance naturally subsists on its own, whereas a substantial form naturally composes a substance. Even so, Suárez's metaphysical scheme requires that substantial forms are *res* distinct from matter, and thus that in producing such a form, the secondary cause produces a being that can, at least miraculously, subsist on its own apart from matter (see §1.2.1). For Descartes, this result is unacceptable, since any being that can subsist on its own, even if only by God's absolute power, is itself a substance.[84] The dispute here is not simply

81. For a further consideration of Descartes's various arguments against substantial forms and real qualities, see Rozemond 1998, ch. 4.

82. As opposed to an instrumental cause; see §1.2.3 (ii).

83. Suárez also appealed to the efficient causality of the substantial form in explaining the production of accidents that immediately derive from that form by means of a "natural emanation." Thus, the substantial form of water is the efficient cause of the accident of coldness that naturally emanates from it. It is due to such an emanation that heated water will, when removed from the source of heat, reduce itself to its natural state of being cold (see *MD* XVIII.3, ¶4, 1:616). For more on the scholastic conception of substantial form, see the discussion in Pasnau 2004. Pasnau documents the increasing emphasis in later scholastic thought on the efficient cause role of substantial forms.

84. In his argument for mind–body distinctness in the Sixth Meditation, Descartes emphasizes that "the question of what kind of power is required" to produce the separate existence

over the use of the term 'substance'. Rather, the real question is whether something that can be educed from the potentiality of matter is in fact a *res* distinct from matter. And when Descartes says in his letter to Regius that forms that merely "emerge from the potentiality of matter . . . should not be regarded as substances" (AT 3:505), he can be seen as making the defensible point that something that is a *res* distinct from matter cannot be contained in the potentiality of matter. For Descartes, what can be educed from matter as *res extensa* is only local motion and, consequently upon that, different sizes and shapes.[85] Since *res extensa* is itself a substance, it is something that only God can create.

In rejecting any *res* in matter distinct from divinely created *res extensa*, Descartes rejects as well the accidental forms that Suárez took to be *res* distinct from composite material substance that serve as efficient causes of natural accidental change. However, Suárez had a complex theory of the efficient causality of accidental forms that raises additional questions regarding Descartes's conception of causation. Suárez's theory starts from Aristotle's list of predicamental accidents, which, as we saw in §1.2.1, distinguishes quantity, quality, relation, action, passion, time, place, position, and having.[86] Of these categories, Suárez held that only qualities, and neither quantity nor relation nor the six minor accidents, can be principles of action. Among the qualities, principles of action include active (as opposed to merely passive) *potentiae*, habits and dispositions that yield specific actions (as opposed to general states), and sensible qualities. Among the sensible qualities, some such as colors can produce "intentional species" of themselves but not qualities similar to themselves, whereas others such as heat and light can produce both intentional species of themselves and qualities similar to themselves. Suárez in fact explicitly denied that either shapes (in the category of quality)[87] or local motions (as well as alteration in quality, augmentation in quantity, and substantial generation) can serve as *per se* principles of action (see *MD* XVIII.4, 1:624–27).

In Suárez's view, then, Descartes's claim in the *Principles* that his consideration of the material world "involves absolutely nothing apart from these divisions [in quantity], shapes and motions" (*PP* II.64, AT 8-1:79) requires the denial that anything in matter can serve as a principle of efficient causality. He therefore would take Descartes's radical alternative to the scholastic ontology of the material world to lead

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of two objects does not affect the claim that they are really distinct (AT 7:78). For a discussion of the relation of this view to that of the scholastics, see Rozemond 1998, 130–33.

85. Descartes claims in the *Principles* that "any variation in matter or diversity of its many forms depends on motion" (*PP* II.23, AT 8-1:52–53). For him, the "forms" intrinsic to the parts of matter can involve only modes of extension such as size and shape.

86. In his *Disputations*, Suárez devotes the following disputations to each of the categories: XL–XLI to quantity, XLII–XLVI to quality, XLVII to relation, XLVIII to action, XLIX to passion, L to time, LI to place, LII to position, and LIII to habit.

87. On Suárez's view that shape is a mode of quantity rather than a *res* distinct from it, see §1.2.1. As indicated in that section, this Suárezian view is reflected in Descartes's characterization of the scholastic position.

back to some form of occasionalism, at least with respect to the explanation of purely material change.

Whether Descartes would accept this implication of his ontology of the material world is a question we will address in due course. Even if Descartes were committed to some form of occasionalism in the case of body–body interactions, however, it would be a mistake to see medieval Islamic occasionalism, rather than scholastic anti-occasionalism, as providing the proper context for a consideration of the account of causation in his physics. For one thing, Islamic occasionalism simply was not a live option during Descartes's time in the way in which scholastic anti-occasionalist accounts of bodily causation were. Moreover, Descartes's rejection of the scholastic ontology of the material world did not prevent him from adopting certain general features of the account of causation that we find in Suárez. I have already mentioned his endorsement of a version of the axiom in Suárez that a cause must be at least as noble as the effect. Given this endorsement, Descartes could not have been sympathetic to the view in Islamic occasionalism, which Hume later accepts, that causal correlations can hold between any two distinct events.[88] But as will become evident in what follows, it is also the case that Descartes's view of God's causal activity draws on claims in Suárez concerning the relation between divine creation and conservation. I will be concerned to argue that this connection to Suárez provides a reason to reject the view of those who take Descartes's theory of causation to include a form of temporal atomism that is similar to that of the Islamic occasionalists (see §2.2). This connection to Suárez is significant for Descartes's theory of causation given the fact, which I emphasize in chapter 3, that his account of divine conservation is a central element of the metaphysical foundations that he provides for his anti-scholastic physics.

The importance of the anti-occasionalist scholastic context is not restricted to Descartes's account of causation in physics. In addition to the general metaphysical principles in the work of the scholastics that I have emphasized in this chapter, there are further specific claims concerning causation in Suárez and other scholastics that we must consider if we are to understand what Descartes has to say about forms of causation other than body–body interaction. In what follows, I note in particular the relevance of such claims for Descartes's account of the action of body on mind (see §4.2.1) and of the action of mind on body (§4.3.1). The scholastic context will allow us to appreciate certain problems in Descartes for mind–body interaction that go beyond the problem of the interaction of objects with differing natures that has tended to dominate recent discussions of his theory of causation. Moreover, it will become clear in the final chapter that this context is essential for an adequate understanding of the sort of causation that Descartes takes to be involved in the free acts of our will.

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88. For this view in Ghazālī's *Incoherence*, see §1.1.1. For a discussion of the relation of Ghazālī's position to Hume's account of causation, see Nadler 1996. My view that Descartes differed from the Humean line on this point has been disputed in Della Rocca (forthcoming). According to Della Rocca, Descartes does not take the causal axiom he inherited from the scholastics to show that causes explain their effects. I defend my different reading of Descartes's axiom in §2.1.3.

Admittedly, as in the case of physics, so Descartes's accounts of mind–body interaction and free human action presuppose a basic ontological framework that differs, sometimes radically, from a traditional scholastic framework. However, these undeniably important differences should not blind us to the extent to which the problems concerning causation that Descartes confronts, and even aspects of his responses to those problems, were bequeathed to him by his scholastic predecessors.

# 2

# Two Causal Axioms

In contrast to Suárez, Descartes did not bequeath to posterity an extended treatise on the nature of causality. Nevertheless, his remarks on causation in the Third Meditation provide a natural starting point for a consideration of his theory of causation. For in this text, Descartes emphasizes two conclusions regarding causation that he took to be evident. The first, which is central to the main proof in the Third Meditation of the existence of God, is that "there must be as much in the efficient and total cause as in the effect of that cause" (AT 7:40). This is alternatively expressed by the claim that the effect "cannot begin to exist unless it is produced by something in which there is formally or eminently all that is found" in the effect (AT 7:41). Elsewhere Descartes labels this as the "axiom or common notion" that "whatever there is of reality or perfection in some thing, is formally or eminently in its first and adequate cause" (AT 7:165). Drawing on this label, as well as the claim in this passage that the reality or perfection is contained in the cause, I call this constraint on causation the "containment axiom."[1] In addition to this axiom, there is Descartes's argument toward the end of the Third Meditation that since "conservation differs solely in reason from creation," there must be "some cause that as it were creates me at this moment, that is, conserves me" (AT 7:49). Descartes also expresses this claim as the axiom that

1. In contrast to the English-language secondary literature on this topic (see note 7), Descartes typically speaks of causal axioms or notions rather than of causal principles. But he does indicate in correspondence that the term 'principle' can be used for "*a common notion* that is so clear and so general that it can serve as a principle for proving the existence of all the beings, or entities, to be discovered later," as well as for "*a Being*, the existence of which is better known to us than any other, so that it can serve as a *principle* for knowing them" (*To Clerselier*, June/July 1646, AT 4:444).

"no less a cause is required to conserve a thing than to produce it at first" (AT 7:165). I call this additional constraint on causation the "conservation axiom."

Both of these axioms have a clear scholastic precedent in Suárez. Indeed, there is a suspicion among some commentators that the containment axiom, in particular, is merely a scholastic holdover that has no real justification in Descartes's system. For instance, Jonathan Bennett has concluded that "after decades of intermittently brooding" over this axiom, the axiom itself is "without value" and "seems not to reflect any deeply considered views about the nature of causation" (Bennett 2001, 1:89).[2] As we will discover, however, other commentators have insisted that this axiom is significant for Descartes insofar as it precludes the causal interaction of objects with natures that he takes to be heterogeneous, most notably the interaction of mind as *res cogitans* and body as *res extensa*.[3]

There is less disagreement in the literature over the value of Descartes's conservation axiom. However, there is an interpretation of this axiom that distances it from its scholastic counterpart. Here again Bennett illustrates the point, claiming that the conservation axiom leads Descartes to the position that "the continual preservation of things through time . . . is really the continual creation of successors to them" (Bennett 2001, 1:98). This claim of course reflects the earlier interpretation of Descartes's view of divine conservation, mentioned in the introduction, that Norman Smith offered in 1902.[4] But this interpretation is perhaps developed most completely in the later work of Martial Gueroult.[5] What neither Gueroult nor Smith nor Bennett emphasizes, however, is that a re-creationalist account of the conservation axiom conflicts with the view in Suárez and other scholastics that conservation requires not distinct acts of re-creation, but merely the continuation of the very same act by which God created in the first place.

A different view of the metaphysics of Descartes's two causal axioms emerges, however, once we take seriously their source in scholastic thought. The scholastic context not only allows us to understand the import the containment axiom had for Descartes, but also reveals that this axiom does not create the sort of difficulties for mind–body interaction that critics have tended to emphasize. Moreover, Suárez's version of the conservation axiom in fact provides a basis for rejecting the claim that Descartes identified the conservation of the world with its continual re-creation. I noted in §1.3 that Descartes offers a radical alternative to the sort of scholastic ontology that underlies Suárez's account of causality. But this departure from scholasticism turns out to be

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2. Bennett calls the containment axiom the "causal resources principle." For further discussion of Bennett's treatment of the issue of causation in philosophers from Descartes to Hume, see my review of Bennett 2001 in Schmaltz 2002b.

3. See the views of Radner discussed below. See also the comments in the introduction concerning the so-called scandal of Cartesian interaction.

4. However, Bennett himself cites in defense of his re-creationalist interpretation of Descartes a passage from Smith 1952, 218. For more on this interpretation, see note 92.

5. Where Bennett goes beyond Gueroult is in attributing to Descartes the position that God does not conserve the very same object over time, but rather creates a series of nonidentical successors. I think that Bennett is correct in holding that this is an implication of the re-creationist reading of conservation, at least on one account of identity, but I argue in §2.2.2 that such an implication reveals that this reading cannot reflect Descartes's own views.

compatible in the end with the dependence of Descartes's understanding of the metaphysics of causation on the views of his scholastic predecessors.

In §2.1, I begin my consideration of this account by focusing on Descartes's containment axiom. My statement above that this axiom "expresses" the claim that the cause contains at least as much reality as its effect actually begs the question against the view in the literature that there are two distinct constraints on causation here. So I need to start by arguing that there is in fact only one axiom. Then I consider the significance of the fact that Descartes restricted his containment axiom to the "efficient and total cause" of an effect, as well as the precise meaning of the claim in this axiom that the effect is contained in the cause "formally or eminently." Throughout it proves useful to take into account remarks in Suárez, who anticipated Descartes's statement of the containment axiom and the technical terminology used therein.

In §2.2, I turn to the conservation axiom as explicated in the Third Meditation. Descartes indicates there that this axiom follows from the "nature of time," and that it yields the result that conservation is distinct only "in reason," and not in reality, from creation. This result seems to be drawn straight from Suárez, though I have mentioned the claim in Bennett, anticipated in Gueroult, that for Descartes divine conservation consists in a series of discrete creative acts rather than, as Suárez would have it, in a continuation of God's original creation of the world. But though there are some differences in the arguments for divine conservation in Suárez and Descartes, I understand both to agree that God conserves creatures by means of the continuation of the same act by which he created them *ex nihilo*.

Even though the Suárezian context is essential for understanding Descartes's containment and conservation axioms, I claim in §2.3 that these axioms do not take him the full way to Suárez's own concurrentist position. The containment axiom leaves unresolved some basic issues concerning how an effect is actually produced. The conservation axiom goes further in revealing that divine conservation plays an essential background role in causal interactions. But there remains the metaphysical question—central to scholastic discussions of causality—of the precise nature of the creaturely contribution to causality in nature. To address Descartes's stance on this issue, we must shift from a consideration of his abstract causal axioms to an exploration of the details of his accounts of various forms of causal interaction.

## 2.1. THE CONTAINMENT AXIOM

The main topic of the Third Meditation is "the existence of God," and in the course of offering his main proof there of God's existence, Descartes appeals to the following as "manifest by the light of nature," which I divide into two parts:

> [1] There must be at least as much in the efficient and total cause as in the effect of that cause. For I ask, where could the effect receive [*assumere*] its reality, unless from the cause? And how could the cause give this to it, unless it also has [this]. For thus it follows that something cannot come from nothing, nor that what is less perfect, that is, what contains more reality in itself, from what has less. . . . That is [*Hoc est*], [2] in no way can some stone, for example, which was not before, now begin to be, unless produced by another thing in which there is all either formally or eminently that is found in the stone; nor can heat that was not

> previously in a subject be induced, unless from a thing that is of at least the same order of perfection as heat, and so for the rest. (AT 7:40–41)

Both (1) and (2), as well as the view that they are intimately connected, are drawn straight from the scholastic tradition. For instance, in his *Disputations* Suárez proposes that especially in the case of efficient causality, the following principle holds, which I divide into corresponding parts:

> [1'] [A]n effect cannot exceed in perfection all of its causes taken together. It is proved that nothing of perfection is in the effect that it does not have from its cause; therefore [*ergo*] [2'] the effect can have nothing of perfection that does not pre-exist in any of its causes, either formally or eminently, because causes cannot give what they in no way contain. (*MD* XXVI.1, ¶2, 1:916*)

Suárez's (1') requires that "all causes taken together" contain "everything of perfection" in their effect on the grounds that the effect can "have" its perfection only from these causes. Similarly, Descartes's (1) requires that the "efficient and total cause" of an effect contain at least as much "reality" as its effect contains on the grounds that the effect must "receive" its reality from its cause. And just as Suárez's (2') requires that the perfection of the effect "preexist" in all of its causes "formally or eminently," so Descartes's (2) requires that the total cause contain in this way "all" that is in its effect.[6]

One important difference derives from the indication in Descartes that his causal constraints apply not only to the "actual or formal" reality that an effect has from its cause, but also to the "objective reality" that his idea of that effect has. In the case of (2), in particular, the causal constraint is said to require that "the idea of heat, or of the stone, could not be in me unless it is placed there by some cause in which there is at minimum as much of reality as I conceive to be in heat or the stone" (AT 7:41). This extension of the causal constraint to the case of objective reality is of course central to the Third Meditation argument that God must exist as the cause of the objective reality of our idea of God. I will have more to say presently about Descartes's views on objective reality in relation to the very different views on this type of reality in Suárez. But my main concern will be to address the following questions concerning the passage above from the Third Meditation. First, there is the question of whether the constraints introduced in (1) and (2) amount to the same or are distinct constraints. A second question concerns the import of Descartes's restriction of the constraint in (1) to the "efficient and total cause." Finally, there is the question of what precisely Descartes meant by the claim in (2), anticipated in Suárez, that a cause must contain its effect "formally or eminently."

### 2.1.1. How Many Causal Constraints?

Suárez links his two causal constraints by the term *ergo*, thus indicating that the fact that all perfections of an effect are contained formally or eminently in the total set

6. Whereas Descartes followed Suárez in holding that a cause need contain *at least as much* reality or perfection as its effect, the version of the containment principle in the work of Proclus and other Neoplatonists requires the stronger condition that the cause contain *more* reality or perfection than its effect. For a discussion of the Neoplatonic version of the principle, see Lloyd 1976.

of its causes (2′) follows from the fact that such causes together contain at least as much perfection as is present in this effect (1′). Indeed, the suggestion in Suárez is that the two constraints come to the same thing. For a cause to contain at least as much perfection as its effect just is for it to contain formally or eminently everything in its effect. Suárez took formal and eminent containment to exhaust the ways in which perfection can be contained. This same view seems to be reflected in Descartes's remarks in the Third Meditation. For by introducing (2) by the term *Hoc est*, he suggested that this constraint comes to the same as (1).

Nevertheless, there is the view in the literature that Descartes's (1) and (2) are distinct constraints insofar as (1) requires much less of the cause than does (2). For instance, Daisie Radner argues that whereas (1) explicates a relatively weak "reality principle," which requires the containment in the cause of only at least as much reality as is found in the effect, (2) introduces a stronger "containment principle," which requires further the containment in the cause formally or eminently of the specific features of the effect (Radner 1985a, 41).[7]

When pressed to explain the sort of "reality" that he had in mind in asserting (1), Descartes explains that "substance is a greater thing than mode," and that "if there is an infinite and independent substance, it is a greater thing than finite and dependent [substance]" (AT 7:185).[8] What is suggested here is the following simple ontological hierarchy:

| | |
|---|---|
| God | infinite substance |
| minds<br>bodies[9] | finite substances |
| thoughts<br>shapes/sizes/motions | modes of finite substances[10] |

7. I take the labels from the discussion of Radner's position in O'Neill 1987, 231–32. Radner calls the reality principle the "at least as much principle," and the containment principle the "pre-existence principle." O'Neill is inclined to Radner's view that Descartes offered two distinct causal constraints; see O'Neill 1987, 232. Radner also takes Descartes to offer a distinct "communication" principle on which the cause literally transfers to the effect what it contains in itself. In §3.2.1 (iii), I consider the claim in Broughton 1986 that Descartes was led by his views on causation to accept such a principle in the case of body–body interaction.

8. Descartes also includes in this hierarchy "real accidents, or incomplete substances" that "are greater things than modes, but less than complete substances" (AT 7:185). But he famously rejects the existence of scholastic bodily accidents that can (at least miraculously) subsist apart from corporeal substance.

9. There is some dispute in the literature over whether Descartes allowed that particular bodies are substances at all. On a view that Martial Gueroult defends, there is only one material substance, with particular bodies serving as modes; see Gueroult 1953, 1:107–18, and Gueroult 1968, 540–55. Cf. the recent development of this interpretation in Lennon 2007. However, Descartes himself speaks of the parts of corporeal substance as distinct substances (e.g., in *PP* I.60, AT 8-1:28–29), and he distinguishes between parts of a body and its modes (Sixth Replies, AT 7:433–34), thus suggesting that particular bodies are substantial parts of matter rather than modes of it. For an appeal to these considerations in response to Gueroult's interpretation, see Hoffman 1986, 347–49.

10. In a letter to Arnauld, Descartes emphasizes that one must distinguish between thought or extension insofar as it constitutes the nature of a substance and the variable

In terms of this hierarchy, the claim that a cause must have as much reality as its effect requires only that the cause be on at least the same level of the ontological hierarchy as its effect. This seems to fall short of the requirement that the cause contain everything in the effect formally or eminently. According to Radner, the requirement here is that the cause possess not merely the general type of reality in the effect, but the specific nature of the effect itself.[11]

In response to Radner, however, Louis Loeb denies the distinction between the two principles Radner claims to find in Descartes on the grounds that what is said to be contained formally or eminently in the cause is simply the perfection or reality that the reality principle concerns. In Loeb's view, to say that the cause must contain formally or eminently everything in the effect is just to say that the cause must contain something on either the same ontological level as its effect (in the case of formal containment) or a higher ontological level than its effect (in the case of eminent containment). Thus, the containment principle requires not that the cause "contain modes of the same kind" as it produces in the effect but merely that it contain the reality of the effect "*qua* degree of perfection" (Loeb 1985, 228). According to Loeb, then, the containment principle requires that in the case of the production of a mode, say, bodily motion, the cause that formally contains this effect possess not motion itself, but only something on the same ontological level as this mode.

Loeb's claim that the two causal principles are not ultimately distinct may seem to be supported by the fact that when attempting to formalize his system in the Second Replies, Descartes offers only the one causal axiom, and explicates that axiom in terms of his simple ontological hierarchy. The causal axiom, which I cited at the outset, is that the "first and adequate" cause contains formally or eminently "whatever there is of reality or perfection in the effect."[12] But this axiom is followed by a further axiom that explains the notion of reality or perfection by appealing to the fact that "substance has more reality than accidents or modes, and infinite substance, than finite" (AT 7:165). So the suggestion here is that the reality that the cause formally or eminently contains is simply the reality of the effect as infinite substance, finite substance or mode.

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modes of that attribute, such as particular acts of thinking or particular shapes, sizes, or motions (29 July 1648, AT 5:221). On his official view, the thought or extension that constitutes the nature of a substance is an invariable attribute that is only "distinct by reason" from that substance (see *PP* I.62, AT 8-1:30). This kind of attribute thus belongs on the same level of reality as the substances to which they are attributed. In §2.2.2, I note the view in Descartes that there is only a distinction of reason between a substance and its invariable attribute of duration.

11. As Radner puts the point, the further constraint on causation requires that in the case where the effect is a mode, the cause "communicates" this something that "pre-exists" in itself and that what gets communicated is not merely "just modality or modeness" but rather a particular kind of mode (Radner 1985a, 41).

12. I address presently the restriction of the axiom to the "adequate" or, what is the same for Descartes, "total" cause.

Loeb's deflationary version of the containment axiom suffices for the purposes of the main argument for the existence of God in the Third Meditation. As I have indicated, the central premise of this argument is that the cause must contain formally or eminently the reality that is present objectively in our idea of infinitely perfect substance.[13] But to contain something at the same level of reality as infinitely perfect substance just is to contain formally infinite perfection itself.

Nonetheless, a more robust sort of formal containment seems to be required for the proof of the existence of the material world in the Sixth Meditation. After ruling out the possibility that his mind has an "active faculty" (*facultas activa*) that produces the objective reality of his sensory ideas, Descartes notes that there must be "another substance distinct from me, in which all the reality must inhere [*inesse*] either formally or eminently, which is objectively in the ideas produced by this faculty." Either the substance is body, in which case the reality inheres formally, or it is God or "some creature more noble than [*nobilier*] body," in which case the reality inheres eminently (AT 7:79). In terms of the simple ontological hierarchy, the claim that one created substance is more noble than another would seem to amount to the claim that the former is on a higher level in the hierarchy than the latter. But this claim is problematic given the implication of the simple ontological hierarchy that all substances other than God are on the same ontological level. As I indicate in my discussion below of Descartes's view of eminent containment, this consideration reveals the need for a revised version of his ontological hierarchy. However, the relevant point here is that the mere containment of something with the same amount of reality does not suffice for formal containment in the Sixth Meditation proof. For other finite minds do contain something with the same amount of reality as the bodily modes present objectively in our sensory ideas, namely, its own modes. But the proof makes clear that finite substances more noble than bodies contain the objective reality of the sensory features of bodies eminently rather than formally (AT 7:79). More needs to be said about the exact nature of the formal containment that Descartes has in mind here; we will return to this point presently. Yet even an initial consideration of the Sixth Meditation proof of the material world indicates that formal containment requires not merely that what is contained be on the same ontological level as the effect, but also that it have the same nature as the effect. So at a minimum, that which formally contains the objective reality of our sensory ideas of bodies must have the same nature as body.

My proposal is that Descartes offers a single causal axiom that requires that the cause contain the reality of the effect formally or eminently. Any apparent distinction of causal constraints derives from the fact that he sometimes needed to consider the reality or perfection of the effect only abstractly in terms of his simple ontological hierarchy, as in the case of the Third Meditation proof of the existence of God,

13. I have more to say in §2.1.3 (i) about Descartes's account of objective reality and of its distinction from formal reality.

whereas at other times he needed to consider the reality or perfection as reflected in the particular nature of the effect, as in the case of the Sixth Meditation proof of the existence of the material world. In the end, there seems to be no difference between Descartes and Suárez on the relation between the two causal constraints. For both, the requirement that the (total or adequate efficient) cause contain at least as much perfection as its effect is to be understood in terms of the requirement that the (total or adequate efficient) cause contain everything it produces in the effect formally or eminently.

To this point I have spoken only in general terms about the requirement in the containment axiom that the cause contain "formally or eminently" what is found in the effect. We will discover that the notions of formal and eminent containment are not entirely straightforward for Descartes. Before puzzling over the complications, however, we need to consider briefly the import of Descartes's claim to Mersenne that when he said in the Third Meditation that there is nothing in the effect "not contained formally or eminently in its EFFICIENT and TOTAL cause," "I added these two words on purpose" (AT 3:274). At least initially, total causes are most usefully contrasted with partial causes, and efficient causes with formal and final causes. The scholastic context, particularly as provided in Suárez's work, turns out to be crucial for Descartes's own understanding of these contrasts.

### 2.1.2. "EFFICIENT and TOTAL Cause"

#### *(i) Total/Adequate versus Partial Causes*

The "theologians and philosophers" gathered by Mersenne who wrote the Second Objections argue that since living things are produced by the sun, rain, and earth, which lack life and therefore are "less noble" than what they produce, it is the case, contrary to what Descartes claimed in the Third Meditation, that "an effect may derive from its cause some reality that is nevertheless not present in the cause" (AT 7:123). Descartes initially responds by insisting that life is a perfection that can be explained in terms of the operations of inanimate bodies. Here he appeals to his argument that it is only reason, particularly as manifested in language use, that cannot be so explained.[14] Yet in his Second Replies, as well as in a related letter to Mersenne, Descartes also allows for the possibility that living organisms include perfections not present in the sun, rain, and earth, but concludes that if this is so, then it shows only that these elements are not the total or adequate causes of what they generate.[15]

Descartes nowhere provided an analysis of total or adequate causes, or indicated the sense in which objects such as the sun, rain, and earth could be causes without being total or adequate causes. Yet at one point in the Third Meditation he does refer to the possibility that several "partial causes" (*causes partiales*) contribute to his cre-

14. This is the argument in *DM* V, AT 6:55–59.

15. Cf. AT 7:134, in which Descartes denies that they are adequate causes, and AT 3:274, in which he denies that they are total causes.

ation (AT 7:50). Moreover, there is in Suárez an analysis of the distinction between total and partial causes. In the *Disputations*, he defines the total cause as that "which provides the whole concursus necessary for the effect in its order," and the partial cause as that "which *per se* alone does not contribute a sufficient and wholly necessary concursus" (*MD* XXVI.3, ¶1, 1:925–96*).[16] In failing to contribute a sufficient concursus, partial causes may seem to be similar to instrumental causes that, in his view, must be subordinated to and act with other causes of the same order to produce effects more noble than themselves (see §1.2.3 (ii)). Suárez cautions that though partial causes also must act with other causes of their same order to produce their effects, they are not subordinated to those other causes, and so are principal rather than instrumental causes (*MD* XVII.2, ¶18, 1:591). However, his claim that partial causes require assistance from other causes of the same order allows him to hold that secondary causes can be total causes of their effects even though they can produce these effects only with the help of the concursus of the primary cause.

In terms of this analysis, Descartes could say that the sun, rain, and earth are not total or adequate efficient causes of living organisms because they do not provide everything needed in the order of secondary efficient causes to produce their effect. The concursus of other organisms or, in the case of the original production of the organism, of other kinds of bodies are required for this production. Since they are only partial causes, the sun, rain, and earth need not contain formally or eminently everything present in the organisms they produce.[17] But given his containment axiom, Descartes must hold that the total efficient cause of the organisms, consisting of these partial causes together with the other organisms or bodies that contribute to their production, must so contain the effect. And on this point Descartes agrees with Suárez, who asserts as certain that "the effect cannot exceed in perfection all of its causes taken together." For Suárez, as for Descartes, such a certainty reveals that "the effect can have nothing of perfection that does not pre-exist in some of its causes, either formally or eminently" (*MD* XXVI.1, ¶2, 1:916*).

There is, however, one interesting complication for the view that Descartes can accept the conclusion in Suárez that creatures as well as God can be the total cause of an effect. This complication derives from the so-called *Conversation with Burman*, a record of a 1648 interview that Descartes had in his country retreat in Egmont with the Dutch theological student Frans Burman. One portion of this conversation concerned Descartes's claim in the Third Meditation that given the fact that God has created him "there is a strong reason to believe that I have been made in

16. Suárez further distinguishes partial causes, which are principal causes that bring about effects with other causes of the same kind and order, from instrumental causes, which are not principal causes, since they bring about effects with other secondary causes of a higher order to which they are subordinated; see *MD* XVII.2, ¶¶16–19, 1:590–91. For more on his view of instrumental causes, see §1.2.3 (ii). Here I focus on his account of principal causes.

17. Elsewhere, Descartes refers to the sun as a "universal" cause of its effects that requires the contribution of other "particular" causes; see *To Elisabeth*, 6 Oct. 1645, AT 4:314. In §2.2.1, I discuss Descartes's view in this letter that the action of the sun as a universal cause must be distinguished from God's action as "universal and total cause" of all effects.

some way in his image and likeness [*imaginem et similtudinem*], and that I perceive that likeness, which includes the idea of God, by the same faculty that enables me to perceive myself" (AT 7:51).[18] Burman objects to this claim that "surely God could create you, and yet not create you in his own image." Descartes is reported to respond, after citing the principle that "the effect is similar to the cause," that since "God is my cause, I am His effect," it follows directly that "I am similar to him." When Burman rejoins that the builder who produces a house is not similar to it, Descartes notes that the fact that the builder "only applies activity to the passive" shows that "the work as a work is not itself similar." He then claims that in the contrasting case of "the total cause and [the cause] of being itself," which "produces something else *ex nihilo* (which is the mode of production that pertains to God alone)," the effect must be similar to the cause. Thus since the total cause of being is itself "being and substance," it follows that what it produces "must at a minimum be being and substance, and so in any case be similar to God and bear His image [*imaginem*]" (AT 5:156).

If 'the total cause *and* the cause of being itself' means "the total cause, *that is*, the cause of being itself," then only God could be a total cause given the remark to Burman that the mode of producing being itself *ex nihilo* belongs to God alone.[19] On this reading, the containment axiom could apply only to God. However, one could read 'the total cause and the cause of being itself' as referring to something that is the total cause *and in addition* the cause of being itself. The response to Burman may be that a thoroughgoing similarity of effect to cause can be derived only in the case of a total cause of that effect that is also the cause of the being of that effect.[20] In the cases of total causes that bring about their effects by applying their activity to passivity, one cannot argue to a similarity in being, since such causes do not produce the being of the patient, but merely alter a patient that already has its own being. To be sure, Descartes must take the alteration to be contained in its total cause formally or eminently. Yet one cannot assume that the being of what is altered must be similar to the being of what alters it. The builder must (eminently) contain the plan of the house he will build, but the passive materials to which he applies his activity need not be similar to himself. We will return in §2.2.1 to the question of whether God's total causality of the world precludes any other sort of causal input. But at least the argument in the Burman report that the similarity between cause and effect is required only in the case of the cause of being itself does not require the restriction of total causality to God alone.[21]

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18. Also at issue is Descartes's claim in the Fifth Replies that "divine [creation] is closer to natural production than to artificial [production]" (AT 7:373).

19. Cf. Descartes's remarks at AT 7:111. But see also the discussion in §1.2.3 (i) of reservations in Suárez of demonstrating on the basis of natural reason alone the conclusion that God alone can create *ex nihilo*.

20. I overlooked the possibility of this alternative reading in my analysis of the Burman passage in Schmaltz 2000.

21. There is a similar reading of the Burman passage in Pessin 2003, 43. Cf. the discussion of this passage in §2.2.1.

*(ii) Efficient versus Formal and Final Causes*

Previously we have considered the view in Suárez that since form and matter are intrinsic causes, they differ in kind from two kinds of extrinsic causes, namely, "final causes" that cause "by means of a metaphorical motion" insofar as they merely incline other causes, and efficient causes that are the true source of effects through an action (see §1.2.2). Though Suárez emphasized that efficient causality is the primary case of causation, he was also willing to appeal to material, formal, and final causality in his explanations of natural change. Descartes's restriction of his containment axiom to efficient causality indicates this unwillingness to extend the notion of causality in a similar sort of way. Even so, he allows at times for something akin to formal causes, and he admits not only a rational teleology in the case of the actions of created minds, but also a kind of natural teleology in the case of the soul–body union.[22] What we need to understand is how Descartes's concessions are compatible with his emphasis on the exclusivity of efficient causality. Let us consider intrinsic formal causality first, then extrinsic final causality.

(ii.a) Descartes admits a kind of formal causality analogous to though distinct from efficient causality in the course of commenting on his suggestion in the Third Meditation that God derives his existence from himself. The Dutch critic Johan de Kater, or Caterus, protested in the First Objections that God can derive his existence from himself only in a negative sense, or not from another, and not in a positive sense, or from a cause (AT 7:95). In response, Descartes insists that it is legitimate to assume that everything requires a cause of its existence, and to inquire into its efficient cause. He adds that even though the fact that God has "great and inexhaustible power" reveals that he does not require an external cause for his existence, still since "it is he himself who conserves himself, it does not seem too improper for him to be called *sui causa*" (AT 7:109). Since God can be called a *sui causa*, "we are permitted to think that he stands in the same relation to himself as an efficient cause does to its effect, and hence to be from himself positively" (AT 7:111).

Dissatisfied with this explanation, Arnauld notes in the Fourth Objections that we are to understand the source of God's existence not in terms of an efficient cause, but in terms of the fact that since his existence is identical to his essence, God requires no efficient cause. Arnauld adds that since nothing can stand in the same relation to itself as an efficient cause does to its effect, God cannot stand in this relation to himself (AT 7:213–14).[23]

Though Descartes protests that Arnauld's complaint "seems to me to be the least of all his objections" (AT 7:235), he nonetheless responds to it at some length. He begins by insisting that he never said that God is an efficient cause of his own existence, but only that he in a sense stands in the same relation to his existence as an

22. I take the terms 'rational teleology' and 'natural teleology' from Simmons 2001.

23. Arnauld's objection is relevant also to Descartes's axiom in the Second Replies that "no thing exists of which it cannot be asked what is the cause why it exists" (AT 7:164). I discuss this axiom in §5.1.2.

efficient cause does to its effect.[24] To explain more precisely the sense in which God is the cause of his existence, Descartes appeals to the claim in Aristotle that the essence of a thing can be considered as a "formal cause" of certain features of that thing (AT 7:242). He concedes to Arnauld that the fact that God's existence is identical to his essence reveals that it does not require an efficient cause, but he notes that God's essence provides a formal cause of his existence that "has a great analogy to the efficient [cause], and thus can be called an efficient cause as it were [*quasi causa efficiens*]" (AT 7:243).[25]

Even though he emphasizes the analogy to efficient causality, Descartes also suggests that there must be some room in his ontology for a species of causation distinct from efficient causation. After all, Descartes tells Arnauld that there is between an efficient cause and no cause "the positive essence of a thing" (AT 7:239). To be sure, he continues by allowing that the concept of an efficient cause "can be extended to" the concept of a formal cause, in the same way that the concept of a rectilinear polygon can be extended to the concept of a circle (AT 7:239). But just as a rectilinear polygon remains something distinct in nature from a circle, so an efficient cause seems to remain something distinct in nature from a formal cause.[26]

In the exchange with Arnauld, the discussion of formal causality is limited for the most part to the special case of God's existence. However, I have noted Descartes's appeal to an understanding of formal causality in Aristotle that is not restricted in this manner. Descartes cites in particular Aristotle's claim in *Posterior Analytics* that the defining form of a right angle is the cause of the fact that an angle in a semicircle is a right angle (II.11, 94$^{a}$25–35, Aristotle 1984, 1:155). Given this citation, Descartes could extend the notion of formal causality to cover any case in which a feature of an object derives from that object's nature or essence. Though he himself does not speak in these terms, he could say that the extension that constitutes the essence of a body is the formal cause of that body's capacity to have certain kind of modes, in particular, modes of extension. Of course, this appeal could not explain why the body has certain modes rather than others. In contrast to the case of God's existence, such an explanation would need to invoke the efficient causes of the bodily modes. But also in contrast to the case of God's existence, an explanation of these modes in terms of their efficient causes seems to be perfectly compatible with an explanation of the ability of body to possess such modes in terms of the formal cause of the modes.

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24. Descartes is not entirely innocent, though, since he does deny in the First Replies that he said that it is impossible for something to be the efficient cause of itself, and he suggests that efficient causes need not be either prior to or distinct from their effects (AT 7:108). It is understandable that Arnauld takes this text (to which he had access when composing his Fourth Objections) to indicate that Descartes wanted to apply the notion of efficient causality to the derivation of God's existence from himself.

25. For a helpful discussion of Descartes's exchange with Arnauld on this point, see Carraud 2002, 266–88. Carraud draws on the discussion of Descartes's conception of God as *causa sui* in Marion 1996, 143–82.

26. Thus, there seems to me to be some reason to qualify Carraud's conclusion that for Descartes "the expression 'cause efficiente' is henceforth redundant" (Carraud 2002, 179). Carraud cites the similar conclusion in Marion 1991, 286–87.

Thus, there may be no reason for Descartes to dispute the consequence in Suárez that the fact that an effect has a total efficient cause does not preclude the fact that it also has a formal cause. Moreover, Descartes's claim in the Fourth Replies that we conceive of formal causality in the case of God "by analogy with the notion of efficient causation" (AT 7:241) recalls the view in Suárez that formal causes can be called causes only by analogy to efficient causes (see §1.2.2 (i)). Nevertheless, it is clear that the account of formal causality that I derive from the remarks in the Fourth Replies differs fundamentally from the account of such causality in Suárez. Descartes's official doctrine in the *Principles* is that there is only a *distinctio rationis*, and not any distinction in reality, between the "principal attribute" of extension and the corporeal substance whose nature it constitutes (see *PP* I.62, AT 8-1:30).[27] According to Descartes, then, anything that inheres in matter can be only a mode of extension.[28] Here he is of course concerned to reject the substantial and accidental forms that schoolmen such as Suárez took to be the source of formal causality in the case of material substances.[29] But Descartes is committed to rejecting as well the view in Suárez that formal causality involves an "intrinsic and formal union" of a form that is distinct *in re* from that with which it unites. Descartes therefore could not take formal causality to enter into an account of the composition of corporeal substance; at most, he could appeal to this kind of causality merely to anchor bodily modes in the extension that constitutes the essence of body.

But though a Suárezian account of the causal role of the forms of material composites cannot provide a model for Descartes's conception of formal causality, such a model is provided by something in Suárez that we have not yet considered, namely, the "metaphysical form" that he identified with "the form of the whole, nothing other than the whole essence of the substantial thing" (*MD* XV.11, ¶3, 1:558). For if anything is a formal cause in a body, according to Descartes, it is the extension that constitutes the whole nature of that body. Yet Suárez himself denied that metaphysical forms are formal causes in the case of material objects insofar as they already include both the matter and form of such objects and thus do not issue in "actualizing some other subject" (*MD* XV.11, ¶7, 1:559). Given this scholastic context, it is understandable that Descartes felt no need to leave room in his physics for a kind of formal causality that differs from the efficient causality governed by the containment axiom.

(ii.b) Descartes is famous for his rejection of appeals to God's final causality. In the Fourth Meditation, he argues for such a rejection by claiming that

> since I now know that my own nature is weak and limited, whereas the nature of God is immense, incomprehensible and infinite, I also know without more ado that he is capable of countless things whose causes are beyond my knowledge.

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27. Here Descartes is drawing on the theory of distinctions in Suárez. For a discussion of this theory, see §1.2.1.

28. In §3.2.2, I consider whether this implication of the doctrine is consistent with Descartes's claim that bodies possess "forces" to persist in or to resist motion.

29. In a 1638 letter, for instance, Descartes asks his correspondent to "compare the suppositions of others with mine that is to say all of their *real qualities*, their *substantial forms*, their *elements* and similar things, the number of which is nearly infinite, with this alone, that all bodies are composed of some parts . . ." (*To Morin*, 13 July 1638, AT 2:200).

> And for this reason alone I consider the customary search for final causes to be totally useless in physics; there is considerable rashness in thinking myself capable of investigating the purposes of God. (AT 7:55)

This argument seems to allow for the possibility that God in fact has purposes, and indeed in the Fifth Replies Descartes granted his critic Gassendi that one may conjecture about God's purposes "in ethics" (AT 7:375). But in other places he was concerned to deny that God has at least a certain sort of purpose. Thus, in connection with his doctrine of the creation of the eternal truths, Descartes insists that God is completely indifferent with respect to the question of what to create, to such an extent that

> no good, or truth, no believing, or acting, or omitting can be feigned, the idea of which was in the divine intellect before his will determines itself to produce such an effect. And I do not speak here of temporal priority, but whatever is of order, or nature, or *ratione ratiocinate*, as they call it, such that this idea of good impelled God to choose one rather than another. (AT 7: 432)

Given this view of divine indifference, it cannot be said that God had any purpose that led him to create as he did.[30]

It may be possible to reconcile this consequence with the suggestion in Descartes that God can have hidden purposes by distinguishing between antecedent and consequent purposes. God has no purposes antecedent to the act of creation that lead him to create in a certain way, but the act of creation itself could produce an idea of the good that conditions creatures. Divine purposes could perhaps be understood in terms of this created idea of the good.

In any event, it is clear that for Descartes, we have no access by natural reason to any idea that would render intelligible the specific purposes deriving from God's act of creation.[31] It may seem, however, that this consideration does not rule out Aristotelian final causes. For as we saw in §1.2.2 (iii), the orthodox Aristotelian view is that that the forms even of beings that lack cognition and appetite are internal sources of final causality in nature. Given such a view, it might appear that Descartes's argument that we have no access to divine purposes is simply irrelevant to the issue of whether we are entitled to appeal to final causes. However, I also noted in this earlier section the clear position in Suárez that "natural agents" lacking cognition and appetite can be said to be final causes only insofar as their action derives from God. This aspect of Suárez's account of final causality reveals the depth of the confusion involved in Descartes's persistent objection that in taking various real qualities and substantial forms to be responsible for various effects in nature, the schoolmen illicitly suppose that bodies have "tiny souls" that cognize the effects

30. Cf. the comment attributed to Descartes in the *Conversation with Burman* that we go astray when "we think of God as some great human being [*magnum hominem*], who proposes to himself such and such, and strives by such and such means, which certainly is most unworthy of God" (AT 5:158). See §5.1.2 for further discussion of Descartes's doctrine of the creation of the eternal truths.

31. I say 'specific purposes' to allow for Descartes's claim, in the passage from his correspondence quoted toward the end of §1.2.2 (iii), that God created the world for his own sake.

they bring about.[32] Far from holding that qualities and forms are quasi-mental causes that cognize their ends, it is a consequence of the view of scholastics such as Suárez that the notion of final causality has no application when nature is considered in abstraction from the ends that direct divine concurrence. So such a scholastic would in fact grant Descartes that were we not entitled to appeal to divine ends in physics, we could not speak of final causality in that realm.[33]

In fact, it seems that there is one respect in which Descartes is closer to the original Aristotelian stance than was Suárez. Whereas Descartes holds that divine ends are inscrutable to the philosopher of nature, he nonetheless insists that we do have access to a kind of finality in the special case of the soul–body union. In the Sixth Meditation, for instance, he takes experience to reveal that the sensations that derive from motions in the brain are "most especially and most frequently conducive to the conservation of the health of the human being" (AT 7:87). Here, it seems, the sensory system has the function of conserving the health of the soul–body composite. Descartes could not, consistent with his prohibition of the appeal to divine ends, conclude that this function reflects God's own purpose in creating the composite as he has.[34] But the function also cannot be referred to any other mind that cognizes the end of conservation. Thus we appear to have—what scholastics such as Suárez could not allow—an appeal to a kind of finality that is not grounded in a cognition of ends.[35]

But though Descartes seems to have allowed for a kind of *finality* in the case of the soul–body composite, it is not clear that he allowed for the activity of *final causes* in that case. After all, he took brain motions to be the source of the various sensations that serve the purpose of conservation of health, and he indicated repeatedly that these motions are *efficient causes* of the sensations.[36] For Suárez, final causes could be involved in this case only by means of God's concursus with the action of secondary efficient causes. But Descartes eliminated this route to final causality when he

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32. See *To Mersenne*, 26 Apr. 1643, AT 3:648; Sixth Replies, AT 7:441–42; *PP* III.56, AT 8-1:108.

33. In §2.1.3 (ii), however, I suggest that Descartes's charge that the scholastics posit tiny souls may derive in part from his distinctive conception of eminent containment.

34. Admittedly, in the Sixth Meditation passage Descartes may seem to attribute the purpose of the sensory system to God. After all, he is concerned there to counter the objection that the fact that we are subject to "true errors of nature" in sensation conflicts with God's goodness (AT 7:85). But though this point requires further consideration than I can provide here, I would simply suggest that Descartes can be read as arguing not that God had good intentions in creating the sensory system, but merely that the worthiness of this system shows that true sensory error is not obviously incompatible with God's goodness. In terms that Laporte has introduced, the vindication of divine goodness requires an appeal only to the "internal finality" of the operation of the sensory system, and not to an "external finality" involving the ends that move God to create in a particular manner (Laporte 1928, 388).

35. For a further defense of the claim that this passage commits Descartes to a kind of natural teleology, see Simmons 2001; cf. Laporte 1928, 385–96. There is a further discussion in §4.1 of the nature of the union in Descartes.

36. As indicated in §4.2, however, there are some important complications for his account of the efficient causality of the motions in this case.

eliminated the appeal to divine ends. From Suárez's perspective, then, he left us with efficient causes that exhibit a natural teleology ungrounded in final causes.

There is still rational teleology, which covers rational agents that act in accord with ends they cognize. Though Descartes denies that we can explain divine action in this way, he explicitly allows for this sort of explanation in the case of our own action. In the Second Replies, for instance, he cites as an axiom that "the will of a thinking thing is carried [*fertur*] voluntarily and freely (for this is the essence of the will), but nevertheless inevitably, toward a clearly known good" (AT 7:166). This "carrying" would seem to correspond to the sort of final causality that Suárez took to be present in cases where the will of a created intelligent agent is inclined to act in a particular way by a cognized end.[37] However, it is important to recall the view in Suárez that the cognized object produces in the will only a kind of "metaphorical motion," and that strictly speaking it is only the will itself that produces the actual volitional act as an efficient cause (see, again, §1.2.2 (iii)). For this reason, Gilles Olivo concludes that in the view of Suárez, "the causality of the final cause is absorbed ultimately, that is to say, in its efficacy [*effectivité*], into that of efficient causality" (Olivo 1997, 99).[38] Once more, Suárez provides the justification for excusing Descartes from providing room in his system for causes in his natural philosophy other than the efficient causes governed by the containment axiom.

### 2.1.3. Formal and Eminent Containment

We have considered the requirement of the containment axiom that the reality of the effect be contained in the total and efficient cause. Now we are in a position to consider the requirement of that axiom that such a cause contain this reality formally or eminently. Descartes's language in the Third Meditation can suggest that he was led to this requirement merely by the "light of nature," with no dependence on previous teaching. But setting aside complications concerning objective reality (on which more presently), the requirement is straight from the scholastic tradition. As we have already seen, Suárez affirmed prior to Descartes that "all causes taken together" must formally or eminently contain the perfections they produce in their effect. We have also seen Bennett's claim that Descartes had no deep understanding of the notion of causal containment. In contrast, it is a central thesis here that Descartes offered the material for a conception of formal and eminent containment on which they differ in important respects from the corresponding kinds of containment that Suárez posited.

#### *(i) Formal Containment*

In the Third Meditation, Descartes illustrates his containment axiom by noting that heat cannot be induced in a subject "unless from a cause of at least the same order of perfection as heat" (AT 7:41). Similarly, Suárez earlier used the case of "fire when gener-

37. However, the case emphasized in the Second Replies passage seems to involve what for Suárez is merely voluntary rather than free action (see chapter 1, note 66). In §5.2, I consider further the relation of the accounts of free human action in Descartes and Suárez.

38. Cf. Carraud 2002, 159.

ating fire" as an example of a "univocal cause," that is, one that "effects an effect of the same kind" (*efficit effectum ejusdem rationis*) (*MD* XVII.2, ¶21, 1:591). Yet the specific accounts that Suárez and Descartes offer of the sort of containment present in this particular case are significantly different. Whereas Suárez held that the heat of both the generating and generated fire is a real accident that is a *res* distinct from the fire itself, Descartes rejects the containment of any such *res* in a purely material being. In Descartes's view, the physical heat (as opposed to the sensation of heat) that the body contains and produces can be only a certain kind of local motion of parts of matter.[39]

Descartes's official explication of formal containment reveals an even deeper disagreement with Suárez. In the list of definitions that he provides in his "synthetic" presentation of his system in the Second Replies,[40] Descartes includes the stipulation that objects contain formally all that is "such as [*talia . . . qualia*] we perceive them" (AT 7:161). This follows his definition of the objective reality of an idea as "the entity of the thing [*entitatem rei*] represented by an idea, insofar as it is in the idea; . . . For whatever we perceive as in the objects of ideas, they are in the ideas themselves objectively" (AT 7:161). For Descartes, then, the paradigmatic case of formal containment is one in which the object as it exists outside of our idea of that object conforms to the objective reality of that idea.

Descartes's understanding of this case of course relies on his account of the distinction between formal and objective reality. According to the Second Replies, an object formally contains what is present objectively in our idea of that object just in case it is "such as we perceive" it. What is odd, from a certain scholastic perspective, is the reference here to the correspondence of what is in the object to a distinct sort of reality in the idea. Caterus protested in the First Objections that "objective being" is merely "the act of intellect itself terminating through a mode of the object," and thus is merely "an extrinsic denomination, and nothing real" (AT 7:92).[41] This understanding admittedly reflects a Thomistic view, and Scotists were more inclined to posit an "objective concept" as a *tertium quid* between the act of intellect and the cognized object.[42] But on this particular point Suárez sided with the Thomists, holding that there is only a *distinctio rationis* between an act of intellect and its objective concept.[43]

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39. See, for instance, Descartes's account of heat in *W* II, AT 11:7–10.

40. Descartes distinguishes a synthetic presentation that involves demonstrations with definitions, postulates, and axioms from an analytic presentation, illustrated in the *Meditations*, in which a method for discovering the truths is employed (AT 7:155–56).

41. Cf. the discussion of Caterus's position in Armogathe 1995.

42. On the difference between Thomists and Scotists on this point, and the relevance of this disagreement to Descartes's understanding of objective reality, see Dalbriez 1929. This work is a critique of Gilson's claim that "in scholastic thought, objective being is not a real being, but a rational being" (Gilson 1925, 321). For a reconsideration of this debate that is sympathetic to Dalbriez's position, see Ariew 1999, ch. 2. Cf. the Scotistic interpretation of Descartes's account of objective reality in Normore 1986.

43. Suárez was responding to the position of Durandus, which was defended by Suárez's contemporary Vasquez. For discussion of this debate, with references, see, again, Dalbriez 1929. But cf. Renault 2000, which takes Ockham to be the source of the anti-Cartesian understanding of objective reality.

For Suárez, then, the reality that exists in an idea (or, as he put it, in an objective concept) is just the reality as it exists in the object. This precision might not seem to be so important; after all, it appears that Suárez could agree with Descartes on the basic point that an object formally contains all that which is "such as we perceive it." But the differences are significant in one case where Descartes's explication of the relation between objective reality and formal containment is most problematic, namely, the case of sense perception.

As we have seen, Descartes argues in the Sixth Meditation that bodies must exist as causes that formally contain what is present objectively in our sensory ideas. But there is scholarly disagreement over whether Descartes even allowed that bodily features are present objectively in sensory ideas.[44] I myself take the argument in the Sixth Meditation to indicate clearly enough that he did intend to allow for such containment. Without the assumption that sensory ideas have an objective reality that requires a cause, this argument could not even get off the ground.[45] Nonetheless, it must be admitted that Descartes's claim in the Second Replies that features that exist formally in objects are "such as we perceive them" seems to fail in the case of sensory ideas. For Descartes himself warns after presenting the Sixth Meditation proof of the material world that bodies may not exist "in a way that is entirely such as [*talia omnino . . . qualia*] the senses comprehend them, insofar as the comprehension of the senses is in many cases very obscure and confused" (AT 7:80). It would seem that bodies cannot formally contain the qualities that we sense in a confused and obscure manner, and thus that there is no need for an external cause in the case of such sensations.[46]

I think we can go some ways toward reconciling the proof in the Sixth Meditation with the subsequent comment concerning the confused and obscure comprehension of the senses by emphasizing the following claim elsewhere in this text:

> [F]rom the fact that I sense diverse colors, sounds, odors, tastes, heat, hardness and the like, I correctly conclude that there are other things in bodies from which these various sensory perceptions come [*adveniunt*], variations corresponding to them [i.e., to the variations among the sensations], though perhaps not similar to them. (AT 7:81)

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44. The disagreement is most evident in the massive literature on Descartes's account in the Third Meditation of "material falsity." For a representative discussion, see Kaufman 2000.

45. That is, the argument as presented in the Sixth Meditation. Interestingly, Descartes offers a version of this argument in the 1644 *Principles* that does not appeal to the objective containment in sensory ideas of what is formally contained in bodies; see *PP* II.1, AT 8-1:40–41. Even so, there is the point in this latter text that we know by means of sensory stimulation that matter "has variously different shaped and variously moving parts that give rise to our various sensations of colors, smells, pain and so on." This point is connected to the account of objective containment in sensory ideas that I offer on Descartes's behalf presently. Thanks to Marleen Rozemond for discussion of the significance of the differences between the two versions of Descartes's proof of the existence of the material world.

46. Here I draw on and further develop the position I proposed in my discussion of this problem in Schmaltz 1992b.

This passage indicates that sensory ideas that do not resemble bodily qualities nonetheless are systematically correlated with them. Because of these correlations, particular ideas can direct the mind to certain bodily qualities rather than others. Of course, we cannot know, simply by introspection, which qualities these ideas represent; that is why Descartes calls the ideas confused and obscure. Nonetheless, the ideas can represent the qualities in the broad sense just indicated. In virtue of the fact that the ideas so represent, they possess some sort of objective reality. Bodies formally contain what is in the sensory ideas objectively, then, in the sense that they possess the qualities to which these ideas direct the mind.[47]

Admittedly, this reading stretches thin the claim in the Second Replies that features contained objectively in the mind are contained formally in bodies only when they exist outside of the mind in a way that is "such as we perceive them." But I take Descartes's own remarks concerning confused and obscure sensory ideas to suggest a thin notion of being "such as" these ideas reveal. Moreover, this thin notion allows for the passage from the Second Replies to be reconciled with the suggestion in the Sixth Meditation that even though the objective reality of sensory ideas corresponds to the formal reality of bodily qualities, these qualities are often "not entirely such as" they are comprehended by sense.[48]

### *(ii) Eminent Containment*

I have mentioned Descartes's stipulation in the Second Replies that objects contain formally all that is "such as we perceive them." He continues by noting in that same passage that objects contain eminently what "indeed is not such [as we perceive], but greater, so that it is able to take the place of such a thing [that is as we perceive]" (AT 7:161). This explication is less than transparent, to say the least. Indeed, critics such as Radner have objected that Descartes offered no clear account of eminent containment, and thus had no clear explanation of a case in which a cause produces an effect that differs in nature from it.[49] This is behind the charge in Radner and others that Descartes's containment principle rules out the causal interaction of objects with different natures. To evaluate this charge, we need to determine whether we can make some sense of Descartes's claim that objects eminently contain what is not such as we perceive but is "greater" than and "able to take the place" of what we do perceive.

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47. I take the account of the objective reality of sensory ideas that I attribute to Descartes to be similar to Locke's view in *Essay* II.xxxi.2 that whether our simple sensory ideas "be only constant Effects, or else exact Resemblances of something in things themselves," still they "are all real and true, because they answer and agree to those Powers of Things, which produce them in our Minds, that being all that is requisite to make them real, and not fictions at Pleasure" (Locke 1975, 373). Locke's claim that nonresembling sensory ideas "agree to" the bodily powers that produce them seems to me to be functionally equivalent to the view, which I attribute to Descartes, that such ideas objectively contain the bodily qualities to which they direct the mind.

48. See §4.2 for further discussion of Descartes's account of the action of body on mind. In §3.2.1 (iii), I consider complications for formal containment connected to Descartes's account of body–body interaction.

49. Radner 1985b, 232, 233–34.

On one understanding, what is greater and able to take the place is simply the power to produce the existence of the object we perceive. This understanding informs the analysis of eminent containment that Eileen O'Neill has offered. On this analysis, Descartes held that

> a property ø is eminently contained in X if and only if: ø is not formally contained in X [i.e., X does not contain at least n degrees of ø]; X is an entity displaying a greater degree of relative independence than any possible Y which could contain ø formally (i.e., higher up in the ontological hierarchy than any such Y); and X has the power to bring about the existence of ø. (O'Neill 1987, 235)[50]

There is a weaker reading of the second clause, on which X is an entity displaying a greater degree of relative independence than ø, that is, is higher up in the ontological hierarchy than ø, as opposed to any possible Y that could contain ø formally. This weaker reading may seem to be supported by Descartes's comment in the Third Meditation that since "extension, shape, position, and motion" are "merely modes of a substance," they can be contained in him eminently given that he is thinking substance (AT 7:45).[51] As we have seen, however, Descartes indicates in the Sixth Meditation that certain finite creatures can contain bodily effects eminently in virtue of the fact that they are "more noble than" corporeal substance (AT 7:79). Here it is not just the fact that the effects are mere modes that allows for eminent containment in these other substances; in addition, there is the fact that these substances are more noble than the corporeal substances that contain the effects formally.[52]

An initial problem for this analysis of eminent containment derives from the implication of Descartes's simple ontological hierarchy that mental and bodily substances have the same reality as finite substances. Given this hierarchy, it would seem that bodily effects cannot be contained eminently in a finite mind, contra the remarks in the Sixth Meditation.[53] However, we could get around this problem by appealing to Descartes's own comment in correspondence that our soul "is much more noble [*beaucoup plus noble*] than body" (*To Elisabeth*, 15 Sept. 1645, AT 4:292).[54] One way in which mind is "more noble" is indicated in the Sixth Meditation, which includes the claim that "there is a great difference between mind and body, inasmuch as body is by its very nature divisible, whereas mind is utterly indivisible" (AT 7:85–86). This difference indicates the

50. To my mind, O'Neill's analysis marks an advance over Clatterbaugh's view that ø is eminently contained in X if and only if X contains greater than n degrees of ø; see Clatterbaugh 1980, 391.

51. Thanks to David Ring, who pressed me to consider this point a number of years ago.

52. Descartes could not have made this point that his mind is more noble than body in the Third Meditation because he had not yet provided an account of the nature of body and of its distinction from mind.

53. On Gueroult's interpretation of Descartes (see note 9), there would be no problem here for eminent containment in mind insofar as particular bodies, as modes, are lower on the ontological hierarchy than mental substances. But in the Sixth Meditation, the stress is on the fact that certain substances, presumably mental, are more noble than the corporeal substances that formally contain what is present objectively in our sensory ideas.

54. Thanks to Michael Della Rocca for drawing this passage to my attention.

greater nobility of mind given Descartes's claim in the Second Replies that "it is known *per se* that it is a greater perfection to be undivided than to be divided" (AT 7:138).

The implication in Descartes, then, is that though created minds are below God insofar as they are finite, still they are above bodies insofar as they are indivisible. This implication yields the following "enhanced" ontological hierarchy:

| | |
|---|---|
| God | infinite indivisible substance |
| minds | finite indivisible substances |
| bodies | finite divisible substances |
| thoughts | modes of finite substances |
| shapes/sizes/motions | |

Given this enhanced hierarchy, O'Neill's analysis is consistent with the claim that particular bodies and their modes can be contained eminently in finite minds.[55]

Even so, there remains a problem with the consequence of the last clause of O'Neill's definition that something can eminently contain ø only if it has the power to bring about the existence of ø. In defense of this clause, O'Neill appeals to Suárez, and in particular to his claim that "what is said to contain eminently has a perfection of such a superior nature that it contains by means of power [*virtute*] whatever is in the inferior perfection," where this power is said to be the power that "can produce [*potest . . . efficere*]" the effects of inferior perfection (*MD* XXX.1, ¶10, 2:63*; cited in O'Neill 1987, 239).[56] But though Descartes was obviously influenced by the scholastic view that the effect must be contained formally or eminently in its total efficient cause, there are reasons to think that he did not adopt Suárez's particular account of eminent containment. When he claims in the Third Meditation that his mind contains material things eminently, for instance, Descartes does not suggest that he has the power to create the material world. Indeed, in a 1641 exchange with his critic "Hyperaspistes," Descartes makes clear his rejection of the claim that our mind has such a power. This critic objected that in Descartes's view, "since a corporeal thing is not more noble than the idea that the mind has of it, and mind contains bodies eminently, it follows that all bodies, and thus the whole of this visible world, can be produced by the human mind" (AT 3:404). Such an implication is said to be

55. For complications concerning the eminent containment of matter in finite minds, see note 57. Descartes also speaks of material things as being eminently contained in God's mind (as in the Sixth Meditation proof of the existence of the material world, at AT 7:79). As I note in §5.1.2, however, Descartes's doctrine of the creation of the eternal truths renders this sort of containment problematic.

56. As O'Neill notes, Suárez went on to claim that "formally speaking" the power to bring about an effect cannot *define* eminent containment, since a cause is said to be able to produce an effect in virtue of the fact that it eminently contains it (*MD* XXX.1, ¶10, 2:63*; cited in O'Neill 1987, 239). But Suárez also indicated that we cannot understand eminent containment other than by its causal relation to the effect. In any event, it seems that having the power to cause an effect could be a necessary condition for eminent containment without being definitionally equivalent to it.

problematic insofar as it undermines our confidence that God alone created the visible world. In response, Descartes protests that we can produce "not, as objected, the whole of this visible world, but the idea of the whole of things that are in this visible world" (AT 3:428). The suggestion here is that even though the whole visible world is contained in our mind eminently, we do not have the power to produce its extra-mental existence.[57] Eminent containment would seem to be a necessary but not a sufficient condition for something to be able to produce features it does not formally contain.[58]

Nevertheless, it seems that we could substitute for O'Neill's last clause the claim that X has at least the power to bring about the reality of ø as present objectively in X's idea of ø. It is this power that, in the terms of the Second Replies, is "not such" as we perceive "but greater, so that it is able to take the place" of what we perceive. This power is able, in particular, to produce bodily qualities insofar as they are present objectively in the mind.[59] We therefore have the following alternative to O'Neill's analysis of eminent containment:

> A property ø is eminently contained in X if and only if: ø is not formally contained in X; X is an entity displaying a greater degree of relative independence than any possible Y which could contain ø formally (i.e., higher up in the ontological hierarchy than any such Y); and X has a power that suffices to produce the objective reality that is present in X's idea of ø.

This alteration of O'Neill's account may seem to be minor, but in fact it serves to highlight an important difference between the accounts of eminent containment in Suárez and Descartes. Suárez had no difficulty applying the notion of eminent containment to the case of bodily causes, as for instance when he held that a heavy body (*unum grave*) that moves another heavy body to a particular place contains that place

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57. The eminent containment of the whole of matter in finite minds is more problematic given Descartes's view that this matter is an "indefinite" rather than a finite substance. Indeed, he tells Regius in correspondence that he could not think of indefinite extension "unless the magnitude of the world also was or at least could be indefinite" (24 May 1640, AT 3:64). But the "could be" perhaps suggests that there need not be anything indefinitely extended in order for our mind to think it. Moreover, there is the claim in the Fourth Meditation that our will is in some sense unrestricted, and that it is in fact in virtue of our possessing such a will that we understand ourselves to bear in some way the image and likeness of God (AT 7:56–57). Given this feature of mind, we could perhaps be said to contain even indefinite extension eminently. For discussion of the complications here, see Wilson 1999a.

58. Cf. the critique of O'Neill's account of eminent containment in Gorham 2003, 11–13. Beyond objecting to the explication of eminent containment of an effect in terms of a causal power to produce that effect, however, Gorham rejects in general any account on which the eminently contained effect is to be reduced to other features that the cause formally contains. The alternative to O'Neill's account that I offer presently is reductionist in this sense.

59. It is important to hold that it is the power that "takes the place" rather than the objective reality itself, given that Descartes emphasizes the difference between eminent and objective containment when he notes that an effect must be contained in its cause "not merely objectively or representatively [*objective sive repraesentative*], but formally or eminently" (*PP* I.23, AT 8-1:11).

"virtually or eminently, but not formally," since that place is contained only in the "active principle" that brings about the downward motion (*MD* XVIII.9, ¶10, 1:671). I mentioned above Descartes's ridicule of the scholastic attribution of tiny souls to bodies, and at one point he expresses his objection in terms of the very example of the action of *gravitas* that Suárez used here. Thus, in the Sixth Replies Descartes notes the misguided thought he had in his youth that "heaviness [*gravitas*] carried bodies toward the center of the earth, as if it contained in itself some cognition of this" (AT 7:442).[60] We have seen that the accusation that the scholastics attributed cognition of ends to natural beings is misplaced. But what is interesting is Descartes's apparent assumption that a future effect not actually present in the cause can be contained in that cause only by means of cognition. Implicit in this assumption is the rejection of the view in Suárez that there can be qualities or powers in bodies "more noble than" bodily effects that eminently contain those effects.[61] Descartes held that all alterable features of body have the same kind of reality as modes of extension, and that only infinite or finite indivisible minds can be more noble than bodily substances and their modifications. For Descartes, then, the bodily principle that Suárez posited as eminently containing its effect could be conceived only on the model of a mind that acts in accord with its cognition of an end. In the case of all other total bodily causes, only formal containment can be at issue.[62]

## 2.2. THE CONSERVATION AXIOM

After concluding in the Third Meditation that it is manifest by the light of nature that God must exist as the cause of the objective reality of his idea of God as infinitely perfect substance, Descartes notes that once his concentration on the argument for this conclusion relaxes he no longer can remember why his idea of a being more perfect than himself must be caused by such a being (AT 7:47). To remedy the uncertainty,

60. For further discussion of Descartes's use of the heaviness analogy, see §4.3.2.

61. But see also the discussion toward the end of §4.2.1 of one way in which Suárez's notion of eminent containment is more restrictive than Descartes's.

62. This implication of the view of eminent containment that I attribute to Descartes can be contrasted with the position, which the English *malebranchiste* John Norris attributed to "the Modern *Reformers* of Philosophy," that all Bodies that we call Hot, [are] so only *Eminently* and *Potentially*, as they are productive of Heat in us." This is said to be a replacement for the "Old Distinction" between heat as a quality formally contained in certain objects and heat as eminently contained in bodily causes of this quality that eliminates the first part of this distinction (Norris 1693, 3:21–22). It is likely that Norris counted Descartes among the modern reformers, since he went on to say that Malebranche alone rejected this position in the moderns. But we have seen that Descartes himself took bodies to *formally* contain what is present objectively in our sensory ideas. And I know of no passage where he referred to the eminent containment of effects in bodily causes. I suspect that Norris simply assumed that Descartes accepted the scholastic view that a quality that is present in a bodily power to produce that quality is eminently contained in the body that has that power. Thanks to Eileen O'Neill for drawing my attention to the passage from Norris.

he proposes another argument for the conclusion that he could not exist if God did not. The new argument is not entirely distinct from the first argument, since it too relies on an application of the containment axiom to the case of the objective reality of his idea of God. Descartes recognizes this point when he admits that the second argument is not so much a new argument as "a more thorough examination" of the original argument (First Replies, AT 7:106).[63] But there is a distinctive element of the second argument that is crucial for our purposes. This element is introduced after the first portion of the proof, in which Descartes claims that he cannot have derived his existence from himself, since in that case he would have produced in himself all of the perfections he desires but lacks. He then considers the objection that he may not need any cause of his existence now given the assumption that he has always existed. Descartes responds:

> [S]ince the whole time of life can be divided into innumerable parts, each single one of which depends in no way on the remaining, from the fact that I was shortly before, it does not follow that I must be now, unless some cause as it were creates me anew at this moment [*me quasi rursus creet ad hoc momentum*], that is conserves me. For it is perspicuous to those attending to the nature of time that entirely the same force and action [*eadem . . . vi et actione*] plainly is needed to conserve a thing at each single moment during which it endures, as would be needed to create it anew, if it did not yet exist; to the extent that conservation differing solely by reason from creation is also one of those things that is manifest by the natural light. (AT 7:49)

The claim here that "the same force and action is needed to conserve a thing . . . as would be needed to create it anew" is reflected in the axiom in the Second Replies—which I have called the conservation axiom—that "no less a cause is required to conserve a thing than to produce it at first" (AT 7:165). In the Third Meditation, the conservation axiom is said to be perspicuous to those who consider "the nature of time," and is said to yield the result that conservation differs "solely by reason" from creation.

In what follows I consider three aspects of the position indicated in the Third Meditation passage. The first is the nature of the conservation that Descartes takes to be required for the continued existence of any creature. His ultimate view is that God alone can conserve the being of created substances. The second aspect is Descartes's understanding of "the nature of time." It turns out that he offers an account of temporal parts of duration that is incompatible with the temporal atomism that some commentators have attributed to him. Finally, there is Descartes's argument that given the nature of time, conservation can differ from creation solely "by reason." Though this argument seems to conflict with an argument in Suárez for the lack of any real difference between creation and conservation, in the end Descartes embraces the basic

63. Cf. Descartes's letter of 2 May 1644, at AT 4:112. In the synthetic presentation of his system in the Second Replies, however, Descartes presents the two arguments as distinct; see propositions II and III at AT 7:167–68.

Suárezian conclusion that the created world depends continually on the original divine act that resulted in the creation of that world.

### 2.2.1. Divine Conservation

In the Fifth Objections, Gassendi challenged the use of the conservation axiom in the Third Meditation by claiming that Descartes could have a power to conserve himself that is not a power to create himself anew, but rather a power "that suffices to guarantee that you are preserved unless a corrupting cause intervenes" (AT 7:302). The suggestion here is that the presence of such a power is revealed by the fact that continuation in existence is the default condition. What requires an external cause is not this continuation, but only the initiation or cessation of existence.

I argue in the next chapter that Descartes invokes something very much like the tendency to persist in existence in his explanation in the *Principles* of his first law of motion (see §3.2.1 (i)). In his response to Gassendi, however, he insists that the claim that conservation requires the "continual action of the original cause" is "something that all Metaphysicians affirm as manifest." Drawing on remarks from Thomas's *Summa Theologiae* noted in §1.1.2, Descartes appeals in the Fifth Replies to the distinction between *causae secundum fieri*, or causes of becoming, and *causae secundum esse*, or causes of being.[64] Indeed, Descartes follows Thomas in illustrating the distinction between these two kinds of causes by noting the difference between the builder as the *causa secundum fieri* of the house and the sun as the *causa secundum esse* of the light.[65] His claim in the Fifth Replies is that just as the continuing action of the sun is required for the light to remain in existence, so the continuing action of God is required for creatures to remain in existence (AT 7:369).[66]

The example of the sun landed Descartes in some trouble, since in correspondence with him the pseudonymous Hyperaspistes attempted to defend Gassendi by noting that the Bologna spur, a phosphorescent rock, can retain light in a closed room (July 1641, AT 3:405). But Descartes responds that the light of the rock is perhaps not the same as the light that constantly depends on the sun, and in any case that even if the sun example fails, it is "more certain that nothing can exist without God's concursus,

64. Descartes indicates in a 1639 letter to Mersenne that he brought with him from France a Bible and "une Somme de S. Thomas" (AT 2:630).

65. See also the example of the builder in the passage from the *Conversation with Burman* cited in §2.1.2 (i), at note 18.

66. Descartes's conclusion that light requires the continuing action of the sun is no doubt connected to his own view that light is not a motion but rather the instantaneous effect of pressure deriving from the source of illumination (see, for instance, *PP* III.64, AT 8-1:115). Whereas a motion could perhaps endure apart from the action that initially produces it, an instantaneous effect could not. Interestingly, Thomas agreed that light cannot involve motion, since its diffusion is instantaneous (*ST* I.67.2). However, his insistence that light requires the action of the sun derives rather from his view that the quality of light depends essentially on the action of the substantial form of a self-luminous body (see chapter 1, note 21). This line of argument obviously would not have been attractive to Descartes. Thanks to Andrew Janiak for discussion of this point.

than no light of the sun without the sun" (Aug. 1641, AT 3:429). Here Descartes was moving toward the version of the Thomistic *secundum fieri*/*secundum esse* distinction in Suárez, according to which God alone can be a cause *secundum esse*.[67] In a Suárezian context, it is admittedly odd that Descartes refers to God's concursus rather than his act of conservation. We will discover in the next chapter that there is in fact some question whether Descartes follows scholastics such as Suárez in thinking that divine conservation differs from God's concurrence with the actions of secondary causes. Even so, his use of the language of concursus in the passage above is supposed to indicate primarily that God must make a causal contribution for any dependent being to exist.

However, why not conclude with Gassendi that a being, once created, can persist on its own? To put the point in terms of Hyperaspistes's example, why not hold that objects can continue to subsist without God's concursus in the same way that the Bologna spur can continue to glow without the influence of the sun? The answer in Descartes is connected to his version of the principle of sufficient reason, reflected in the axiom in the Second Replies that every existing thing, including God, requires a "cause or reason" (*causa sive ratio*) of its existence (AT 7:164–65).[68] I have mentioned his conclusion that in the case of God, the reason is provided by God's essence, which serves as the formal cause of his existence (see §2.1.2 (ii.a)). But since essence is distinct from existence in the case of every other existing object, the cause or reason of beings other than God must be provided by some efficient cause. Because this cause provides the reason for the existence of the object at any time, it is required not only for the initial creation of the object but also for its subsequent conservation.

In addition, Descartes holds that the cause of an object *secundum esse* must be active at each moment that object exists. Aquinas had concluded that just as something cannot be in the process of becoming without the action of its cause *secundum fieri*, so that thing cannot subsist in being without the action of its cause *secundum esse*. If an object needs the activity of a cause *secundum esse* at all, it needs the activity of this kind of cause throughout its existence (*ST* I.104.1; see §1.1.2). As we know, Suárez also accepted this Thomistic conclusion, arguing that a creature depends on God for its existence at each moment, since God is "its cause directly and *per se* with respect to its *esse*." He held that there would be such a dependence even if—as Descartes supposes in the Third Meditation—the object were not created in time but existed from eternity. For even in this case, since the object is not God, it must have its being from another, and ultimately from God (see §1.2.3 (i)).

This line of argument in Suárez is reinforced by his analysis of efficient causality. In opposition to the view of some Thomists—but, he insisted, not of Thomas

67. See the discussion in §1.2.3 (i) of Suárez's revision of the Thomistic distinction.

68. For the link between this axiom and the principle of sufficient reason, see Carraud 2002, especially ch. 2. As Carraud emphasizes, however, Descartes's version differs from the more familiar version in Leibniz insofar as Descartes insisted on the unintelligibility of the divine creation of eternal truths (Carraud 2002, 288–93). In §5.1.2, I consider this doctrine and its relation to Descartes's axiomatic requirement that there be a "cause or reason" for everything that exists.

himself—that a cause can remain efficacious even after its action has ceased, Suárez held that an effect can depend on an efficient cause only insofar as that cause is active (*MD* XVIII.10, ¶8, 1:682). Applied to the case of conservation, the consequence is that created objects that depend essentially on God for their being can continue to so depend only insofar as God continues to produce that being through an action.[69] Descartes in effect adopts Suárez's anti-Thomistic (though, for Suárez, not anti-Thomas) premise when he appeals in the First Replies to the fact, revealed by the light of nature, that something "does not properly have the reason of a cause, unless for as long as it produces the effect, and thus is not prior to it" (AT 7:108). For Descartes, no less than for Suárez, an object cannot depend for its being on God unless God is active as an efficient cause of that being at each moment it exists.[70]

In his letter to Hyperaspistes, Descartes offers a further Suárezian argument for the necessity of divine conservation. Descartes insists there that "if God ceased his concursus, at once all that he has created would go into nothingness, because, before they were created, and he offered his own concursus, they were nothing." He continues by noting that "it is not possible that God destroy other than by ceasing his concursus, because otherwise he would tend to non-being through a positive action" (AT 3:429). These remarks are reminiscent of Suárez's argument that God cannot conserve the being of an object merely *permissively*, through not depriving them of their being, rather than *positively*, by means of his efficient causation of that being that derives from an action. The argument is that since God is omnipotent, he can annihilate any creature, and since every action by its nature tends toward some positive being, he can annihilate only by omitting some action (*MD* XXI.1, ¶14, 1:789). Thus, divine conservation must consist in the continuation of that action by which God gave being to creatures.[71]

Admittedly, Descartes's claim in the passage from the Third Meditation concerning "the nature of time" is only that there must be *some cause* that "*quasi* creates anew" at each moment, not that *God* must be the cause. In the First Replies, however, Descartes notes, "[W]hat I have not written before, that [conservation] can in no way come from any secondary cause, but altogether from that in which there is such great power that it conserves a thing external to itself, so much the more conserves itself by its own power, and thus is *a se*" (AT 7:111). The need for divine conservation in the case of substances is clear from a passage from a 1642 letter to Regius, cited in §1.3, in which Descartes insists that God alone can create a substance *de novo* (AT 3:505). According to Descartes, then, God alone can be the cause *secundum esse* of the initial existence of a substance, and thus he is the only being who can conserve this substance in existence through the continuation of the act of creating it.

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69. I think this line of argument is implicit in Suárez's discussion in *MD* XXI.1, ¶¶6–15, 1:787–79; see §1.2.3 (i). In this earlier section, Suárez presents himself as correcting and developing Thomas's argument in *ST* I.104.1.

70. For this point, see also Secada 1990, 49–51.

71. Cf. Thomas's invocation of the claim in Augustine that nature is annihilated once God withdraws his ruling power (*ST* I.104.1).

But a central question, given the scholastic rejection of occasionalism, is whether Descartes allows for any causes other than God. In the passage from the *Conversation with Burman* that I considered in §2.1.2 (i), he is said to hold that God, in producing the being of something *ex nihilo*, acts as a total cause, and thus produces something similar to himself. I noted in that section that if the containment axiom requires that total causality involve creation *ex nihilo*, then given the remarks in this passage the axiom would be restricted to divine action. Indeed, Jean-Luc Marion has suggested recently that Descartes restricts true efficient causality to God alone.[72] In addition to the remarks to Burman,[73] Marion cites Descartes's claim in a 1645 letter, in defense of the conclusion that God is the cause of all effects of human free will, that

> the distinction of the Schools between universal and particular causes is out of place here: because what makes the sun, for example, the cause of flowers is not the cause of the fact that tulips differ from roses, [since] their production depends also on other particular causes to which they are not subordinated; but God is such a universal cause of all that he is in the same way the total cause. (*To Elisabeth*, 6 Oct. 1645, AT 4:314)[74]

However, the claim here is not that God is the universal and total cause in such a way as to exclude all other causes. Rather, it is simply that the universality of God's causality differs from the universal causality of the sun insofar as the former does not involve the contribution of particular causes not subordinated to it. All derivative causes, whether universal or particular, are subordinated to God's distinctive sort of universal and total causality. Some combination of universal and particular derivative causes can still be sufficient in their order to bring about their effect, and thus are still subject to the containment axiom. But this sort of total cause nonetheless is dependent on God's total causality, which unlike derivative causes includes an act of conservation not distinct from the act of creation *ex nihilo*.

We have seen the implication in Descartes that only God's universal causality can create and conserve substantial being. However, there still seems to be room in his system for a derivative sort of causation of the modifications of substance. This causation of modes must be subordinated to God's causation of the substances the modes modify, since the existence of the modes themselves depends on the existence of these substances. In this sense, God can be said to be the total causes of the effects produced by derivative causes. Even so, it seems that these causes could produce effects that do not derive immediately from God. In terms of the Thomistic distinction that Descartes employs, derivative causes could be causes *secundum fieri* of modes that God does not directly produce as the cause *secundum esse* of the

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72. Thus Marion speaks of "the reduction of all kinds of causalities to the efficient causality as only divine" (Marion 1991, 288).

73. Cited in Marion 1991, 289 n.24, in support of the conclusion that "God alone can exercise total causality."

74. Cited in Marion 1991, 287. I will return in §5.3.1 to a consideration of the ramifications of this passage for Descartes's account of human freedom.

substances the modes modify.[75] Descartes of course rejected the scholastic view that derivative causes can educe from matter forms that are *res* distinct from matter. But since he follows Suárez in thinking that modes are not *res* distinct from the substances they modify, Descartes's rejection of this view does not prevent him from holding that such causes educe from material substance modes that are contained in it merely potentially. Whether Descartes can allow for this sort of derivative causation of modes depends on whether his metaphysical system allows for the attribution of causal power to beings other than God; this is an issue that remains to be resolved. Even so, it seems clear enough that his view of God's universal and total causality of the created world does not straightforwardly commit him to occasionalism.[76]

### 2.2.2. "The Nature of Time"

In the Third Meditation passage that introduces the conservation axiom, Descartes claims that careful attention to "the nature of time," and in particular to the fact that time is divisible into "innumerable parts," each independent of the others, reveals that conservation differs solely by reason from creation. §2.2.3 will be devoted to the argument that this feature of temporality provides support for the conservation axiom. Here our concern will be to consider Descartes's view of the nature of temporal parts and of their mutual independence.

In the *Principles*, Descartes holds that when time is considered in general, apart from the duration of particular objects, it is a mere "mode of thinking," a mental abstraction (*PP* I.57, AT 8-1:26–27). What is mind-dependent here is a particular measure of duration, such as when we measure our life in days and years by comparing it with other regular motions. In line with a view that Suárez offered previously, however, Descartes holds that the duration that is measured is itself distinct only in reason, and not in reality, from the enduring object. In particular, he claims that we cannot distinctly conceive of a substance apart from its duration, and also cannot so conceive the duration, as it exists in the substance, apart from the substance itself (*PP* I.62, AT 8-1:30).[77]

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75. Cf. the discussion in §3.1.3 of the distinction between modal and substantial causes that Garber attributes to Descartes.

76. On the basis of these considerations, I would dispute Gorham's conclusion that the remarks in the letter to Elisabeth reveal that "God does not leave it to other causes to produce our diverse volitions and bodily movements, nor rely on them for assistance. Rather, he brings about all of the particular volitions and movements directly and by himself" (Gorham 2004, 412–13). I think Descartes would agree that God produces the being of everything "directly and by himself." But in the case of becoming, his claim in the letter to Elisabeth seems to be merely that his universal causality does not involve the causal contribution of particular causes that are not subordinated to him. Gorham stresses the claim in Descartes's letter that God would not be perfect "if there were something in the world that did not come entirely from him" (AT 4:314, cited in Gorham 2004, 412, n.104), but in light of the remarks that follow I would read the claim that an effect "comes entirely from God" as saying that there is no cause of the effect that is not subordinated to a divine causality that is both universal and total.

77. See Suárez's claim that there is merely a *distinctio rationis* between duration and the existing object (*MD* L.1, ¶5, 1:914*).

So much for time and duration. What about their parts? Descartes notes in the *Principles* that the parts of an extended substance are themselves really distinct substances, since each can exist on its own apart from the others (*PP* I.60, AT 8-1:28).[78] If temporal parts are to be conceived in the same manner, however, we have the strange result that all substances are composed of distinct substantial time-slices. For we have seen that when it is considered in objects, time is nothing other than an attribute that is distinct only *ratione* from the enduring substance. And if the duration is composed of distinct substantial parts, the substance itself must be composed of distinct substantial parts over time, just as extended substance is composed of distinct substantial parts at any one time.

There is reason to think that this result would be unacceptable for Descartes. In the conservation passage from the Third Meditation, he considers his own temporal duration as a thinking thing. Yet Descartes is clear in the *Meditations* that "it is one and the same mind that wills, that senses, that has intellectual perceptions" (AT 7:86). Here it seems that the mind not only is "utterly indivisible" at a particular time, but remains one and the same unified substance over time.[79]

There is an exchange relevant to this point in the *Conversation with Burman*. When confronted with the objection that it follows from the temporality of thought that thought itself is extended and divisible, Descartes is reported to claim that though thought is "extended and divisible as far as duration, which can be divided into parts," nonetheless "it is not extended and divisible as far as its nature, insofar as it remains unextended" (AT 5:148). The view here is that even though the mind has an extended and divisible duration, it always remains unextended and indivisible by its very nature, insofar as it is an immaterial *res cogitans*.[80]

I have suggested that given that the mind is indivisible by nature, the parts into which its duration can be divided cannot be substantial parts. What sort of parts, then? Of the three kinds of distinction that Descartes borrowed from Suárez—namely, the *distinctiones realis, modalis*, and *rationis* (see §1.2.1)—it would seem to be the modal distinction that is applicable to the case of temporal parts. Descartes

78. As Descartes makes clear elsewhere, the three-dimensional parts of body are distinct from its two-dimensional modes; see Fourth Replies, AT 7:250–51; Sixth Replies, AT 7:433–34.

79. Descartes's talk of extended substance taking on different modes over time suggests that he thinks that even though such a substance is divisible, it too can remain the same substance over time.

80. This passage is admittedly suspect. Descartes is reported to continue by claiming that God similarly is an unextended being who has a duration that is divisible into parts, and that since we can now divide God's duration, we can divide that duration as it was prior to his creation of the world (AT 5:148–49). In his own correspondence around the same time of his meeting with Burman, however, Descartes denies both that God has a successive duration (*To Arnauld*, 4 June 1648, AT 5:193), and that there was any such duration prior to the creation of the world (*To More*, 15 Apr. 1649, AT 5:343). But even though there may well be a corruption in the report of Descartes's remarks to Burman, I claim presently that Descartes can accept a sense in which the duration of his indivisible mind is divisible into parts (though, in contrast to the case of the extension of a body, not into substantial parts).

indicates that a modal distinction holds between two modes of the same substance, since "we can know one mode without the other, and vice versa, but neither however without the same substance in which they inhere" (*PP* I.61, AT 8-1:29). My proposal is that in contrast to the case of the parts of extended substance, he takes the different parts of the duration of a substance to be modally distinct from each other.

A clear counterexample to this proposal may seem to be provided by Descartes's claim in the *Principles* that "in created things, that which never has in itself diverse modes, such as existence and duration in the thing existing and enduring, must be called not qualities or modes but attributes" (*PP* I.56, AT 8-1:26). Isn't the indication here that duration is not subject to modification?[81] However, we need to remember Descartes's position that thought and extension are also attributes that are not subject to modification *considered as such*. As he notes in correspondence with Arnauld,

> [A]s extension, which constitutes the nature of body, differs greatly from various shapes or modes of extension that it assumes, so thought, or thinking nature, in which I take the essence of the human mind to consist, is much other than this or that act of thinking. (29 July 1648, AT 5:221)

In the same way, he could say that invariable duration differs greatly from the various modes that it has at different moments. Just as Descartes can distinguish the continuing attributes of thought and extension from the varying modes that it assumes, then, so he can distinguish the duration of thinking and extended substances from the varying modes that constitute its distinguishable parts.[82]

Thus far I have emphasized the importance of distinguishing Descartes's view of the parts of time or duration from his view of the parts of extended substance. But there is a reading of Descartes—more popular in the past, perhaps, than currently—on which the difference seems to be even greater than I have indicated. Descartes argues explicitly that there can be no indivisible atoms on the grounds that any portion of extension can be divided into smaller parts.[83] Yet Gueroult, most prominently, insists that he takes temporal duration to be a discontinuous collection of indivisible parts.[84]

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81. In §3.2.2, I consider an objection along these lines that Alan Gabbey has offered.

82. I will return to this interpretation of Descartes's account of duration and its parts in the course of my discussion in §3.2.2 of his view of bodily force.

83. See, e.g., *PP* II.20, AT 8-1:51–51; *To Gibieuf*, 10 Jan. 1642, AT 3:475–77; *To More*, 5 Feb. 1649, AT 5:273–74.

84. The prominence of Gueroult's interpretation in the earlier literature is reflected in Yvon Belaval's remark that it is common knowledge that for Descartes time is discontinuous (Belaval 1960, 149). There is documentation of the relevant literature in Arthur 1988. For a more recent defense of an "atomist" interpretation of Descartes's account of time, see Levy 2005. Cf. Leibniz's claim in a 1699 letter to De Volder that since "the Cartesians" hold that "God creates all things continually" and that "moving a body is nothing but reproducing it in successively different places," they are committed to the conclusion that "motion in its essence is nothing but a succession of leaps through intervening intervals, which flow from the action of God" (Leibniz 1978, 2:193/Leibniz 1969, 521).

He argues that even though Descartes grants that time can be viewed as continuous from "the point of view of created things, or in the abstract" (Gueroult 1953, 1:280–81), still he holds that there is "the point of view of creation and of the concrete" from which time is conceived as a "repetition of indivisible and discontinuous creative instants" (1:275). In Gueroult's view, then, Cartesian conservation consists in the successive creation of independent atemporal instants, the atomic parts of duration.

I have mentioned the emphasis in the work of Maimonides on the temporal atomism of the occasionalistic Mutakallimun (see §1.1.1). Even so, scholastic opponents of occasionalism, represented most notably by Thomas, rejected this account of time.[85] Gueroult's critics insist that Descartes also rejected the view of conservation as continual re-creation, arguing that he took durationless instants to be boundaries of temporally extended temporal parts rather than distinct temporal parts of time.[86] However, the debate on this issue has tended to bog down on the interpretation of technical terminology in particular passages in Descartes, and there is the view in the recent literature that the texts do not decisively favor the thesis that instants are ultimate parts over the thesis that they are mere boundaries of parts.[87]

As will become clear in §2.2.3, my sympathies are with Gueroult's critics. But I think that there are considerations against his interpretation of Descartes's account of temporality that do not rest solely on the issue of how he understood his technical terminology. These considerations are related to the debate in contemporary metaphysics between "endurantists," who hold that persisting objects endure by being wholly present at different times, and "perdurantists," who hold that persisting objects perdure by being composed of distinct temporal parts.[88] The main issue here concerns not the status of instants, but rather the nature of persisting objects. And on this point, Descartes seems to me to be clearly in the endurantist camp.[89] For on the view that I have proposed above, he holds that there is an important difference between spatial and temporal extension. The indication in Descartes is that spatial extension is composed of parts that can exist on their own as substances. But on my proposal, he was committed to denying that temporal extension is such a composite. The sort of distinction that applies to temporal parts is not a real distinction, as in the case of spatial parts, but rather a modal distinction. Insofar as they are only modally distinct, however, temporal parts are modifications of the

85. Thomas accepted the Aristotelian view that time is the measure of the continuous motion of the heavens, and so is itself continuous; see, e.g., *ST* I.10.6. Cf. Suárez's endorsement of the view in Aristotle that "time has its extension from motion" and that "there is no other extension of time than the continuity of its succession" (*MD* L.8, ¶4, 1:949*).

86. See Beyssade 1979, ch. 3 and conclusion, and Arthur 1988, 373–75. This position is anticipated in Laporte 1950, 158–60.

87. See, for instance, Secada 1990 and Garber 1992, 266–73.

88. For a helpful discussion of the various issues involved in the debate over endurantism and perdurantism, see Haslanger 2003.

89. Gorham 2006 defends a reading on which Descartes understood the different parts of time to be substantially distinct, and thus was committed to perdurantism. As Gorham admits, however, this sort of perdurantism is incompatible with Descartes's insistence on the simplicity of the soul. I take this conflict to provide reason to reject Gorham's reading.

same underlying attribute of duration, that is, for Descartes, the same enduring substance. Gueroult's interpretation requires that there is for Descartes an important difference between spatial and temporal extension insofar as only the latter can be composed of independent atomic parts. I agree that Descartes took these two kinds of extension to be fundamentally distinct, but I understand the relevant difference to be between a spatial extension divisible into distinct substantial parts, on the one hand, and a temporal extension divisible only into distinct modes of a single attribute of duration, on the other. As I argue presently, the persistence of this attribute is coupled with a single act of divine conservation identical to the act by which God originally created the substance that is only distinct by reason from that attribute.

### 2.2.3. Conservation and Creation

We can now turn to Descartes's argument in the Third Meditation that it is evident from the fact that the different parts of his life are independent of each other that "conservation differs solely by reason from creation" (AT 7:49). In the Second Replies, this connection is reflected in the axiom that "the present time does not depend on the proximate preceding [time], and thus no less a cause is required to conserve a thing than to produce it at first" (AT 7:165). We need to consider first how the fact that temporal parts are independent shows that the same sort of cause is required to conserve as to create, and then how this latter result is connected to the conclusion that conservation differs solely by reason from creation.

With respect to the first point, recall Descartes's Suárezian conclusion that the activity of the cause must be simultaneous with the production of its effect. Given that distinct parts of time are not simultaneous, it cannot be the case that causal activity at a previous portion of time suffices for the existence of an effect at a subsequent portion of time.[90] The conclusion that the simultaneous cause that suffices for the existence of the effect during that portion of time must be of the same sort as a creative cause depends on Descartes's claim that any object that has an existence distinct from its essence requires an efficient cause *secundum esse* that produces the existence of this object at each moment it exists (see §2.2.1). In the case of a cause *secundum fieri*, the cause acts on preexisting material, and what is produced can continue to exist after the cause has acted. But in the case of the cause *secundum esse*, there is no preexisting material, since the very being of the object is produced. This object must therefore be produced *ex nihilo*, and in that respect this production does not differ from the initial creation of the object *ex nihilo*.

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90. Here I follow the summary of Descartes's line of argument in Gorham 2004, 391–400. Gorham considers the claim in Secada 1990 that Descartes cannot take the causal independence of different parts of time to derive simply from the condition of causal simultaneity, since causal activity at an earlier portion of time could produce an effect at a later portion of time by producing something during an overlapping interval that produces that effect. As Gorham indicates, the counterexample does not succeed, since the overlapping interval can itself be divided at just the point where the initial points of time are distinguished, and that nothing prior to that point can suffice for the production of something after that point (Gorham 2004, 398).

One problem, however, is that this conclusion seems to fall short of the doctrine that conservation differs solely by reason from creation. For Descartes himself indicates that when applied to God, this doctrine requires not only that conservation is *the same type* of act as creation, or is merely type-identical to it, but also that it is *the very same act*, and so is token-identical. Thus, in the *Discourse* he notes that it is "an opinion commonly received among the Theologians" that "the action by which [God] now conserves [the world] is entirely the same as [*toute la mesme que*] that by which he has created it" (*DM* V, AT 6:45). This same theological opinion backs his later claim in the *Principles* that "the world now continues to be conserved by the same action [*eadem actione*] as created it then" (*PP* II.42, AT 8-1:66).

In fact, this theological opinion can be found in Suárez. Recall his conclusion in the *Disputations* that the creation of an object does not differ in reality from the direct and immediate *per se* conservation of that object (see §1.2.3 (i)). Suárez did note the objection that conservation seems to differ from creation insofar as they occur at different times. Far from making manifest that conservation does not differ from creation, as Descartes claims, the distinction of the parts of time is here presented as an obstacle to recognizing this conclusion. Suárez's response to this objection is that since the time of creation is joined continuously with the subsequent time of conservation, we can hold that there is a single continuous effect deriving from a single action. It is due to this sort of continuity, he concluded, that "Saint Thomas said that conservation is as it were continued creation [*quasi continuatam creationem*]" (*MD* XXI.2, ¶4, 1:791).

This last point is linked to Descartes's claim in the Third Meditation that there must be some cause that "as it were creates me anew at this moment" (*me quasi rursus creet ad hoc momentum*) (AT 7:49). The reference here to creation *rursus* may seem to suggest that the creation that conserves is not merely a continuation of the act of creation, as in the case of Thomas and Suárez, but rather an entirely new act. Indeed, I noted at the outset of this chapter that Bennett takes Descartes to embrace this suggestion. But if we follow Bennett's view on this issue, then the premise in Descartes that the parts of time are distinct not only cannot lead to the common theological opinion that initial creation and subsequent conservation are the same act, but actually conflicts with that opinion insofar as it requires that at each moment an object must be created anew by a distinct act.

As in the case of Thomas, however, I think we must take seriously Descartes's qualification that he is only *quasi* created anew.[91] Descartes's main point in speaking of new creation is that God does not conserve by acting on preexisting material. Rather, he conserves by producing the being of an object *ex nihilo*. In this respect Descartes is simply following the Suárezian line, albeit by using language that may suggest an anti-Suárezian conclusion. Moreover, Descartes's argument in the letter to Hyperaspistes that God annihilates only by ceasing his concursus indicates that he accepted the Suárezian view that God conserves this being by continuing the initial act by which he created it. Whatever separation

91. Or, as Descartes puts it in other texts, *veluti* reproduced; see Fourth Replies, AT 7:110; *PP* I.21, AT 8-1:13.

there may be of distinct temporal parts, it is not a separation that requires conservation by a series of distinct creative acts.[92]

Though Bennett does not address this point about distinct acts, Gueroult accepts that there is for Descartes only a single indivisible creative act in God.[93] But it is unclear how this single act could result in the series of distinct creations that Gueroult (anticipating Bennett) takes Descartes to posit. Since there is only one creative act, it would seem that there should be only one effect. I submit that in the case of Descartes, this single effect is simply the attribute of duration in the persisting substance. Since this attribute is not distinct in reality from the substance itself, God produces this attribute in initially producing the substance as a cause *secundum esse*. Conservation is just the continued production of the substance that yields the continuing presence of its attribute of duration.

I have mentioned the possibility that Descartes could allow for derivative causes *secundum fieri* of the modes of the substances that God alone can create and conserve. Perhaps then there could be such causes of the modal features of the duration that constitute the different parts of time.[94] But even if Descartes grants that there are such causes, he still must hold that they depend essentially on God's activity as cause *secundum esse*. For the production of the relevant modes of duration presupposes the existence of the attribute that these modes modify. But God alone can be the cause that produces this attribute given Descartes's claim both that the attribute is not distinct in reality from the substance to which it is attributed, and that God alone can produce the existence of the substance as a cause *secundum esse*.

According to Descartes, then, the cause of the duration of a substance is just the same as the cause that gives that substance its existence in the first place. Here we have an endorsement of the received scholastic position in Suárez that God conserves the world by means of the very same act by which he created it. This similarity to Suárez is admittedly obscured somewhat by Descartes's references to independent parts of time and to conservation as renewed creation. But Descartes's view of the nature of time militates against the view that temporal parts are separated in such a way that their production requires a separate divine act. And his talk of renewed creation merely reflects his position, which Suárez had anticipated, that conservation as well as creation involves a production of being from nothing. This is why his conservation axiom says that the cause that conserves is as great as the

92. Thus I stand in opposition to Gabbey, who endorses the view in Gilson that "Descartes and Aquinas differ in their respective interpretations of God's conservation of the world: for Aquinas the conservation is a simple continuation of the initial creative act, whereas for Descartes it is a re-creation at each (independent) instant" (Gabbey 1980, 302, n.40, citing Gilson 1925, 340–42). As indicated in the introduction, this "re-creationalist" interpretation of Descartes is found also in Smith 1902. Cf. the more recent claim in Secada 2000 that for Descartes "God initially created and then recreates at every instant all that there is" (105).

93. "And certainly, the various creations are really only one, since the creative act of God is in itself one, and since it would be inconceivable for them to be separated by intervals of time" (Gueroult 1953, 1:280).

94. Indeed, my suggestion in chapter 3 is that we can conceive of the forces that Descartes attributes to bodies in terms of such causes.

cause that creates. And it is clear that Descartes himself takes this axiom to show that the power by which God conserves is not merely the same type as, but also token-identical to, the power by which he creates. This further result turns out to be central to Descartes's argument—to be considered in the next chapter—that God conserves the total quantity not only of the substance of matter but also of the motion of its parts.

## 2.3. FROM AXIOMS TO CAUSATION

I hope it is clear from what I have said in this chapter why I would resist saying of Descartes's account of the causal axioms, what Bennett has said about his account of the containment axiom, that it "seems not to reflect any deeply considered views about the nature of causation." Indeed, I think that what Descartes has to say shows that his account is backed by a rich view of causation that is profoundly conditioned by, though also departs on important matters of detail from, the scholastic account of efficient causality that Suárez articulated with great sophistication. Now, however, I want to make the more deflationary point—more congenial, perhaps, to Bennett—that Descartes's axioms do not provide an adequate basis for attributing to him the sort of concurrentist position that Suárez offered against his competitors. This is because the axioms themselves are easily rendered compatible not only with a certain form of occasionalism, but also with a "mere conservationist" position in Durandus that was an important scholastic alternative to concurrentism.

To show the conceptual flexibility of the axioms, I start with the containment axiom. I have mentioned the objection to this axiom in the literature that there is in Descartes no clear account of how causes that do not formally contain the reality of their effects can contain them eminently. In contrast, the main problem for this axiom that I have stressed concerns formal containment. Recall that this problem derives from the conclusion in the Sixth Meditation that bodies formally contain what is present objectively in our sensory ideas. Given Descartes's emphasis in this text on the fact that bodies are often "not entirely such as" we sense them, it seems that they do not satisfy his official definition of formal containment, according to which an object is "such as we perceive." My solution was to offer on Descartes's behalf the view that bodies are "such as" we sense them insofar as they possess those features with which our sensory ideas are systematically correlated. Descartes assumes that causal relations between the bodily features and the ideas make this correlation possible. But it is not entirely clear that the solution requires a causal relation. For it seems that the correlations could be present even if bodies were causally inefficacious; an occasionalist could explain them, for instance, by appealing to the nature of divine action. The main point here is not that Descartes should be tempted by this occasionalist alternative. Rather, it is that showing that bodies satisfy the requirement of formal containment in the problem case of the objective reality of sensory ideas does not suffice to reveal that bodies have the power to cause this objective reality. To draw this conclusion, we must consider issues concerning the nature of body and of its connections to the mind that go beyond the containment axiom. Even if we assume that bodies have such a power, moreover, the containment axiom itself does not reveal whether the

effect derives from this power alone, or rather, as on Suárez's concurrentist view, requires a special divine concursus (see §1.2.3 (ii)). What needs to be sorted out here is how precisely Descartes's suggestion that bodies are total causes of the objective reality of sensory ideas is related to his conclusion that everything derives from God as a "total and universal cause."

In contrast, the conservation axiom takes a clear stand on the nature of divine causality. In particular, this axiom requires that God's conservation of the world involve an act that does not differ in kind from his act of creating that world. Descartes's application of that axiom reveals further his commitment to the stronger conclusion, previously accepted by Suárez and other scholastics, that there is only a distinction in reason, and no distinction in reality, between God's conservation of an object and his creation of that object. Whatever Descartes thought about secondary causation, then, he clearly indicated that the continued existence of the world requires that God act in a particular way as the primary cause.

But though it says more about God's causal role than the containment axiom says about the role of secondary causes, the conservation axiom is nonetheless neutral on issues regarding divine causality that were central to earlier medieval and later scholastic debates over causality. All of the main parties to these debates agreed that divine conservation is necessary for the continued existence of the created world. The differences concern the precise nature of God's continuing causal contribution. Suárez characterized the occasionalist as arguing that since God brings a creature into existence by determining all of its features, God alone can be a real efficient cause (*MD* XVIII.1, ¶2, 1:593). We have seen that to avoid this occasionalist conclusion, Durandus sharply distinguished the conservation of the being of the created world from the production of changes in that world. He held that whereas God alone can bring about the former, the created powers that God conserves suffice to bring about the latter (see §1.1.3).[95] However, we also know that in response to Durandus, Suárez offered the compromise position, previously proposed by Thomas, that though created powers cannot produce effects without divine assistance, God can act with those powers in a manner that allows them to make a genuine causal contribution to the effect (see §1.2.3 (ii)).

In this chapter I have argued that Descartes's claim that God is the "universal and total cause" does not preclude the view that creatures can be total causes, and thus does not rule out Suárez's concurrentist position. But though this claim may seem to rule out Durandus's mere conservationism, it is not evident to me that this is the case. In the passage from the letter to Elisabeth cited in §2.2.1, Descartes emphasizes that God's universal causality differs from the universal causality of the sun, since whereas there are particular causes of the effects of the sun that are not subordinated to the sun, there are no particular causes of effects in the created world that are not subordinated to God. The notion of "subordination" could be understood in a concurrentist manner, as indicating a dependence on a divine concursus that acts with the created cause. But the notion also could be given a weaker sense that is more in line with Durandus's mere conservationism. That is, subordination could be taken to

95. For a contemporary statement of the mere conservationist position, see Quinn 1988.

indicate only a dependence on God's creation/conservation of substantial being. God's total causality extends to this kind of being as the causality of creatures does not, and since there could be no secondary causality if there were no substances, such causality depends essentially on God's action as a cause *secundum esse*. But this sort of subordination does not require a concursus with the action of secondary causes that goes beyond God's act of conservation. It thus allows for the view in Durandus that divine conservation exhausts God's causal contribution to the production of effects by secondary causes. In terms of the Thomistic distinction we have considered at several points, the view here is that though God alone is the cause *secundum esse* of such effects, only the secondary causes cause them *secundum fieri*.

The previously noted comment in Descartes's letter to Hyperaspistes that "nothing can exist without God's concursus" may seem to put him on the side of the concurrentists. However, it is not evident that he sharply distinguished this concursus from the divine act of conservation. Moreover, there is even the possibility of understanding the concursus in an occasionalist manner, as the exclusive locus of causal activity. On this understanding, the contributions of creatures with which God "concurs" are restricted to merely passive aspects of the causal situation. The conservation axiom alone cannot determine which of these readings is correct, since the axiom could be acceptable to occasionalists as well as to concurrentists and mere conservationists. As in the case of the containment axiom, so here we must descend from the abstract heights of the conservation axiom to Descartes's treatment on the ground of particular kinds of causal interaction to determine whether he intended to allow for real secondary causes and, if so, how he thought such causes produce their effects.

The account of the causation of motion in Descartes's physics would seem to be a good place to start. After all, we will discover that the account that Descartes provides in the *Principles* relies explicitly on the consideration, connected to the conservation axiom, that God's act of conserving the material world is identical to his initial act of creating it. Moreover, Descartes indicates the importance of the containment axiom for his account in this same text of the communication of motion when he insists there that such a account be governed by the rule "that we never attribute to a cause any effect that exceeds its capacity [*potentiam*]" (*PP* II.60, AT 8 1:76). It turns out that Descartes's discussion in the *Principles* of body–body interaction provides the material for a response to the argument in the literature that he could not have taken the communication of motion to involve real bodily causes given that his spare ontology requires the reduction of matter to mere extension. But even if it is granted that Descartes rejects an occasionalist view of body–body interaction, there remains the question—which a consideration of the scholastic context of his theory of causation serves to highlight—of whether he intends to side with concurrentism against mere conservationism.