



# Aquinas's Parasitic Cosmological Argument

SCOTT MACDONALD

In *Summa theologiae* (ST) 1.2.3 Aquinas says that his first way of proving the existence of God is clearer (*manifestior*), seemingly meaning that it is the clearest of the five ways he will offer. Most philosophers who have considered the matter, however, have disagreed. The proof from motion has been almost entirely abandoned, and philosophers from Clarke and Leibniz to Rowe and Swinburne have preferred versions of the cosmological argument nearer to Aquinas's second or third ways.<sup>1</sup> One reason for the neglect of the first way is that it has been generally supposed to be subject to several obvious, devastating criticisms, among them that it crucially depends on archaic physical theory, ancient astrology, and one or more elementary fallacies. In this paper I argue that the proof from motion can be freed from the trappings of ancient science and astrology and defended against the most common of the strictly philosophical criticisms of it. Having defended the argument against some well-known criticisms, I argue that it nevertheless fails as an independent proof for God's existence because it depends for its validity on another of Aquinas's

1. See William L. Rowe, *The Cosmological Argument* (Princeton: Princeton University Press, 1975); and Richard Swinburne, *The Existence of God* (Oxford: Clarendon Press, 1979), chapter 7.

proofs for God's existence. Commentators have not adequately appreciated the significance of the parasitical nature of the proof from motion, though Aquinas himself did, as I argue in the final section of this essay.

I will draw on both of Aquinas's statements of the proof, the "first way" found in *ST* 1.2.3 and the first of the two "Aristotelian" proofs found in *Summa contra gentiles* (SCG) 1.13. The SCG and *ST* statements of the proof differ in two significant respects. First, in the more detailed discussion in SCG 1.13 Aquinas offers several subarguments and often gives more than one argument for each point that he thinks needs justification. By contrast, the *ST* discussion preserves only some of those subarguments and incorporates them into the body of the proof. I discuss only those subarguments that seem to me to be strongest and most useful for making my case. Whether or not the subarguments I do not discuss are good arguments seems to me to make no difference to the points I argue in this paper. All I need to do is to trace a single defensible strand running through the proof from motion. The second respect in which the two presentations of the proof from motion differ is in the statement of the conclusion. The SCG version of the proof concludes: "Therefore it is necessary to suppose that there is some primary unmovable mover" (*primum movens immobile*), while the conclusion of the proof from *ST* is apparently weaker: "Therefore it is necessary to arrive at some primary mover that is not moved by anything" (*primum movens quod a nullo movetur*). I think this second difference is important and I discuss it in the seventh section, below.

Following the presentation in SCG 1.13, the argument can be represented as follows:<sup>2</sup>

1. Everything that is moved is moved by something else.

2. The passage reads: "Everything that is moved [*movetur*] is moved by something else. But it is clear from the senses that something—for example, the sun—is moved [*moveri*]. Therefore it is moved [*movetur*] by something else that moves [*movente*]. Therefore that mover [*movens*] either is moved [*movetur*] or not. If it is not moved [*movetur*], then we have what we set out to prove, [*viz.*,] that it is necessary to suppose that there is some unmovable mover [*movens immobile*], and we call this God. But if it is moved [*movetur*], then it is moved by something else that moves [*movente*]. Therefore we either proceed to infinity or arrive at some unmovable mover [*movens immobile*]. But we cannot proceed to infinity. Therefore it is necessary to suppose that there is some primary unmovable mover [*primum movens immobile*]." I have supplied the

2. Something—call it *A*—is moved.
- ∴ 3. *A* is moved by something else—call it *B*—that moves.  
[1, 2]
4. That mover, *B*, either (a) is moved or (b) is not moved.
5. If 4b is the case, then there is some unmovable mover, viz., *B*.
6. If 4a is the case, then *B* is moved by something else—call it *C*—that moves.
7. If 4a is the case, then one either (a) proceeds to infinity or (b) reaches some unmovable mover.
8. One cannot proceed to infinity.
- ∴ 9. If 4a is the case, then one must reach some unmovable mover. [6, 7, 8]
- ∴ 10. There must be some primary unmovable mover. [4, 5, 9]

Aquinas himself sees that two of the premises of the proof—premises 1 and 8—need to be argued for, and critics have generally thought that either one or both of these are demonstrably false. In the second through fifth sections I discuss these premises and some recent, influential criticisms of them. In the sixth section I examine Aquinas's apparently unwarranted assumption (in premise 5, for example) that an unmoved mover is unmovable. This apparent assumption in fact masks a deep difficulty that exposes the parasitic nature of the proof. Before turning to the difficulties raised by these three premises, however, we need to look closely at the proof's observational starting point, premise 2.

Premise 1 might be thought of as the theoretical premise that, together with 2—the observation premise—gets the proof off the ground. Premise 2 draws our attention to certain phenomena in the world, and 1, a universal proposition that takes as its instances phenomena of that sort, starts us on a search for causes or explanations. The remainder of the proof is intended to establish that the

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Latin corresponding to the various forms of the verb “to move” because I think, as will emerge, that something of philosophical importance turns on the grammar. I use the Leonine edition of Thomas Aquinas, *Opera omnia* (Rome, 1882–) except for *In libros Physicorum*, where I use the version in Roberto Busa's edition of the *Opera* (Stuttgart and Bad Canstatt, 1980).

search can stop only at some unmovable mover. What sort of phenomena does Aquinas think provide the basis for this cosmological argument? He says that it is an argument from motion (*motus*) and that it is evident to the senses that something is moved (*moveri*). What does he understand by “motion” and “being moved”?

Following Aristotle, Aquinas takes *motus* to be a genus having three species: local motion, alteration, and increase and decrease (change in place, quality, and quantity, respectively).<sup>3</sup> So *motus* includes, but is not limited to, what we would normally call “motion,” namely, local motion. In the presentation of the argument in *ST* he considers a case of alteration (a log on the fire growing hotter), while in *SCG* he cites a case of local motion (the sun’s moving across the sky). The proof from *motus*, then, appears to begin from commonly observable physical motions and changes.

But we have to be careful not to construe *motus* too broadly. In the first place, it does not cover everything we might be willing to call “change,” even though it covers some cases (alteration, for example) that we would prefer to call “change” rather than “motion.” The coming to be or passing away of substances and so-called mere Cambridge changes—George Bush’s changing from not being thought of by me to being thought of by me—are not instances of *motus* for Aquinas.<sup>4</sup>

In the second place, the way in which the argument proceeds makes it clear that certain cases of what we would be willing to call motions or movements have to be excluded from the scope of the observation premise. We would ordinarily say that anything that moves is in motion, but it is crucial to the validity of the proof that there are moving (active) things that are not moved (passive) things; that is, cases of moving that are not also cases of *motus*. A case of motion (*motus*) is a case of a thing of which we can say that it is moved or is being moved (*movetur*)—premise 2—and all such things are moved by something else—premise 1. But Aquinas denies that a primary mover is either moved by something else or self-moved, so he

3. In *libros Physicorum* 5.2. Aquinas points out, however, that sometimes “motion” is taken more broadly to include coming to be and passing away (see 3.2). In its broad sense *motus* is equivalent with *mutatio*; in its narrower sense it designates a species of *mutatio*.

4. Reasons for ruling out cases of these sorts emerge later in this section.

cannot suppose that a primary mover is moved (*movetur*) or that its moving is an instance of motion (*motus*).<sup>5</sup> The proof, then, depends on a distinction between moving and being moved, and not all instances of moving can be instances of *motus*.

Given that the proof depends on some sort of distinction between movers and moved things, it is natural to suppose that Aquinas uses the passive and active voices of the verb to mark the distinction. One might suppose, for instance, that when Aquinas claims (in the observation premise) that something is moved (*moveri*), he means the passive voice of the verb to be taken quite literally: something is being moved (by something that is acting on it). In other words, there is something that is the passive recipient of motion (from something that is its active mover).<sup>6</sup> Thus, the distinction between moving and being moved, movers and moved things, on which the argument depends might be the distinction between active movers (agents that possess and exercise active causal powers) and passive recipients of motion (things possessing capacities for being affected by agents exercising active causal powers). When a man pushes a stone by means of a stick, for example, the stick and the stone are passive recipients of motion from the man, who is an active mover. On the basis of a distinction of this sort Aquinas could exempt certain movers—movers that only give motion without receiving it—from the general principle expressed in premise 1.

5. In the division of the text at the beginning of *ST* 1.3, Aquinas explicitly denies that motion (*motus*) characterizes God, the primary mover.

6. Kenny, however, suggests that Latin uses the passive voice of the verb “to move” to express either the genuine passive or the intransitive sense of the verb. Thus, “the sun moves” or “the sun is moving” (intransitive sense) and “the sun is being moved” (passive sense) would be rendered in Latin by the same form of the verb—*movetur*. The passive form of the verb in the observation premise, then, might indicate only the intransitive sense of “to move.” See Anthony Kenny, *The Five Ways: St. Thomas Aquinas's Proofs of God's Existence* (London: Routledge and Kegan Paul, 1969), reprint ed. (Notre Dame: University of Notre Dame Press, 1980), pp. 8–9. But the fact that Aquinas cannot allow the observation premise to cover all cases of intransitive moving shows, I think, that the passive form of the verb there cannot be taken as expressing the intransitive sense. For similar reasons I reject Blair's suggestion that the principle expressed in premise 1 be rendered “whatever moves is moved by another.” See George A. Blair, “Another Look at St. Thomas' ‘First Way,’” *International Philosophical Quarterly* 16 (1976): 301–314. Aquinas's conclusion presupposes the falsity of the principle Blair suggests.

Of course, taking the passive voice of the verb as marking the passive side of this distinction between agents and patients will affect how we understand the proof's opening moves. First, the observation premise must be read not as the unassailable commonplace that there are instances of motion broadly speaking, but as the claim that there are passive recipients of motion. This latter claim is certainly stronger than the former, but perhaps it too is unobjectionable. The stick and the stone seem to be straightforwardly passive recipients of motion.

Second, when the passive voice of the verb is taken in the way I have suggested, the general principle expressed in premise 1 must be read as the claim that everything that is a passive recipient of motion is moved by something else. Now it might be objected that this way of reading the general principle trivializes it, since on this reading, "is moved" appears to be analytically equivalent to "is moved by something else."<sup>7</sup> But this objection is mistaken. Taking things that exemplify *motus* as passive recipients of motion analytically entails only that they are moved by something, but not that they are moved by something *else*. In fact Aquinas's arguments in support of premise 1 are intended to rule out the possibility that things exemplifying *motus* might be *self*-moved rather than moved by something else. So the general principle, taken as I have suggested Aquinas intends it, is not trivial.

The analysis of motion to which Aquinas appeals in support of premise 1 shows more clearly what he takes to be the significant features of these instances of *motus*.

But everything that is moved [*movetur*] is moved by something else, for something is moved [*movetur*] only insofar as it is in potentiality with respect to that toward which it is moved. But something moves [*movet*] insofar as it is in actuality, for to move [*movere*] is nothing other than to bring something from potentiality to actuality. But something can be brought from potentiality to actuality only by some being that is in actuality [*aliquid ens in actu*]. . . . But it is not possible for one and the same thing to be in potentiality and actuality in the same respect at the same time. . . . Therefore it is impossible that something be a mover [*movens*] and a moved thing [*motus*], or that it move [*moveat*] itself, in one and the same respect. (ST 1.2.3)<sup>8</sup>

7. Blair makes this claim in "Another Look," p. 301.

8. For the version of this argument in SCG 1.13, see note 18, below.

I will take up the details of this argument in the next section, but first I want to focus narrowly on Aquinas's characterization of motion in terms of potentiality and actuality. He says that something is moved (*movetur*) only insofar as it is in potentiality, and that something moves (*movet*) only insofar as it is in actuality. The active and passive forms of the verb apparently mark a distinction that Aquinas explains in terms of actuality and potentiality.

Aquinas is following Aristotle's characterization of motion (*motus*), which he explicates in his commentary on the *Physics*:

Therefore, one should notice that a thing [can] be entirely in actuality, entirely in potentiality, or intermediate between potentiality and actuality. Therefore, what is entirely in potentiality is not moved yet [*nondum movetur*]; what is already in complete actuality, however, is not being moved [*non movetur*] but has already been moved [*iam motum est*]; therefore, that thing is being moved [*movetur*] which is intermediate between pure potentiality and pure actuality, which is indeed partly in potentiality and partly in actuality.

This is clear in the case of alteration, for when water is hot only in potentiality it is not yet moved; when it has already been heated the heating motion has been completed; but when it shares in heat to some degree, but incompletely, it is being moved [*movetur*] toward heat, for what becomes hot shares in heat gradually by degrees. Therefore, the incomplete actuality of heat existing in the heatable thing is itself motion [*motus*], not, indeed, insofar as it is in actuality alone, but insofar as what already exists in actuality is ordered toward further actuality. For if one were to take away its being ordered toward further actuality, the actuality itself (however imperfect) would be the terminus of motion [*motus*] and not motion [*motus*], as happens when something heats partially. . . .

Therefore, incomplete actuality has the character [*ratio*] of motion [*motus*], insofar as it is related both as potentiality to a further actuality and as actuality to something less complete. (*In libros Physicorum* 3.2)<sup>9</sup>

This passage highlights three essential features of motion.

First, motion characterizes things that are specifiable in terms of their being in states of potentiality and actuality. Moreover, to specify

9. In discussing Aristotle's proof from *motus* in *Physics* 8, Aquinas refers to this discussion of *motus* in book 3 of the *Physics*; see *In libros Physicorum* 8.10. (The English translation of Aquinas's commentary on the *Physics* seems inadvertently to have omitted the text I have translated as the last paragraph of this quotation. See *Commentary on Aristotle's Physics*, translated by Blackwell, Spath, and Thirlkel [London: Routledge and Kegan Paul, 1963], pp. 136–137.)

a thing as being in potentiality or actuality is to specify it as being in potentiality or actuality with respect to something. When Aquinas says that a thing can be entirely in actuality, entirely in potentiality, or intermediate between potentiality and actuality, he means that it can be entirely in potentiality with respect to some state *S*, entirely in actuality with respect to some state *S*, and so forth. Thus, a kettle of cold water is entirely in potentiality with respect to being hot; a kettle of boiling water is entirely in actuality with respect to being hot, but entirely in potentiality with respect to being cold. Aquinas often leaves unstated the qualification giving the respect in which a thing is in potentiality or actuality, but there must be some such respect for any case of motion.

Second, Aquinas explains *motus* in terms of states of incomplete or intermediate actuality. These states are characterized as incomplete or intermediate in virtue of their relations to preceding and succeeding states of the thing being moved: a thing is in a state of incomplete actuality when it is in actuality relative to some preceding state of potentiality but still in potentiality relative to some succeeding state of (further) actuality. Aquinas says that a thing is being moved when it is in incomplete actuality with respect to some end-state; that is, when it is partly in actuality with respect to it but also still ordered toward it as toward a further actuality. As he says, if one were to take away a thing's being in the process of attaining further actuality, one could no longer say that it is being moved (*movetur*), but only that it has reached the terminus of the motion.<sup>10</sup> Presumably, for similar reasons, if one were to take away the fact that the thing has already actualized some potentiality (to some extent), one could no longer say that it is being moved, but only that it is in the state from which motion begins.<sup>11</sup> Hence, to say that at some time a thing is being moved

10. Of course the actual terminus of the motion might not be the expected or intended terminus. If I put a kettle of water on the burner intending to bring the water to a boil, I intend the end-state of this motion (the heating of the water) to be the state in which the water is boiling. But if my wife, unaware of my intentions, turns the burner off before the water boils, the actual end-state of the motion in question will be the water's state at the time she interrupts the heating process.

11. On this analysis, the two termini of a given instance of motion will not be instants at which the thing can be said to be in motion; they will be extrinsic limits of the motion. Hence, the state from which motion begins will be the state it is in at the last instant of rest (there will be no first instant of motion). For discussion of medieval



involves covert reference to the thing's states at both earlier and later times. Being moved, then, involves process. Though we might be able to identify at specific times things that are being moved, their being moved consists in their being in the process of actualizing potentiality over an interval of time.

It follows from this second feature of *motus* that anything that is being moved thereby has two aspects or can be considered in two ways. In virtue of being moved a thing is in incomplete actuality with respect to some end-state, and is thereby in actuality in one respect and in potentiality in another. It is intermediate between an initial state (the state of being entirely in potentiality with respect to the final state) and the final state (the state of being entirely in actuality with respect to that state). It can be considered relative to either terminus—as being in actuality (though still incompletely actual in the relevant respect) or as being in potentiality (though no longer completely in potentiality in the relevant respect).

Third, when Aquinas says that what is being moved is in potentiality to further actuality he means not just that it *could* go on from its present state to a state of further actuality, but that it actually is going on to a further actuality. The kettle can be taken off the fire when the water is at 50 degrees, in which case the water at 50 degrees is not in motion, is not being moved. The state of being 50 degrees is the end-state of this particular case of motion, the final actuality, and so the water in this state cannot be said to be in incomplete actuality (with respect to this end-state).<sup>12</sup>

These points suggest that we can say of some thing *M* at some time *t* that it is being moved (*movetur*) if and only if:

- a. at *t*, *M* is in actuality with respect to some state *S<sub>i</sub>* (an intermediate state), and
- b. in any interval of time (no matter how short) immediately prior to *t*, there is an instant at which *M* was in actuality with respect

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analyses of motion and change, see Norman Kretzmann, "Incipit/Desinit," in *Motion and Time, Space and Matter*, edited by Peter K. Machamer and Robert G. Turnbull (Columbus: Ohio State University Press, 1976), pp. 101–136.

12. This raises a problem about how we could be certain at any given instant whether or not a thing is being moved, since often we cannot be certain that a thing's present state is an intermediate state in some process rather than the process's final state, at which point it would be correct to say that the process had ceased.

to state  $S_{pr}$  (a prior state not identical with  $S_i$ ), and in virtue of being in actuality with respect to  $S_{pr}$   $M$  was in potentiality with respect to  $S_i$ , and

- c. in any interval of time (no matter how short) immediately after  $t$  there is an instant at which  $M$  will be in actuality with respect to some state  $S_{po}$  (a posterior state not identical with  $S_i$ ), and in virtue of being in  $S_i$  (and  $S_{pr}$ )  $M$  is (was) in potentiality with respect to  $S_{po}$ .<sup>13</sup>

When conditions a–c are met,  $M$  can be said to be in incomplete actuality at  $t$  because, in virtue of being in  $S_i$ ,  $M$  is in actuality relative to  $S_{pr}$ , but still in potentiality with respect to the further actuality  $S_{po}$ . Of course  $S_{pr}$  need not be the state from which a given instance of motion starts, and  $S_{po}$  need not be the given motion's end-state, but at any time at which  $M$  can be said to be moved there will be states of this sort. If we let  $S_e$  be the end-state of a given instance of motion and  $S_b$  be its beginning-state, then we can say that, with respect to this instance of motion, when  $M$  is in  $S_b$  it is in complete potentiality with respect to  $S_e$ , and when it is in  $S_e$  it is in complete actuality with respect to  $S_e$  (though of course, on this analysis,  $M$  is being moved at neither  $S_b$  nor  $S_e$ ).<sup>14</sup>

Aquinas's observation premise will be true, then, just so long as there are things that satisfy these conditions, and his other claims about motion and moved things will be true just so long as they are true of these things.

With this characterization of *motus*, of what it means to say that something is moved (*movetur*), we are now in a position to

13. When  $S_{pr}$ ,  $S_i$ , and  $S_{po}$  are states involving qualities, the motion will be a case of alteration. When they involve quantities, it will be a case of increase or decrease. When they involve spatial location, it will be a case of local motion. Moreover, given this analysis we can see why coming to be and passing away fail to be cases of motion strictly speaking: cases of a thing's coming into, or going out of, existence are not cases in which that thing is in successive states.

14. This analysis exemplifies what Kretzmann has called the strong definition of motion in his "An Alleged Asymmetry between Rest and Motion: A Reply to Richard Sorabji's 'Aristotle on the Instant of Change,'" part of an unpublished exchange between Kretzmann and Sorabji in 1976. One could obtain the corresponding weak definition by disjoining rather than conjoining conditions b and c. Aquinas seems clearly committed to the strong definition.

take up premise 1 of the proof—the claim that everything that is moved (in the sense specified) is moved by something else. Three common sorts of objections have been raised against premise 1. First, it has been claimed that some cases of motion are cases in which what is moved is moved not by something else, but by itself. Cases of this sort (animal and plant motion, for instance) constitute counterexamples to the general principle; animals and plants are *self-movers*.<sup>15</sup> Second, it has been objected that Aquinas has not established even the weaker claim that everything that is moved is moved by *something*. Why can it not be the case that some things are simply in motion without being (or having been) moved by anything? Third, if the general principle is read as the claim that whatever is moved is *now* being moved by something else (as it seems it should, for reasons that will emerge), then cases of projectile motion—a croquet ball rolling through a hoop, for example—appear to be cases in which what is moved continues in motion *after* the causal activity of its mover.

Aquinas defends the general principle expressed in premise 1 in the passage from *ST* 1.2.3 that I quoted in the previous section, and that argument will provide replies to the first two sorts of objection. The third objection requires separate treatment; I take it up in the fourth section. The argument from *ST* 1.2.3 can be elaborated in light of Aquinas's analysis of motion and represented as follows:

- i. Whatever is being moved toward some state *S* is potentially in *S*.
- ii. Something can be brought from being potentially in *S* to being actually in *S* only by what is in actuality with respect to *S*.<sup>16</sup>
- ∴ iii. Whatever is being moved toward *S* is being brought to being actually in *S* by some being in actuality with respect to *S*. [i, ii]
- iv. To move (*movere*) is just to bring something from being potentially in some state to being actually in that state.
- ∴ v. Whatever moves (*movet*) something toward some state is in actuality with respect to that state. [ii, iv]

15. Kenny, *Five Ways*, pp. 13, 16, 17.

16. I intend "being in actuality with respect to *S*" to be broader than "being actually in *S*" in important ways that I will explain in section 3, below.

- ∴ vi. Whatever is being moved toward S is being moved by something that moves (*movet*) it toward S. [iii, v]<sup>17</sup>
- vii. No one thing can be in potentiality and in actuality in the same respect at the same time.
- ∴ viii. Whatever is being moved (*movetur*) toward S cannot be identical with what moves (*movet*) it toward S. [i, v, vii]
- ∴ ix. Whatever is being moved toward S is being moved by something else. [iii, vi, viii]<sup>18</sup>

Aside from the logical truth expressed in premise vii, the argument has only three premises. Two of them—i and iv—encapsulate elements of Aquinas’s analysis of motion; the third—premise ii—might be thought of as a sort of principle of sufficient reason for cases of motion. Though Aquinas’s analysis of motion does not by itself entail that moved things are passive recipients of motion, that analysis together with the principle of sufficient reason endorsed in this argument does entail it. Things that are being moved are in potentiality in some respect and in the process of having that potentiality actualized; but potentialities are actualized only *by something* actual in the relevant respect.<sup>19</sup> Similarly, a thing is properly said to move (*movere*) when it brings something from potentiality in some respect to actuality in that respect, and only what is in actuality in the relevant respect can do this.<sup>20</sup> So moved things, in virtue of being in poten-

17. Kenny has noted that Aquinas’s proof from motion diverges from Aristotle’s at this point. The claim expressed in premise vi is Aristotle’s conclusion in the *Physics*, but Aquinas goes on to argue that everything that is moved must be moved by something else. See Kenny, *Five Ways*, pp. 14–15; and *Physics* 8.4.254b25.

18. In SCG the argument is given as a supporting argument separate from the main proof: “No one thing is in potentiality and in actuality in the same respect at the same time. But everything that is moved [*movetur*], insofar as it is of this sort, is in potentiality, because motion [*motus*] is the actuality of a thing existing in potentiality, insofar as it is of this sort. But everything that moves [*movet*], insofar as it is of this sort, is in actuality, because a thing acts only insofar as it is in actuality. Therefore, nothing is a mover [*movens*] and a moved thing [*motum*] with respect to the same motion [*motus*]. And so nothing moves [*movet*] itself” (SCG 1.13). See also *In libros Physicorum* 8.10.

19. See *In libros Physicorum* 8.10: “It was established in book 3 that what is moved [*movetur*] is movable [*mobile*], i.e., is something existing in potentiality. . . . But that which moves [*movet*] is already in actuality, for what is in potentiality is brought to actuality only by what is in actuality—and this is a mover [*movens*].”

20. This claim also shows that as Aquinas uses the active voice of the verb in these contexts it has its transitive sense. That which moves, moves *something*.

tiality in the relevant respect, are passive recipients of motion from movers that are active in virtue of being in actuality in the relevant respect.

Hence, the analysis of motion that lies behind premises i and iv, together with the principle of sufficient reason expressed in ii, entails that whatever is being moved is being moved by *something*. The role of vii is to secure the conclusion that what is being moved and what moves it are distinct; that is, that whatever is being moved is being moved by *something else*. Given the analysis of motion, a moved thing must be in potentiality in the relevant respect and, given the principle of sufficient reason, what moves it must be in actuality in that respect. Hence, the moved thing must be distinct from what moves it; a moved thing cannot be a self-moved thing.

So the argument in support of premise 1, with the analysis of motion on which it relies, constitutes Aquinas's reply to the first two sorts of objections raised above. Suppose, with the first objector, that at *t* an animal is being moved (*movetur*) toward *S* and is being moved by itself and not by something else. On Aquinas's account, if at *t* it is moved toward *S*, the animal must be (at *t*) in potentiality with respect to *S*; and if at *t* it moves something (namely, itself) toward *S*, it must be (at *t*) in actuality with respect to *S*. So the animal that is moved and moves itself is in potentiality and actuality in the same respect at the same time, which is impossible. Hence, there cannot be a case of the sort imagined. Aquinas thinks that self-moving animals in fact have parts, one of which (the soul) is the mover and the others the moved things. So Aquinas would be justified in rejecting alleged counterexamples involving self-moving moved things.<sup>21</sup>

Kenny objects, however, that even if Aquinas can rule out the possibility that what is moved is moved by itself, it still does not follow that it is moved by something else.

If a thing cannot be moved by itself, it does not follow that it must be moved by something else. Why cannot it just be in motion, without *being moved* by anything, whether by itself or anything else? Does not the

21. But notice that this is an argument only against self-moving moved things. It shows only that something that is moved (*movetur*) cannot be the mover of itself. It does not show that animals, or rather animal souls, cannot be *unmoved* movers. But Aquinas need not rule out the possibility that animal souls are unmoved movers in order to defend premise 1, since it is a claim only about moved things.

argument need completing with a proof that whatever is in motion is being moved?<sup>22</sup>

Kenny directs this objection toward the general principle expressed in premise 1. Construed in this way, the objection misses the mark. According to Aquinas, whatever is moved is in potentiality, and whatever is in potentiality with respect to some state is brought to actuality only by what is in actuality with respect to that state. Something's being in motion entails that it is being moved. But perhaps Kenny's point can be reformulated so that it is not an objection to premise 1 but to Aquinas's principle of sufficient reason—premise ii of this subargument. We need, then, to look more closely at ii.

When directed toward premise ii—the claim that something can be brought from being in potentiality in some respect to being in actuality in that respect only by what is in actuality in that respect—Kenny's objection appears to ask for a defense of Aquinas's version of the principle of sufficient reason. As far as I can see, Aquinas has no argument to prove the principle. He undoubtedly thinks it self-evident; and if it needs defense, I cannot give it here. Nevertheless it is useful to see precisely to what version of the principle of sufficient reason Aquinas appeals and what role it plays in the proof from motion.

The principle stated in premise ii both asserts that certain sorts of phenomena require a cause (or explanation) and specifies the sort of cause (or explanation) that is required. Anything brought from potentiality to actuality with respect to state *S* must have a cause of its being brought from potentiality to actuality in that respect; the process of actualizing potentiality requires a cause. According to ii the sort of cause that can account for a phenomenon of this sort is one that is itself in actuality with respect to *S*. The actualizing of a potentiality requires explanation, and a sufficient explanation will cite the cause of the actualization, which must itself be in actuality in the relevant respect.

This version of the principle of sufficient reason is relatively weak. It does not require an explanation of every state whatever or even of every moving (*movere*). It requires an explanation only of changes

22. Kenny, *Five Ways*, pp. 18–19.

from potentiality with respect to some state to actuality with respect to that state.<sup>23</sup> The weaker the principle of sufficient reason on which an argument relies, the better; so it is a virtue of Aquinas's argument for premise 1 that it relies on a weak version of the principle. But that principle has work to do in support of other premises of the proof from *motus* as well and, as will emerge in section 6, it is doubtful that this weak version will bear all the weight imposed by a proof for God's existence. It is strong enough, however, to fulfill its role in support of premise 1. If we are willing to grant it, it seems to me that Aquinas's opening moves succeed: everything that is moved must be moved by something else.

Recent commentators, however, have offered reasons other than general worries about any such principle for thinking Aquinas's version of it false. Kenny, for instance, thinks that there are clear counterexamples to it. He has suggested taking Aquinas's principle as the claim that something can be brought from being potentially *F* to being actually *F* only by something that is actually *F*.<sup>24</sup> There certainly are cases of change in which what is actually *F* brings something else from being potentially *F* to being actually *F*. The oven's actually being 350 degrees, for example, brings the cake from being 350 degrees merely in potentiality to being actually 350 degrees. But the principle does not fit other cases: a farmer who fattens oxen need not himself be fat, and murders are not committed by dead men.<sup>25</sup>

Aquinas, however, has two reasons for rejecting these putative counterexamples. First, he denies that a cause must have the same actuality or form as its effect. On his view there are two ways in which a cause and its effect might fail to have the same actuality. First, the effect might have the same nature as the cause but have it to a lesser degree. The heat acquired by the cake in the oven is of the same nature as the heat possessed by the oven, though the oven may be at

23. Rowe has distinguished between two versions of the principle of sufficient reason. A strong version maintains that the existence of anything whatsoever requires an explanation; a weaker version maintains that only the coming into existence of things needs explanation (see Rowe, *Cosmological Argument*, chapter 2). The principle at work in premise ii is neither of these, since Aquinas is concerned about potentialities being brought to actuality rather than about things coming into existence, but it is in the same spirit as the second, weaker version.

24. Kenny, *Five Ways*, p. 21.

25. The counterexamples are Kenny's in *Five Ways*, pp. 21–22.

350 degrees and the cake only at 300 degrees.<sup>26</sup> Second, the effect might have, not the same nature as its cause, but a nature with less actuality. Aquinas calls causes that have a different nature from their effects “equivocal” causes.<sup>27</sup> God is an equivocal cause of the things he makes. God is the cause of inanimate objects but is not himself an inanimate object; God’s nature is such that he has greater actuality than inanimate objects.<sup>28</sup>

Now, if we draw a distinction between being in actuality with respect to *S* and being actually in *S*, we can understand premise ii in such a way as to leave room for the sorts of cases Aquinas has in mind. We might say that a thing is in actuality with respect to *S* if it is either actually in *S* or in a state *S*\* where *S*\* is a state of greater actuality than *S*. Thus, if we let *C* be the cause of some object’s coming to be in state *S* (where *S* admits of degrees), then *C* can be in actuality with respect to *S* to degree *n* in at least three ways: either by being actually in *S* to degree *n*, by being actually in *S* to some degree greater than *n*, or by being in some state *S*\* with greater actuality than *S*.<sup>29</sup>

26. In light of cases of this sort, Kenny suggests altering the principle to “A can make B become F-er, only if A is itself F-er than B” (*Five Ways*, p. 22).

27. “Effects that fall short of their causes do not agree with them in name and nature. Yet some likeness must be found between them since it belongs to the nature of action that an agent produces its like (since each thing acts according as it is in actuality). Therefore, the form of an effect is certainly found in some measure in a transcending cause. . . . For this reason the cause is called an equivocal cause” (SCG 1.29). See also *ST* 1.4.3.

28. This requires us to understand Aquinas’s notion of a hierarchy of natures, which I cannot develop here.

29. Patricia Matthews has objected that once one grants my distinction between a thing’s being in actuality with respect to some state and its being actually in that state, premise vii no longer seems to be a logical truth and in fact seems false. On that distinction, a thing that is not actually in *S* might be in actuality with respect to *S* and potentially in *S* at the same time. At time *t* an oven might be at 350 degrees, and so in actuality with respect to being 300 degrees and also in potentiality with respect to being 300 degrees (since the oven can cool to 300 degrees). There seem to me to be two different ways of replying to this objection. First, one might restrict the concepts of actuality and potentiality in such a way that one can say that at *t*, *x* is in potentiality with respect to *S* only if it is the case that *x* is not in *S* at *t* and can come to be in *S* after *t* and that *x* can come to be in *S* only by virtue of acquiring real or positive properties. On this line, the oven at 350 degrees could not be said to be in potentiality with respect to being 300 degrees because the oven can come to be at 300 degrees only by virtue of losing heat or energy. (The oven that is cooling, then, is not being moved



So premise ii must be read in light of Aquinas's doctrine of equivocal causes. Second, its application must be restricted to cases of immediate causation. Aquinas can reply to the case of the fattened oxen, for example, by denying that the farmer is the proper and immediate cause of the oxen's growing fat; the nutritive faculties of an ox's soul are the cause of its growing fat—an animal's soul has sufficient actuality to cause (equivocally) certain effects in the animal's body. (Of course the farmer is a remote cause by virtue of his providing hay for his oxen, for example.) Similarly, a murderer is not the proper and immediate cause of his victim's death, though he may be the immediate cause of an alteration in the body of the victim, an alteration he has sufficient actuality to bring about.<sup>30</sup>

Cases of local motion, however, are more difficult to accommodate. Premise ii appears to commit Aquinas to holding that something that is being moved from position *A* to position *B* (and so is in potentiality with respect to being at position *B*) must be moved by something else that is in actuality with respect to position *B*, i.e., that is actually at position *B*. But this seems clearly wrong. This objection to premise ii is closely related to the third objection to premise 1 that I raised in the second section, so I will discuss them together.

The argument for premise 1 that was laid out in the previous section requires us to take the premise as the claim that whatever is being moved is (now) being moved by something else. But cases of projectile motion seem to be cases of things that need not be moved by something else during the whole interval in which they are in motion. Something may be required initially to impart motion to a projectile, but after having been moved initially the projectile con-

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[*moveri*] though it is moving [*movere*]; the surrounding environment is being moved.) Second, one might allow that the oven that is cooling from 350 to 300 degrees is being moved, but maintain that what counts as being in actuality with respect to some state depends on the direction of the motion toward that state. When the state of being at 300 degrees is the end-state of a process of cooling, things that are 300 degrees or cooler will count as being in actuality with respect to that state; when that state is the end-state of a process of heating, things that are 300 degrees or hotter will count as being in actuality with respect to it. On this line, the oven that is cooling will not count as being in actuality with respect to being at 300 degrees.

30. I am grateful to Alfred Freddoso for suggestions along these lines.

tinues in motion without continually being moved. So projectile motion constitutes a counterexample to premise 1.

Aquinas apparently mistakenly believed that the medium through which a projectile moves—for example, the air through which a ball is thrown—continues to move it.<sup>31</sup> This belief would explain why he did not see projectile motion as a difficulty for premise 1 (the air continues to move the ball after it has been released by the thrower) or local motion in general as a difficulty for premise ii (the medium stretches all the way to the end-point of the motion, and so is actually at the end-point). But of course, this explanation of local and projectile motion essentially depends on archaic physical theory.

I think these are genuine counterexamples to the respective principles, understood as Aquinas understood them, but it seems to me quite easy nevertheless to salvage Aquinas's argument. We can simply restrict premises 1 and 2 of the proof to a narrower range of cases than Aquinas intended, a range that excludes cases of local motion (and projectile motion as a subclass of local motion). The observation premise, then, would appeal not to *motus* generally but only to certain sorts of *motus*; premise 1 would claim that things that are now being moved in these particular ways are now being moved by something else. By restricting the range of the observation premise and the principle expressed in premise 1 we would be sacrificing generality. Still, provided there are *some* members of the domain to which we appeal, premises 1 and 2 will be true and the argument can proceed. Aquinas was misled by a false physical theory to overstate his case, but it seems easy enough to restrict his claim in relevant respects.

In fact, there are good reasons, ones that Aquinas acknowledges, for distinguishing local motion, on the one hand, from alteration and increase and decrease, on the other. Once that distinction is made we will have grounds for restricting the proof from motion to the latter sorts of *motus*, and we will be able to see how the principle expressed by Aquinas's premise 1 can be brought into line with modern physics.

Local motion involves change in place, and a thing subject to local motion changes in virtue of changes in characteristics that belong to the category of place. Characteristics in the category of place, however, characterize their subjects only extrinsically; that is, a subject is characterized by a predicate in the category of place in virtue of its

31. See Kenny, *Five Ways*, p. 16.

spatial location, and its spatial location is wholly extrinsic to the subject considered in itself.<sup>32</sup> Alteration and increase and decrease, on the other hand, involve changes grounded in characteristics from the categories of quality and quantity (respectively), and these sorts of characteristics characterize their subjects intrinsically.<sup>33</sup> So alteration and increase and decrease require an ontological ground in the subject considered in itself, whereas local motion does not. This can serve as the basis for a distinction between the former two species of motion and the latter. I will call instances of motion grounded in changes of intrinsic characteristics "*motion\**" (*motus\**).<sup>34</sup> Motion\* is a species of motion but not a lowest species, since it is the genus for alteration and increase and decrease. By restricting the proof from motion to motion\*, we will be able to rule out counterexamples involving local and projectile motion.

Having excluded local motion from the scope of the argument, however, it is worth noticing that cases involving projectile motion typically do involve elements that are genuine instances of motion\*. When I throw a ball through the air, my arm imparts momentum to the ball. The ball's acquisition of momentum is a case of motion\* (provided the acquisition is a process satisfying conditions a–c of the analysis of motion) since it involves a change in the ball's intrinsic characteristics.<sup>35</sup> Moreover, when I release the ball its momentum is

32. As Alfred Freddoso has pointed out to me, not all scholastic philosophers were in agreement on this point.

33. Aquinas distinguishes between types of change based on an intrinsic change (alteration, increase and decrease, and generation and corruption) and types of change based on extrinsic change (local motion) in his commentary on Aristotle's *Metaphysics* 12.7 (Cathala-Spiazzi no. 2530). Following Aristotle, he takes local motion to be the primary sort of change precisely because a thing that changes only in place does not suffer intrinsic change. (I take it that local motion is the primary sort of change because it requires the least change.) For more detailed discussion of the distinction between intrinsic and extrinsic characteristics and intrinsic and extrinsic change, see "The Metaphysics of Goodness and the Doctrine of the Transcendentals," in *Being and Goodness: The Concept of the Good in Metaphysics and Philosophical Theology* (Ithaca: Cornell University Press, 1991), pp. 31–55.

34. In terms of the analysis of motion in section 1 above, we can state this restriction as a restriction to cases of motion satisfying conditions a–c in which the states in question ( $S_{pr}$ ,  $S_i$ , and  $S_{po}$ ) are either qualitative or quantitative states of  $M$ .

35. Presumably an adherent of medieval impetus theory, and perhaps Aquinas, could accept an account along these lines.

gradually reduced by the friction of the air through which it travels, and that gradual change in the ball's momentum might also be a case of motion\*.<sup>36</sup> The observation premise of the proof from motion\*, then, might appeal to the ball's acquisition or loss of momentum, but not to the ball's local motion, as a starting point for the proof.

So the critics are right to point out that some of the grounds on which Aquinas holds premises 1 and ii do not support them, but they are wrong to suppose that these principles are thereby undermined. In the rest of this paper I will leave local motion out of consideration and assume that any objections based on features peculiar to it are irrelevant. As long as there are some cases of *motus\** to which Aquinas's analysis applies—the fire heating the water in the kettle, for instance—the argument can proceed. (From now on when I use the terms “motion” and “being moved,” I understand them as restricted to what I have just now been calling motion\*.)

Aquinas's denial that there can be an infinite series of moved movers—premise 8—is the other premise besides 1 that Aquinas argues for in some detail and that commentators have found most objectionable. In the statement of the first way in *ST* Aquinas says:

But this [series of moved movers] cannot proceed to infinity because then there would be no primary mover [*primum movens*]. Consequently, there would be no other mover [*movens*] either, because secondary movers [*moventia secunda*] move [*movent*] only in virtue of the fact that they are moved [*sunt mota*] by a primary mover. For example, a stick moves [*movet*] only in virtue of the fact that it is moved [*est motus*] by a hand. (*ST* 1.2.3)

It has been objected that this argument is fallacious since it does not follow from the denial of a primary (or first) mover in a series that no other things in the series can move or be moved. Of course, if one denies that there is a first mover in a *finite* series of movers, the motion cannot get started, as it were, and any potential secondary movers will remain merely potential movers. One way of denying that there is a first mover, however, is by maintaining that the series in question is infinite, in which case there will be no first mover, but an infinite number of movers nevertheless. Aquinas is not entitled to assume that

36. But see note 29, above, for a reason for denying that the loss of momentum is a case of motion\*.

the series in question is finite. Hence the argument either begs the question or turns on an equivocation regarding "denying that there is a first mover."<sup>37</sup>

I think that this objection is misguided. Aquinas cannot intend the argument to rule out the possibility of an infinite series of causes or movers of just any sort, since he thinks that certain sorts of infinite series are at least possible. He admits, for example, that an infinite line of human ancestors extending back in time is at least a possibility. What sort of infinite regress, then, is Aquinas's argument supposed to block?

In *ST* Aquinas distinguishes between causal series ordered *per se* and causal series ordered *per accidens*, and it is clear that he means to claim that an infinite series is impossible only in series ordered *per se*:<sup>38</sup>

It must be said that as regards efficient causes it is impossible to go on *ad infinitum per se*. For example, if causes that are required *per se* for some effect were multiplied *ad infinitum*, such as if a stone were moved by a stick, the stick by a hand, and so on *ad infinitum*. But it is not thought to be impossible to go on *ad infinitum* in the case of *per accidens* efficient causes. For example, if each of the causes that are multiplied *ad infinitum* possesses an order with respect to [only] one [other] cause, their multiplication is *per accidens*. The smith, for example, works by means of many hammers *per accidens* because one after another breaks. Therefore, it is accidental to this hammer that it works after the action of another hammer. Similarly, it is accidental to this man, insofar as he generates another, that he has been generated by another; for he generates insofar as he is a man and not insofar as he is the son of another man. . . . Thus, it is

37. This objection has been raised or discussed by Paul Edwards, "The Cosmological Argument," *The Rationalist Annual* 1959, reprinted in *Readings in Philosophy of Religion*, edited by Baruch Brody (Englewood Cliffs, N.J.: Prentice-Hall, 1974), pp. 71–83; C. J. F. Williams, "Hic autem non est procedere in infinitum," *Mind* 69 (1960): 403–405; Patterson Brown, "Infinite Causal Regression," *The Philosophical Review* 75 (1966): 510–525; Kenny, *Five Ways*, p. 26; and Rowe, *Cosmological Argument*, pp. 18–37.

38. Commentators who have recognized that Aquinas's argument against an infinite causal regress depends on this distinction have appealed to Scotus for an explicit account of the distinction. See, for example, Brown, "Infinite Causal Regression," pp. 218–227; and, following him, R. G. Wengert, "The Logic of Essentially Ordered Causes," *Notre Dame Journal of Formal Logic* 12 (1971): 406–422; as well as Rowe, *Cosmological Argument*, pp. 23–29. It seems to me, however, that there is plenty of evidence in Aquinas for constructing such an account, as will emerge.

not impossible that a man be generated by [another] man *ad infinitum*. But it would be impossible if the generation of this man depended on that man and on an elementary body and on the sun and so on *ad infinitum*. (ST 1.46.2.ad 7)

In order to evaluate premise 8, then, we will need to be clear about the distinction between these two kinds of causal series.

In this passage and in many other places, Aquinas takes over Aristotle's example of a man's being generated by a man and by the sun. The example has led some commentators to suppose that the distinction between two sorts of causal series rests on ancient astrology, according to which the heavenly bodies are causes of events in the sublunary world.<sup>39</sup> But the distinction seems to me not to depend crucially on astrology and to be defensible apart from such examples.

Aquinas draws the distinction in different ways in different passages. In the passage quoted just above, the distinction is between causal series in which prior causes are ordered to only one other posterior cause (or effect) and those in which the prior causes are ordered to all the posterior causes (and effects). Imagine the causal series *D-causes-C-causes-B-causes-A*. In a series of this sort *D* is ordered to *C*, *C* is ordered to *B*, and *B* is ordered to *A*. Now, Aquinas suggests that causal series ordered *per se* are ones in which some prior cause is ordered to all the other causes (and effects) posterior to it. Thus, if our imagined causal series is ordered *per se*, it will be the case, not only that *D* causes *C*, *C* causes *B*, and *B* causes *A*, but also that *D* causes *B* and *D* causes *A*. Consider a case in which a fire heats a kettle, which in turn heats the water contained in it.<sup>40</sup> In this case the fire moves (heats) the kettle and also the water (by means of the kettle), and so the fire is ordered to both the kettle and the water.

Causal series ordered *per accidens*, on the other hand, are such that each cause is ordered to *only* one other posterior cause (or effect). Thus, if our causal series is such that *D* causes *C*, *C* causes *B*, and *B* causes *A*, but it is not the case that *D* causes *B* and *D* causes *A*, then it

39. See Kenny, *Five Ways*, pp. 43–44; J. L. Mackie repeats Kenny's appraisal in *The Miracle of Theism* (Oxford: Clarendon Press, 1982), p. 87.

40. Aquinas's own example—a hand moving a stick, which moves a stone—involves local motion. For the reasons given in the fourth section, I am restricting the discussion to cases of alteration and increase and decrease. I think my example involving alteration captures what Aquinas takes to be essential in his.

will be a series in which each cause is ordered to only one other cause (or effect); hence, it will be a causal series ordered *per accidens*. Aquinas offers a genealogical series as an example of a causal series ordered *per accidens*. He thinks that if Abraham causes Isaac, who causes Jacob, it is not the case that Abraham causes Jacob; Abraham is ordered to only one other cause (or effect) in the series—to Isaac.

Of course there is at least some sense in which Abraham can be said to be one (if not the only) cause of Jacob, as well as of Isaac, so it might seem as if Aquinas's distinction collapses.<sup>41</sup> But Aquinas's characterization of the distinction in other passages helps to clarify his view. Elsewhere he characterizes the distinction as being between causal series in which the posterior causes exercise their causal power solely in virtue of the power of a prior cause (those ordered *per se*) and those in which the posterior causes exercise their own proper causal power (those ordered *per accidens*).<sup>42</sup> One might think of the kettle that heats the water as being under the (causal) control of the fire that moves it; it is not exercising a causal power it has independently of the fire. Isaac, on the other hand, possesses his own causal power and can exercise it of his own accord. He is an independently existing human

41. For commentators who have taken Aquinas's characterization of causal series ordered *per se* to depend on taking prior causes as antecedent necessary conditions, see Kenny, *Five Ways*, p. 43; and Anthony Flew, *God and Philosophy* (New York: Delta Books, 1967), paragraph 4.26. I claim that we might be willing to say that Abraham causes Jacob since Abraham's causal activity is a necessary condition of Isaac's causing Jacob. Brown, however, argues in support of the intransitivity of causal series ordered *per accidens* by claiming that we cannot say that Abraham begets Jacob, but only that Abraham begets Isaac; thus, "begetting" is an intransitive causal relation ("Infinite Causal Regression," pp. 226–227). But Brown's argument depends on the (irrelevant) fact that some ways of describing a particular causal relation may yield intransitivity, while other ways of describing the same causal relation may yield transitivity. For example, suppose my hand is pushing a stick to which is attached a string with a stone tied on the other end. When I push the stick, the stone is pulled along by the string that trails along behind the end of the stick. Aquinas would clearly take the case I have just described as a causal series ordered *per se*: the hand moves the stick and also moves the string and the stone. Hence, the causal relation (described as "moves") is transitive. But if I say not that the hand *moves* the stick, but that it *pushes* the stick, the relation is no longer transitive because the hand does not push the string or the stone—which are being pulled by the stick.

42. For example, "secondary movers move only in virtue of the fact that they are moved by a primary mover" (ST 1.2.3); "a secondary mover cannot move apart from a primary [mover]" (*In libros Physicorum* 8.9).

being possessing his own causal powers, and he begets Jacob by exercising those causal powers.

Aquinas often characterizes the secondary causes in causal series ordered *per se* as instruments, as in this passage from his commentary on the *Physics*.

Further, [Aristotle] claimed above that the last mover does not move without the primary [mover]. . . . In this passage he says instead that it is impossible that that by means of which something moves [something else], as by an instrument, move anything without the principal mover which moved it; for example, the stick without the hand. (*In libros Physicorum* 8.9)

He tells us what he means by “instrument” in the following passage:

Now a thing works for the production of an effect in two ways. In one way, as a *per se* agent, where that which acts by means of some form inhering in it in the manner of a complete nature (whether it has that form from itself or from something else, whether naturally or violently) is said to act *per se*. . . . In another way, a thing is said to work for the production of an effect instrumentally, where that thing does not work for the production of the effect by means of a form inhering in it, but only insofar as it is moved [*motum*] by a *per se* agent.

For it is the nature [*ratio*] of an instrument insofar as it is an instrument that, having been moved, it moves [*moveat motum*]. Thus, the motion [*motus*] by which [the instrument] is moved by the principal agent is related to the instrument as the complete form is related to the *per se* agent. (*De veritate* 27.4)

In some causal series, then, the posterior causes are mere instruments by which a prior cause produces an effect. In such series the causal power of a prior cause—say *D*—is carried all the way through the other, posterior causes in the series to the final effect—*A*—so that one can say that *D* (*per se* and immediately) causes *A*. And, although each of the posterior causes can be said to be a cause, none exerts a causal power of its own but merely transmits the causal power of the prior cause. Because it is *D*'s causal power that causes *A*, the causal series is ordered *per se*; one and the same causal power is at work through all the links in the series.<sup>43</sup> So when Aquinas says that sec-

43. In his commentary on the *Liber de causis*, Aquinas says that a causal series ordered *per se* is one in which the intention (*intentio*) of the primary cause is referred (*respicit*) all the way to the last effect through all the intermediate causes. Though he uses the word “intention” in this description, he seems not to mean that the primary



ondary causes (in causal series ordered *per se*) act only in virtue of the power of a primary cause, he does not mean only that the activity of a prior cause is some sort of necessary condition of the activity of the posterior causes. He means further that the posterior causes are exercising no independent causal power in the causing of the relevant effect.

In other causal series, by contrast, a different causal power is at work at each link in the series. Abraham's causal power is at work in the production of Isaac, but it is Isaac's causal power and not Abraham's that is at work in the production of Jacob. Causal series of this latter sort are ordered *per accidens* because there is no single causal power uniting the series. Isaac is not the instrument by which Abraham causes Jacob, but an independent cause with independent causal power.<sup>44</sup>

Given that causal series ordered *per se* are series in which a primary cause causes some effect by means of purely instrumental secondary causes, and given Aquinas's conception of purely instrumental causes, we can see why Aquinas claims that causal series ordered *per se* cannot go on to infinity. The instrumental secondary causes in series of this sort exercise no independent causal power, and so they cannot in themselves adequately account for the effect.

It might seem, however, that once all this is granted, our paradigm case of a causal series ordered *per se* (the fire heating the kettle, which

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causes in such series must be beings capable of having intentions and that they must in fact intend the last effect in the series. He holds rather that the causal power of the primary cause is directed towards the final effect, whether by intention or nature or whatever.

44. Brown has focused on the transitivity of the causal relation as the key to identifying and understanding causal series ordered *per se*, but I think transitivity is not a sufficient condition of a causal series's being ordered *per se*. A man who lights a match which lights a fuse which ignites explosives which demolish a building can himself be said to cause the demolition of the building, but this is not a causal series ordered *per se* on Aquinas's account. Aquinas's view seems to be that a causal series ordered *per se* is a series in which the only independent causal power at work is the causal power of the primary cause. In the case of the hand moving the stick that moves the stone, the stick exercises no independent power; it is merely an instrument or a vehicle through which the hand exercises its causal power. In the case of the demolition of the building, however, the match, the fuse, and the explosives exercise their own causal powers. The match, the fuse, and the explosives, of course, would not exercise their causal powers were it not for the man's causality, but they are not merely instruments for his causal power.

heats the water) fails to satisfy the conditions for being a causal series of that sort. In our paradigm case the kettle appears not to be a purely instrumental cause since, according to the passage from *De veritate*, an instrumental cause causes not by means of a form inhering in it but only insofar as it is moved by an agent that acts *per se*. But the kettle has a temperature of its own (even if it was caused by the fire to have that specific temperature), and so it has a form of heat inhering in it and heats the water by means of that form. It seems, then, that the kettle in the paradigm case is not a purely instrumental cause, and the causal series described in that case seems not to be ordered *per se*. Indeed, we might wonder whether there are any genuine examples of causal series ordered *per se*.

If we look more closely at the paradigm case, keeping in mind Aquinas's analysis of motion, we can see how Aquinas's account of secondary, instrumental causes avoids this difficulty. Suppose that the water in the kettle is being brought to a boil by the fire, and suppose that  $S_e$  designates that end-state. Given that the case is an instance of a causal series ordered *per se*, the water (the last effect) is being moved toward  $S_e$ , and so it is in potentiality with respect to  $S_e$ . The kettle (a secondary, instrumental cause) is moving the water, but it also is being moved toward  $S_e$ , and so is in potentiality with respect to  $S_e$ . The fire (the primary cause) is only moving and is not also being moved toward  $S_e$ , and so it is in actuality with respect to  $S_e$ . Now, so long as the kettle is being moved toward  $S_e$  (even if it also moves the water), it cannot be the explanation of the water's being moved toward  $S_e$ . This is because only what is in actuality with respect to  $S_e$  can bring the water from being potentially in  $S_e$  to being actually in  $S_e$ , and *ex hypothesi* the kettle is not in actuality with respect to  $S_e$ . If it is in fact true that the water is being moved to  $S_e$ , and if Aquinas's principle of sufficient reason is true, then only the fire, which is in actuality with respect to  $S_e$ , can account for the water's being moved in this way.

To see this more clearly, imagine that at time  $t$  during the process of the water's being heated continuously from 0 to 100 degrees the kettle is at 50 degrees. At  $t$  the water will have a temperature less than or equal to that of the kettle. The kettle and its states at  $t$  explain the water's having (or having come to have) the temperature it does at  $t$ . They can explain this because the kettle is in actuality with respect to the relevant state of the water at  $t$ . But the kettle and its states at  $t$

cannot account for its being the case that the water is being heated to 100 degrees. The kettle's being at 50 degrees is not the cause of the fact that the water at  $t$  is ordered toward that further actuality. Only the fire, which at  $t$  is in actuality with respect to the further actuality, being at 100 degrees, can account for that fact.

So even if the kettle in our paradigm case possesses an inhering form (its temperature), and moves the water by means of that form, it is not in virtue of the kettle and its inhering forms that the water is being moved to 100 degrees. What is essential to the kettle's being an instrumental cause in this particular case of motion is its lacking, at some time during the interval of motion, the form or actuality necessary to bring the motion to its end-state. The kettle is a mover that is itself being moved toward the end-state. So the kettle, like the water, is in potentiality with respect to the end-state, and hence lacks the actuality required of an explanation of the water's being moved to that end-state.<sup>45</sup> This is what Aquinas means, I think, when he says that an instrumental cause "does not work for the production of the effect by means of a form inhering in it, but only insofar as it is moved by a *per se* agent" (*De veritate* 27.4).<sup>46</sup>

It is clear, then, that Aquinas thinks that causal series in which at least one effect is something that is being moved (*movetur*) are causal series ordered *per se*.<sup>47</sup> The observation premise 2 is meant to call our

45. When the kettle itself reaches 100 degrees it will no longer be the case that it is being moved toward that state; it will have already been moved to it. So it will be in actuality in the respect necessary for bringing the water to that temperature.

46. In *ST* 1.45.5 Aquinas makes it clear that instrumental secondary causes may possess an inhering form that gives them certain causal powers. These powers may play a role in the production of the final effect but are not of the right sort to account for its realization. The example there is of a saw that cuts wood by virtue of its own form, thereby producing the form of a bench, which is nevertheless the proper effect of the craftsman, who is the primary cause. I am grateful to Alfred Freddoso for pointing this passage out to me.

47. "One finds three things in [cases of] motion [*motu*]: (1) the movable thing that is moved [*movetur*], (2) something else that is the mover [*movens*]; and (3) an instrument by which the mover moves [*move*]" (*In libros Physicorum*, 8.9). See also *In libros Metaphysicorum* 12.6 (Cathala-Spiazzi no. 2517). In *In libros Physicorum* 8.9, and in the passage from *ST* 1.46.2 ad 7 that I quoted above, Aquinas points out that in a given series ordered *per se* there might be no secondary causes or an infinite number of secondary causes. In either case there must be a primary cause on the causal power of which each secondary cause (if there are any) depends.

attention to an effect in a causal series ordered *per se*, and the two main theoretical premises 1 and 8 are meant (respectively) to show that there must be at least one mover in a series of this sort and that not all movers in such a series can be secondary, purely instrumental movers.

It is important to see that this argument against an infinite regress differs from two superficially similar kinds of argument that appear in cosmological proofs. One sort of argument claims that a secondary cause can serve as a sufficient explanation of a thing's being moved, but that the motion of the secondary cause itself must be explained. Thus, in one's explanation of the first phenomenon one introduces a second phenomenon that needs explaining. Hence, even though the first case is explained, we are left with something else to explain. If there is no primary cause, there will be an infinite number of things to explain; and where there is no end to the explaining, there is no adequate explanation. The second sort of argument claims that there may be an infinite series of secondary, dependent causes, each explaining the next, but that one will still need an explanation of the series as a whole, and any such explanation must appeal to some primary cause outside the series itself.<sup>48</sup>

Aquinas's argument against an infinite regress as I have just sketched it is of neither of these kinds. He thinks that citing a secondary mover is not an adequate explanation of some thing's being moved. It is not that an explanation of this sort explains, but at the cost of introducing something *further* to be explained; it is that it does not explain. One must find a primary mover in order to explain some thing's being moved.

It seems to me, then, that the most common objections to premises 1 and 8 of Aquinas's proof from motion can be met. There is, however, another problem for the proof. Assuming that Aquinas can block a regress in the case of movers and things moved, why must the primary mover be not just unmoved, but unmovable? Aquinas thinks that if the mover of some moved thing is not itself moved, it is an unmovable mover (premises 5 and 7). What justification does he have for supposing that an unmoved mover is unmovable?

The sort of causal series he has in mind in the proof from mo-

48. Blair mistakenly takes Aquinas's first way to be an argument of this sort ("Another Look," pp. 303–304).

tion has as a member something, *M*, that is being moved. *M*'s going from being in potentiality with respect to some state *S* to being in actuality with respect to *S* needs to be explained by some primary mover, *P*. All that is required of *P* is that it be in actuality with respect to *S*; *P*'s being in actuality with respect to *S* is what makes *P* the primary mover in this causal series ordered *per se*. So in order to count as a primary mover, as the stopping point in a causal series ordered *per se*, *P* must be unmoved (because it is in actuality) in the relevant respect. But it does not follow from this that *P* must be unmoved (and hence in actuality) in *all* respects. If *P* were in actuality in all respects, *P* would be absolutely unmoved and unmovable, but the fact that *P* is unmoved with respect to some state *S* does not entail that *P* is unmovable.<sup>49</sup>

Given that Aquinas's argument so far has shown only that there must be some primary mover that is in actuality in the respect relevant to the particular case of motion at hand, it seems likely that there will be very many relatively uninteresting primary movers. The fire in our paradigm case seems to be a suitable primary mover, animals (or their souls) might be unmoved movers, and some of Aquinas's own examples of causal series ordered *per se* apparently have human beings filling the role of primary mover, at least as Aquinas describes them.<sup>50</sup> We might call fire, animals, human beings, and other natural unmoved movers (if there are any) mundane primary movers. The problem, then, is that the proof from motion gives us no reason to suppose there are any primary movers other than mundane primary movers.<sup>51</sup>

In at least some contexts, Aquinas seems to be aware of the problem of mundane primary movers. In stating the second of the two "Aristotelian" proofs in *SCG*, he takes up the possibility that animals or human beings are unmoved movers. The second "Aristotelian" proof proceeds in two stages. Aquinas argues first that there is a primary mover, and then that this mover is absolutely unmovable and separate. Aquinas begins the second stage of the argument: "But

49. Kenny raises an objection of this sort in *Five Ways*, p. 23.

50. See *In libros Physicorum* 8.9: "Therefore, the man of himself is the primary mover, and he moves the stone through several intermediaries."

51. See Blair, "Another Look," pp. 310–311.

52. See *In libros Physicorum* 8.12, where Aquinas makes the same claim about Aristotle's strategy.

Aristotle proceeds further . . . because from the conclusion that there is a primary mover that is not moved [*non movetur*] by anything exterior to it it does not follow that it is completely unmovable" (SCG 1.13.21).<sup>52</sup> He repeats the arguments from the first "Aristotelian" proof against the position that the primary mover is a self-moved moved thing and then offers four arguments to show that the primary mover must be absolutely unmovable. The first three of these four arguments closely follow the text of *Physics* 8 (258b23 ff.);<sup>53</sup> the last is drawn from *Metaphysics* 12.

The general strategy of the first three arguments is to show that the existence of primary movers that are movable in some respect (mundane primary movers) entails the existence of a primary mover movable in no respect. The first of these arguments, for example, argues that mundane primary movers are corruptible (or contingent), and so must be explained by appeal to something incorruptible, which will be an unmovable mover.<sup>54</sup> The third argues that there must be some eternal (beginningless) mover, since motion is eternal, but no mundane primary mover can be an eternal mover (each mundane primary mover's moving begins). Mundane movers cannot be eternal movers because even if they are not moved *per se* and so do not depend on another mover for the very causal power by which they move, they are moved *per accidens* and so depend on other things in order to move, though not for the very causal power by which they move. Animals that are primary movers with respect to some local motion, for instance, are moved *per accidens* in that they depend on nutritive processes such as digestion and breathing in order to initiate local motion.<sup>55</sup>

I cannot evaluate these arguments from contingency here. I want only to point out that they are themselves cosmological proofs essentially *different* from the proof from motion. Their starting points are the existence of corruptible beings of a certain sort or the beginninglessness of motion, not the fact that some particular thing—the sun in the sky or the log on the fire—is moved. It appears that the

53. See *In libros Physicorum* 8.12–13.

54. SCG 1.13.24; see *In libros Physicorum* 8.12. Compare *In libros Metaphysicorum* 12.6 (Cathala-Spiazzi no. 2501).

55. SCG 1.13.26; see *In libros Physicorum* 8.13. In *In libros Metaphysicorum* 12.5 (Cathala-Spiazzi no. 2494), Aquinas connects the argument from corruptibility with the argument from the eternity of motion.

proof starting from an instance of *motus* and relying on the weak version of the principle of sufficient reason I have discussed can get us only as far as mundane primary movers. The proof for an absolutely unmovable mover must take a different phenomenon as its starting point and will require a different version of the principle of sufficient reason.<sup>56</sup> If these arguments from contingency are the only bridges Aquinas has from mundane primary movers to an unmovable primary mover, then the proof from motion must contain another cosmological argument—perhaps the third way—as an integral part. These other cosmological arguments might stand on their own, but the proof from motion is invalid without one of them. Of course, this is not to say that the proof from motion fails; it is just to say that it is parasitic on another version of the cosmological argument.

Of the four arguments for an absolutely unmovable mover that are offered in SCG, however, the last suggests another argument that might be construed as an attempt to bridge the gap between mundane primary movers and the unmovable primary mover. Following Aristotle, Aquinas takes animals and human beings to be composed of an unmoved moving part, the soul, and a moved part, the body. Aquinas denies, however, that this unmoved moving part—the soul—is absolutely unmovable:

For since every mover [*movens*] is itself moved [*moveatur*] by appetite, it must be that the mover [*motor*] that is a part of what moves itself moves on account of appetite for some appetible object that is superior to it in moving [*in movendo*]. For what has an appetite [*appetens*] is a kind of moved mover [*movens motum*], but what is appetible is an altogether unmoved mover [*movens omnino non motum*]. Therefore, there must be a

56. Salamucha has pointed out that the second “Aristotelian” proof in SCG is linked with the proof from the contingency of the world. But he claims that it is for this reason that Aquinas found it unsatisfactory and abandoned it in favor of the third way when he wrote *ST*. See J. Salamucha, “The Proof *Ex Motu* for the Existence of God,” *New Scholasticism* 32 (1958), reprinted in *Aquinas: A Collection of Critical Essays*, edited by Anthony Kenny (New York: Anchor Books, 1969), reprint ed. (Notre Dame: University of Notre Dame Press, 1976), pp. 175–213, p. 117. But I see no evidence that Aquinas found it unsatisfactory. His statement, “But two [objections] seem to count against the arguments given above,” does not, as Salamucha supposes, indicate his dissatisfaction with the second proof. It is merely a way of raising possible objections that he goes on to rebut. On the link between the proof from motion and the proof from contingency, see section 7, below.

primary, separate, altogether unmovable mover [*primum motorem separatam omnino immobilem*], which is God. (SCG 1.13.28)<sup>57</sup>

This argument purports to show that souls cannot be absolutely unmovable movers: souls are moved by the objects of their appetites. If there is an absolutely unmovable mover, it cannot be a soul, but must be an appetible object. But must there be an absolutely unmovable mover?

Aquinas might be suggesting the following line of reasoning. A soul cannot after all be a primary mover in a causal series ordered *per se*, because it moves with respect to some state *S* only by virtue of some appetible object. For example, the hand would not be using the stick as a lever to pry the stone out of the field if the farmer's soul were not moving it; the farmer would not be willing that the stone be moved from his field, however, if he did not desire to grow crops. So it is after all the farmer's desire to grow crops that accounts for the farmer's willing and the stone's being moved. If this is what Aquinas has in mind, then the argument seems intended to show that one has to move farther along in the causal series to reach a primary mover than one might have thought. One has to get to an appetible object.

If this is the argument, it is a striking move.<sup>58</sup> It is striking because it is a move from explanation in terms of efficient causality to explanation in terms of final causality. The proof from *motus* has invoked efficient causes at each stage until now—the stick that moves the stone, the hand that moves the stick, and the soul that moves the hand are all efficient causes of motion. But the appetible object that moves a soul is a final cause of the soul's motion. Apparently, that is why Aquinas says “for what has an appetite is a kind of moved mover” (*quodammodo movens motum*). It is a “kind of” moved mover because it is moved by a different sort of causality from that by which the hand or the stick is moved.<sup>59</sup>

57. Aquinas attributes this argument to Aristotle in the *Metaphysics*. See *In libros Metaphysicorum* 12.7 for Aquinas's commentary on the relevant text.

58. I am not sure, however, that Aquinas does intend this argument. In his commentary on the *Metaphysics*, at least, Aquinas takes it as established (at the end of 12.6 [Cathala-Spiazzi nos. 2517–2518]), on the basis of the arguments from the *Physics* I have just sketched, that there is an absolutely unmovable mover whose substance is actuality. He then argues (in 12.7) that an absolutely unmovable substance must be an appetible object.

59. Aquinas frequently asserts the principle that the final cause is the cause of all



Still this argument does not succeed in bridging the gap between mundane primary movers and the unmovable mover; it simply replaces one sort of mundane primary mover (souls) with another (appetible objects). The argument gives us no reason to suppose that the appetible objects that will count as the primary movers are absolutely unmovable movers.

Of course, final causes as well as efficient causes can be ordered *per se*.<sup>60</sup> The farmer may desire to grow crops only because he desires to eat, and so on. Some ends, then, will be purely instrumental, but it seems we will never get to an unmovable mover that is God. The farthest we can go, even on Aquinas's account, is the farmer's happiness, and then only the farmer's conception of happiness.<sup>61</sup> The farmer's conception of happiness (whatever that is) will be the primary mover in any causal series ordered *per se* in which the farmer's will figures as a moved mover. So there is still a gap between the conceived ultimate good and God. Moreover, the conceived ultimate good need not exist at all (except in the conceiver's mind) in order to play its role as primary mover. The argument from souls to appetible objects, then, is not sufficient to bridge the gap between mundane primary movers and the primary mover that is God.

Perhaps Aquinas intends the move from souls to appetible objects to lead in another direction. In the fourth way (ST 1.2.3), he argues to the existence of God from the existence of things that are good or noble to some degree or in some respect. If that proof works, then we have a way of getting from appetible objects to the existence of God: appetible objects are good to some degree, and so they constitute a

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the other causes. See, for instance, his *In Posteriorum Analyticorum* 1.16: "But causes are arranged in a definite order to one another: for the account of one [cause] depends on another. Thus an account of the matter depends on the form. . . . Moreover, an agent accounts for the form. . . . Finally, it is on the end that the account of the agent depends." This general principle squares with the line of reasoning I am suggesting.

60. See, e.g., ST 1–2.1.4.

61. For discussion of Aquinas's views on the role of final causes in human intention and action, see my "Egoistic Rationalism: Aquinas's Basis for Christian Morality," in *Christian Theism and the Problems of Philosophy*, edited by Michael Beaty (Notre Dame: University of Notre Dame Press, 1990), pp. 327–354; and "Ultimate Ends in Practical Reasoning: Aquinas's Aristotelian Moral Psychology and Anscombe's Fallacy," *The Philosophical Review* 100 (1991).

starting point for the fourth way. But if the proof from motion must be completed by appeal to the fourth way, it will be invalid on its own.

It seems, then, that the proof from motion is incomplete. It may be that the third or fourth way will fill the lacuna in the proof, but in any case it is essentially parasitic on some other proof for God's existence.

I have suggested that there is evidence in SCG 1.13 indicating that Aquinas was aware of the problem of mundane primary movers. In his presentation of the second "Aristotelian" proof, he acknowledges that the claim that there is a primary mover that is not moved by anything exterior to it does not entail that there is a primary mover that is completely unmovable. He proceeds to offer supplementary considerations that do, in his view, imply the latter claim. Now this development in the discussion of the second "Aristotelian" proof occurs only after the presentation of the first proof has been completed with the explicit conclusion that there is a primary unmovable mover, and so it might seem that Aquinas does not see the lacuna in the first proof.<sup>62</sup> It seems to me plausible, however, to suppose that he was aware of the parasitic nature of the first "Aristotelian" proof and that he left it unremarked in view of the forthcoming supplementary discussion.

There is some interesting evidence in *ST* 1.2.3 that supports this assumption. As I have said, the presentation of the first way in *ST* differs in only two respects from the presentation of the first "Aristotelian" proof in *SCG*. The first of these—the fact that in *ST* Aquinas incorporates two of the subarguments from *SCG* into the main body of the proof—is relatively unimportant. But the second difference—the fact that Aquinas states the conclusion of the proof differently in the two presentations—seems to me significant. In *ST* he concludes, not that there is some primary unmovable mover, but only that there is some primary mover that is not moved by anything.<sup>63</sup> This latter

62. There is a question, of course, about how the second stage of the second Aristotelian proof might relate to the first Aristotelian proof. These arguments are for the most part taken from *Physics* 8 (257a35 ff.), from the text immediately following that which provides the proof from motion. See Aquinas's *In libros Physicorum* 8.9–12.

63. This way of stating the conclusion is quite close to that at the end of the first stage of the second Aristotelian proof in *SCG* 1.13. *ST*: "Ergo necesse est devenire ad

statement of the conclusion is weaker than the former, and in just the way we would expect if Aquinas were aware of the problem of mundane primary movers.

If I am right that Aquinas saw the problem of mundane primary movers and that his drawing only the weak conclusion to the first way shows his awareness of it, then we are left with two other exegetical questions. First, why does Aquinas suppose, later in *ST*, that he has established the strong, modal conclusion that the primary mover is unmovable? In texts just following the presentation of the five ways, for instance, he claims that he has shown that there is some primary unmovable principle (*ST* 1.2.3 ad 2) and that there is some primary unmovable mover (*ST* 1.3.1). It might seem that Aquinas thinks that the first way warrants this stronger claim even if he did not state it as the first way's explicit conclusion.

I think this explanation is incorrect, and I think the context of Aquinas's later claims in fact supports my thesis. I have argued that Aquinas would be entitled to the stronger, modal version of the conclusion only after the proof from motion has been supplemented by other proofs, perhaps the third or the fourth way. The fact that in *ST* Aquinas makes the modal claim only after the presentation of the five ways (and so after the presentation of the third and fourth ways) shows, I think, that he takes the first way to be parasitic on these other proofs in just the way I have suggested. He draws only the weak version of the conclusion at the end of the first way because he sees that it is all he is entitled to. Then, after he has filled the lacuna in the

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aliquod primum movens quod a nullo movetur." Second Aristotelian proof: "Ergo relinquitur quod oportet ponere aliquod primum quod non movetur aliquo exteriori." In *SCG* Aquinas explicitly acknowledges that this conclusion is an inadequate stopping point for a proof for God's existence. See my discussion in the sixth section, above. Notice that the conclusion given in *ST* is ambiguous. Given my analysis of the proof from motion, I think it should be read as the claim that there is some primary mover that is not being moved by anything with respect to *S*, where *S* is the end-state of the motion identified in the proof's observation premise. It might alternatively be read as the stronger claim that there is some primary mover that is not moved by anything in any respect. Taken in the latter way, I think the conclusion is unwarranted by the proof (for the reasons given in the sixth section, above). Even if we read it this way, however, it is still weaker than the modal version of the conclusion stated in *SCG*. It does not follow from the fact that something is unmoved that it is unmovable.

proof with the third or fourth way, he goes on to state and use the stronger, modal conclusion.

This interpretation of Aquinas's procedure seems to me to be clearly supported by a close look at the first appearance of the modal claim in *ST*. It occurs in his reply to the second objection in *ST* 1.2.3. The objection argues that it is unnecessary to suppose that God exists since all features of the world can be explained by appealing either to nature or human reason and will—in effect, by appealing only to mundane primary movers. Aquinas replies that nature must be directed by a higher agent, God, and that human reason and will must be explained by a higher cause, too. This is because human reason and will “are changeable and corruptible [*mutabilia et defectabilia*]. But all things that are changeable and susceptible to corruption [*deficere possibilis*] must be traced back to some primary principle that is unmovable and of itself necessary, as has been shown” (*ST* 1.2.3. ad 2). In my view the striking feature of this part of Aquinas's reply is his conjoining the starting points and conclusions of two of the five ways, the proof from motion and the proof from contingency.<sup>64</sup> The starting point of this little argument is that human reason and will are both changeable and corruptible, and its conclusion is that there must be something that is both unmovable and of itself necessary. Aquinas has run together the first and the third ways, and it is here—with the first and third ways simultaneously called to mind—that he first claims that the primary mover must be unmovable. I think this is not inadvertent but, rather, shows that Aquinas knows that the first way is parasitic on the third.

The second exegetical question raised by my claim that Aquinas knew that the first way is a parasitic cosmological argument is why he chose to include it in *ST* among his proofs for God's existence. If it is essentially parasitic on the third or fourth ways, why not simply present these latter proofs, leaving the former aside altogether? Moreover, why would he present it as the clearest of the five ways when he knows that it is not a complete way at all?

64. To call a thing *defectabile* might be to say that it is corruptible either in the sense that it can go out of existence or in the sense that it can be flawed or suffer imperfection. The latter sense might call to mind the possibility of degrees of goodness or nobility, in which case the reply to the second objection would connect the first way with the fourth.

The answer, I think, is that he takes the proof from motion to be the clearest of the five ways not in the sense that it is the easiest way of proving God's existence but in the sense that it begins from the most readily accessible phenomena. Ordinary processes of change are ready to hand, immediately obvious to the senses, in a way that the contingency of things, their degrees of nobility, and their being related in a providential world order are not. A plainer starting point cannot be had.

So Aquinas would have straightforward strategic reasons for opening his discussion of the proofs for God's existence with a proof that begins from phenomena that are obvious to anyone.<sup>65</sup> He also has theoretical reasons for starting with a proof that begins from what is obvious to the senses. Aquinas's empirically based theological methodology requires us to proceed toward knowledge of God on the basis of God's sensible effects; Aquinas's Aristotelian empiricism requires us to proceed toward what is knowable in itself on the basis of what is better known to us, namely, what is obvious to the senses. Each of the five ways starts from God's sensible effects, and it would be natural for Aquinas to begin the five ways as a whole with a proof that starts from the most obvious of those effects.

Aquinas must have thought that these strategic and theoretical considerations in favor of the first way outweighed the difficulty presented by the parasitical nature of the proof. The first way by itself could not resolve the issue raised in *ST* 1.2.3 ("Does God exist?"), but it can contribute to the discussion by preparing the way for the independent proofs that follow it. After all, the proof is not seriously flawed, only incomplete. Aquinas intended his readers to find the completion of the proof in the immediately succeeding paragraphs of *ST*.<sup>66</sup>

*University of Iowa*

65. These strategic reasons would be all the stronger if his intention in *ST* is to provide a manual for the teaching of theology.

66. I am grateful to Evan Fales, Alfred Freddoso, and Norman Kretzmann for comments on earlier versions of this paper.