

CAUSATION

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The sense of Aquinas's term '*causa*' is broader than the English 'cause'. Following Aristotle, Aquinas distinguished four types of causes:

Now the genus of 'cause' is fourfold, namely, final, formal, efficient, and material...¹

As a general rule, a material cause is that which something is made up of (its matter), and a formal cause of a thing is a form of that thing. This chapter will focus on efficient causation, with some discussion of final causation as well.

Apart from his brief, early work *On the Principles of Nature* and some relatively short sections of his commentaries on Aristotle's *Physics* and *Metaphysics*, Aquinas wrote nothing that could be considered a systematic treatise on causation. His understanding of causation must therefore be gleaned from comments scattered throughout his works. When those scattered comments are brought together and analyzed, we find a complex and multi-faceted theory. A good place to begin is with a paradigm instance of ordinary efficient causation: the production of a statue.

On Aquinas's Aristotelian account of change, any change involves (i) something which persists throughout the change (the subject of the change), (ii) something which accounts for the fact that the subject is actually configured or characterized as it in fact is

at the end of the change (the form), and (iii) the lack of that form at the beginning of the change (the privation). Any subject of a change can be referred to as “matter,” for Aquinas, so we can also refer to the subject of change as the matter of the change.

When, for instance, an irregularly shaped lump of bronze is formed into a statue, the bronze is the matter of the change, the distinctive shape of the finished statue is the form of the change, and the lack of that shape at the beginning is the privation.² Now, while distinguishing these three factors can help us specify the nature of this change, they cannot by themselves explain why the change has occurred. As experience tells us, bronze does not make itself into a statue. It is in this context, the explanation of change, that Aquinas introduces the notion of an efficient cause in *On the Principles of Nature*:

But these [three factors] are not sufficient for generation.³ For what is in potency is not able to reduce itself to actuality; just as bronze, which is potentially a statue, does not make itself [into] a statue. But there needs to be something operating, which draws forth the form of a statue from potency to actuality. ... Therefore, it must be that, besides matter and form, there is some principle which acts, and this is said to be the maker [*efficiens*], or the mover, or the agent, or that from which the beginning of motion comes.⁴

Upon reading this passage, one would be inclined to think that, for Aquinas, the efficient cause of the statue in our example is the sculptor, end of story. Aquinas would indeed say that the sculptor is *an* efficient cause of the statue,⁵ but he also holds that the *art* of the sculptor is an efficient cause of the statue.⁶ As it turns out, the notion of an efficient cause is used analogically, in Aquinas, and the term ‘efficient cause’ has a broad, manifold application. To get a full picture of Aquinas’s views here, we need to turn to his account of transitive action, which is, roughly, action *on* something. This will involve a discussion of the following concepts: agent, patient, power, inclination (or tendency), end, action, and passion.

Agents and patients

When Aquinas uses the term ‘agent’, he is almost always referring to a created substance or to God. Occasionally Aquinas likens a power to an agent,⁷ but in the proper sense of the term, an agent is a substance which acts,⁸ e.g. an angel, a human being, a cat, or even an inanimate substance like fire.

Two points of explanation are in order here, since the contemporary reader might find it strange that fire is an “agent” according to Aquinas, and that two things as disparate as a human being and fire both count as substances. First, Aquinas is comfortable saying that fire can *act*, and that fire is an agent (*agens*, literally “an acting thing”) because he does not restrict the application of the predicate “act” to subjects which are conscious agents. We sometimes use this predicate in the same broad sense, as in “the pancreatic juice acts on all classes of food.”⁹

Second, according to Aquinas’s concept of substance, substances are set apart from accidents by the fact that substances are subsistent things, in this sense: they do not exist in another being as in a subject (whereas accidents do). An accident, like the color of Socrates’s hair, is the sort of thing that exists *in* something (Socrates’s hair), while Socrates himself does not exist in any subject. He exists in his own right, so to speak. Aquinas thinks that each substance belongs to a particular species, and has a complete nature common to any other members of that species that there may be. And corresponding to each specific nature is a distinctive set of causal powers. So Aquinas counts both a particular human being and a particular fire as individual substances capable of action because he thinks that each is a subsistent thing with a complete specific nature and a distinctive set of causal powers.¹⁰

Correlative to the agent (*agens*, “the thing acting”) is the patient (*patiens*, “the thing undergoing”). The patient is the substance, or aggregate of substances, upon which the agent acts (e.g. the bronze in our sculpture example).

Aquinas calls the change (or motion) produced by the agent the ‘passion’.¹¹ More precisely, the passion is the change, recognized as being something which occurs in the patient. That is, ‘passion’ refers to the change, and connotes the fact that the change takes place in the patient. Thus Aquinas can say, “passion is the effect of the agent in the patient.”¹²

Powers

Given the view that the agent produces a change in the patient, we can next ask *how* the agent produces that change. While a sculptor has many properties or features, only some of them are called into play when the sculptor makes a statue. The sculptor’s power to move his hands is clearly salient here in a way that his ability to sing middle C is not. He performs the action of sculpting through the use of his power to move his hands (among other powers), but not through the use of his power to sing. Aquinas generalizes this way of thinking, and holds that any action of any agent occurs through the use of some particular power:

In any action there are two things to consider, namely the *suppositum* acting, and the power by which it acts, just as fire heats by heat.¹³

Why posit the existence of powers? Perhaps the idea is just this: If a thing performs some sort of action, then it is reasonable, at least in many cases,¹⁴ to think that there must be some real, positive feature of the thing which enables it to perform that sort of action. If a species of bird appears to use the earth’s magnetic field to navigate, for example, then it is reasonable to think that members of that species have some sort of faculty for

detecting magnetic fields. An *active* power is a feature of some thing which we posit to account for the fact that that thing is able to perform some action.¹⁵ Aquinas thinks of active powers as real (though not necessarily physical) components of a thing which enable it to act in certain ways. A *passive* power is something we posit to account for the fact that a thing is capable of being acted upon in a certain way, that is, to account for the fact that a thing is capable of undergoing a certain sort of passion.¹⁶

As is indicated by the last quotation, above, Aquinas thinks of heat as a power. Other examples are the powers of nutrition and growth (in all living things), the powers of sensation and movement (in animals), and the powers of intellect and will (in human beings). Aquinas also thinks of productive arts like the art of building and the art of medicine as powers.¹⁷ Aquinas holds that an art—the art of building, say—is a feature of a person’s mind.¹⁸ To say that a person possesses the art of building is to say that that person has a certain cognitive feature. And because the possession of that feature enables him or her to perform a certain sort of action (building), that feature counts as a power.

Ends and inclinations

On Aquinas’s views, the sculptor’s powers play an important role in the analysis of the example of efficient causation we’re considering – the making of a statue. But while various powers of the sculptor explain his ability to sculpt, they do not by themselves explain why he gets up in the morning, goes to his studio, and sets to work. To explain these things, we need to make reference to the sculptor’s desires and choices, to acts of will.¹⁹ A choice to make a statue today, for instance, explains why the sculptor goes to his studio and begins to sculpt. The existence of active powers in a thing grounds facts about the actions that thing can perform, but explaining how it is that an agent *can* perform an

action is somewhat different than explaining why it is that it *does* perform an action in a given situation. It is for this reason that Aquinas's discussions of action make reference to *inclinationes* (inclinations or tendencies) as well as powers.

We can grasp what Aquinas means by an 'inclination' by examining something he says about ends, i.e. final causes. In several places Aquinas claims that every agent (living and non-living) acts by intending some end.²⁰ Because of the connotations of the English 'intend', and because we sometimes identify ends with the purposes of rational agents, this claim of Aquinas's can sound wildly implausible. In fact, Aquinas did *not* think that inanimate objects do things out of an awareness of some goal.²¹ Although a purpose or goal of a rational agent is one sort of end, the general definition of an end is much broader: for Aquinas, an end is merely that to which an agent tends, i.e. that to which an agent has an inclination, whether cognized or not.²²

At *Summa Theologiae* 1a2ae, q. 1, a. 2, Aquinas gives an argument for the claim that every agent acts out of an intention (i.e. an inclination) for an end. A close look at a single line in this argument will shed light on what Aquinas takes inclinations to be, and why he includes them in his ontology. The line in question reads:

For if an agent were not oriented to some effect, it would not do this more than that.²³

Consider that electrons regularly repel other negatively charged particles when in close proximity to them. To state the matter in terms of actions, an electron regularly performs one sort of action (repelling negatively charged particles) and not another (attracting negatively charged particles). That is, an electron does *this* more than *that*. Faced with this fact about the behavior of electrons, it is natural to seek an explanation. It would be absurd to think that the consistent behavior of electrons is merely a coincidence. So it is

reasonable to think that the regular behavior in question (that electrons regularly repel other negatively charged particles) has an explanation. A quite natural explanation is provided by positing a feature about the electron itself, by supposing that it itself possesses some feature which leads it to repel negatively charged particles. Call that feature an inclination. The inclination in question here would be the electron's negative charge, conceived of as a property of the electron that makes it regularly repel negatively charged particles.

If we asked Aquinas to justify the inclusion of inclinations in his ontology, his answer, I believe, would focus on the explanatory role they play, and most especially the role they play in explaining the regular behavior of non-rational agents and the purposeful behavior of rational agents. On Aquinas's way of thinking, the best available explanation of the regular behavior of agents involves the positing of inclinations, where an inclination is conceived of as an intrinsic feature of an agent which leads it (inclines it, disposes it) to engage in some action.

Where I have used an electron as the agent in my example, Aquinas would have used an agent familiar to him, like fire, but his reasoning would have been just the same. Fire regularly performs one sort of action (heating) and not another (cooling). This regularity of behavior is not a coincidence; it must have some explanation. The best explanation is that fire has some feature which inclines it to heat things in close proximity. Calling this feature an inclination, Aquinas now has a reason to posit the existence of inclinations (given that the argument was perfectly generalizable to agents other than fire).

Aquinas distinguishes two types of inclinations: natural and voluntary. Examples of natural inclinations are fire's inclination to heat and a stone's inclination to fall.²⁴ A

voluntary inclination is just any act of the will.²⁵ In both cases, an inclination is the sort of thing whose presence can explain the initiation and occurrence of action or change.²⁶

Action and passion

Aquinas accepts Aristotle's position that an action (like this fire's heating that water) and a passion (the water's being heated) are not two different motions, but are one and the same motion. Consider the phrases "the road from Thebes to Athens," and "the road from Athens to Thebes."²⁷ In reality, there is just one road. But people can travel on that road in either of two directions. When we're thinking of the road as having Thebes as its starting point, or when we want to advert to the fact that people sometimes start from Thebes and go to Athens, then we speak of the road from Thebes to Athens. When we're instead thinking of the road as having Athens as its starting point, we speak of the road from Athens to Thebes. Similarly, if fire heats water, we can talk about the action (heating) and the passion (being heated). In reality, there is just one motion or change, but when we want to advert to the fact that the motion is caused by the agent, we speak of the action. When, instead, we are calling to mind the fact that the motion occurs in the patient, we speak of the passion.

In explaining this position Aquinas discusses an example of Aristotle's concerning teaching and learning.²⁸ The initially puzzling view held by both Aristotle and Aquinas is that teaching and learning are not two different motions, but are one and the same motion. In the course of explicating this view, Aquinas asserts that the action of teaching and the passion of learning are the same "in subject," but differ "*secundum rationem*," that is, they differ conceptually or in definition.²⁹ I think we can best understand Aquinas's position here by saying that, for Aquinas, the action of teaching and the

passion of learning are the same in reference (they refer to one and the same change, which occurs in the learner), but different in sense ('action' expresses the fact that the change is caused by the teacher, and 'passion' expresses the fact that the change occurs in the learner).³⁰

Transmutation

To return to our example: The sculptor (the agent), on account of his inclinations and through the use of various powers, brings about a change in the bronze (the patient), so as to give it a new accidental form (its distinctive shape). This is an example of what Aquinas calls 'transmutation'. In any case of transmutation, an agent,³¹ on account of its powers and inclinations, produces a change in some already existing patient. This change might terminate in the patient's possession of a new accidental form, or it might terminate in the existence of a new substance.

Causal relata

Because contemporary philosophers almost always use the word 'causation' to refer to a relation,³² it's natural to ask what the terms of the relation of efficient causation are, according to Aquinas. In our example, what exactly is the efficient cause and what is the effect? As briefly indicated above, Aquinas uses the concepts of efficient cause and effect quite broadly, applying both notions to items from many different ontological categories. Aquinas applies the notion of an efficient cause to substances,³³ to powers,³⁴ to acts of will (and thus to inclinations),³⁵ and to processes or activities.³⁶ When Aquinas says that "passion is the effect of the agent in the patient,"³⁷ he is applying the notion of an effect to a change, which is an event. (Likewise when he speaks of an action as something that is "produced" by the agent.³⁸) And because the change which an agent produces

terminates in a new accident (in cases of accidental change) or a new substance (in cases of substantial change), Aquinas sometimes speaks of accidents³⁹ and substances⁴⁰ as the effects of transmuting causes. Further, in cases of transmutation, for a new accident to be produced is just for some substance (or substances) to be given a new accidental form, and for a new substance to be produced is just for some prime matter to be given a new substantial form. Accordingly, Aquinas can speak of forms (whether accidental or substantial) as the effects of transmuting causes.⁴¹ Thus, rather than thinking that, for Aquinas, *the* relation of efficient causation in our example is a relation existing between the sculptor and the bronze, we should keep in mind Aquinas's fuller story: the sculptor brings about a change in the bronze, via his powers and inclinations (and various tools too, no doubt), and by so doing produces a statue and a new accidental form.

The three kinds of efficient causation and what they have in common

In addition to transmutation, Aquinas recognizes two other fundamental kinds of efficient causation: God's creation of a thing out of nothing, and the conservation of existing things in existence.⁴² What all three have in common is their relation to action.⁴³ To transmute something is to bring about a change in it. To create something is to produce it, but not out of any pre-existing material. To conserve something is to maintain it in existence. Each involves the action of one thing on or with respect to something. To create, to conserve, to transmute...these are all what Aquinas would have called transitive actions. It is therefore not surprising that Aquinas distinguishes efficient causation from material, formal, and final causation by means of the notion of action or operation:

For an efficient cause is a cause insofar as it acts.⁴⁴

For Aquinas, then, something counts as an efficient cause precisely because of its connection to some transitive action.⁴⁵ What all three types of efficient causation have in common is this: a metaphysically complete description of any case of efficient causation will be a description of the transitive action of one or more agents.

The generic notion of causation

We can get a clearer understanding of the connection between efficient causation and action by examining something Aquinas says about causation in general. A principle (*principium*) is a source or starting point of some kind, or simply something which is first in some sequence, and a cause is a certain sort of principle, viz., a source of *being*:

Every cause is related as a principle to the being of its effect.⁴⁶

This statement is meant to apply to all four causes, as is the similar claim:

The name 'cause' implies some influence with regard to the being of the thing caused.⁴⁷

Each of the four causes has an influence on the being of that of which it is a cause, but the kind of influence is different for the different kinds of causes. The matter and form of a thing have an influence on the being of that thing by being constituents of it (more specifically: matter has its influence by being the subject of form, and form has its influence by being that which accounts for the thing's actually being whatever (or however) it is). Efficient and final causes influence their effects too, but in quite different ways:

Just as influencing for an efficient cause is acting, so for a final cause influencing is being sought and being desired.⁴⁸

We might express Aquinas's view by saying that the way in which an efficient cause influences the being of its effect is by acting. But care must be taken to understand this in

the correct sense. Aquinas's point is not that an efficient cause does one thing (influencing) by doing something else first (acting). Rather, his idea is that acting *is* influencing – acting consists in either (i) bringing about a change in something, (ii) creating something out of nothing, or (iii) conserving something in being, and any of these count as a kind of influencing.⁴⁹ The sense in which an efficient cause influences the being of its effect is that an efficient cause produces or conserves something (in a word, an efficient cause *acts*).

Given the prevalence of reductive analyses of causation in the contemporary literature on causation, it is worth noting that when Aquinas makes reference to the notion of transitive action in order to distinguish the efficient cause from the other genera of causes, he is not attempting to reductively define or analyze efficient causation in terms of some non-causal concept. On the contrary, action, in the sense at issue here, is already a causal concept.

Contemporary accounts of causation

An adequate treatment of Aquinas's views on causation would require discussion of several other topics, including especially the distinctions between *per se* and *per accidens* causation⁵⁰ and between primary and secondary causation. But in the very short space remaining, I want to focus instead on ways in which Aquinas's views relate to recent philosophical reflection on causation. Despite a few passages which might mislead an unwary reader, Aquinas clearly rejects a transference theory of causation.⁵¹ And while he does recognize a close relationship between counterfactuals and causation, he never attempts to reductively analyze causation in terms of counterfactuals. Or in terms of anything else, for that matter – Aquinas seems happy to accept at least some causal

concepts and some causal facts as basic. For this reason, and because of his focus on powers and inclinations, Aquinas's understanding of causation has most in common with contemporary dispositionalist accounts of causation, which take causal powers as irreducible aspects of reality.^{52 53}

¹ ST 2a2ae, q. 27, a. 3c. For the Latin texts of Aquinas I have used S. Thomae de Aquino, *Opera omnia*, ed. Enrique Alarcon, URL = <<http://www.corpusthomicum.org/iopera.html>>. Translations are my own.

² A word about prime matter: Aquinas recognizes several different uses of the term "matter" (*materia*). (See DPN chs. 1-2, and ST 1a2ae, q. 55, a. 4c.) For my purposes here it is only necessary to distinguish two such uses, corresponding to the two types of change, accidental and substantial. In an accidental change, the matter of the change is a substance (or an aggregate of substances) and the form acquired in the course of the change is an accident. When Socrates loses his tan and becomes pale, Socrates (a substance) acquires paleness (an accident). The example of a lump of bronze being formed into a statue is also an example of an accidental change, since bronze is a substance in its own right which persists through the change, receiving in the process only a new shape (which is an accident).

In a case of substantial change, by contrast, the matter of the change is not an independently existing substance (or an aggregate of such substances), but is rather what Aquinas calls *materia prima* ("prime matter" or "primary matter"). Matter such as bronze is a subject of form (e.g., this bronze is the subject of a particular shape), but bronze is itself something which has a matter-form structure. Aquinas holds that any material substance is composed of two metaphysical parts or constituents: substantial form and prime matter. As a first approximation: the substantial form of a material substance S is that constituent of S which accounts for the fact that S is the kind of substance it is, and not a substance of some other kind made out of the same prime matter, while the prime matter of S is that constituent of S which persists, and begins to be the matter of some new substance, when S passes away. Prime matter is matter which is not itself composed of form and matter.

According to Aquinas, prime matter can be separated from form in thought, but it can never be so separated in reality, because prime matter can never exist on its own, without having some form or another. For more on prime matter, see DPN 2; In Phys I.13.118; In Meta VII.2.1285-1296, and VIII.1.1689.

³ Here by "generation" Aquinas intends to include both generation *simpliciter* (substantial change) and generation *secundum quid* (accidental change). See DPN 1.4, and In Meta I.12.199.

⁴ DPN 3.15.

⁵ In Meta V.2.773.

⁶ In Phys II.5.182.

⁷ ST 1a, q. 82, a. 4c.

⁸ ST 2a2ae, q. 58, a. 2c.

⁹ A sentence from the entry on "act" in *Webster's New Collegiate Dictionary* (Springfield, Mass: Merriam, 1956).

¹⁰ For more on Aquinas's theory of substance, see Brown 2005, ch. 3, and the chapter on Being in this volume.

¹¹ See In Phys III.5.

¹² ST 1a2ae, q. 26, a. 2c.

¹³ ST 1a, q. 36, a. 3 ad 1. Here, the term '*suppositum*' refers to the substance which acts.

¹⁴ I say "at least in many cases" because there may be cases where a thing performs an action of a certain sort, such that it would not necessarily be reasonable to infer the existence of a single positive feature which enables the thing to perform actions of that sort. Human beings occasionally hiccup; should we infer that humans possess a power of hiccupping? Not necessarily, because a hiccup might just be the accidental result of several distinct powers functioning (or malfunctioning) together. Be that as it may, what is crucial to Aquinas's view is only the claim that, at least in many cases, it is reasonable to infer the existence of powers.

¹⁵ See ST 1a, q. 25, a. 1c, QDP 7.9c and SCG IV.77.

¹⁶ On the ontology of passive powers, see In Meta V.14.963.

¹⁷ In Meta IX.3.1796 and In Meta V.14.955.

¹⁸ See In Meta VII.6.1407.

¹⁹ By “act of will” I mean to translate Aquinas’s “*actus voluntatis*”, which is a generic term that covers at least six different acts of which the will is the subject: enjoyment (*fruitio*), intention (*intentio*), volition (*voluntas*), choice (*electio*), consent (*consensus*), and use (*usus*). See ST 1a2ae, qq. 11-16.

²⁰ ST 1a2ae, q. 1, a. 2, DPN 3.16, SCG III.2, In Phys II.13-14.

²¹ DPN 3.16 and QDV q. 22, a. 1 ad 2.

²² See DPN 3.16, SCG III.16 [3], and In Phys II.10.240.

²³ ST 1a2ae, q. 1, a. 2c.

²⁴ Fire always heats, but a stone does not always fall (e.g., if it’s held up by something). Does this mean that a stone sometimes has an inclination to fall, and sometimes lacks such an inclination? No. Aquinas’s theory seems to be this: A stone that is located anywhere but at the center of the Earth always has an inclination to fall. (Indeed, maybe it would be best to characterize the stone’s inclination as an inclination to move to and rest in its proper place, which is the center of the Earth.) Now, a stone falls only in certain circumstances *not* because it sometimes has the inclination to fall and sometimes does not have that inclination, but rather because its always-present inclination to fall is sometimes impeded, and sometimes not. If something is in the way of the stone and the center of the Earth, then the stone’s inclination to fall may not be able to issue forth in actual movement.

²⁵ ST 1a, q. 87, a. 4c: “An act of the will is nothing other than a certain inclination following upon an understood form, just as a natural appetite is an inclination following upon a natural form.” See also ST 1a2ae, q. 6, a. 4c, ST 1a2ae, q. 15, a. 1c, QDV q. 22, a. 12c and QDC q. 1c.

²⁶ Aquinas customarily speaks as if power and inclination are distinct (see, e.g. ST 1a, q. 106, a. 2c and ST 1a, q. 80, a. 1 ad 3). It is easy enough to see why we should think there is such a distinction in the case of voluntary inclinations, but in cases of natural inclination it is less clear. Why think that the substance fire has two ontologically distinct features, one of which is its active power to heat and one of which is its inclination to heat? Some of Aquinas’s comments (e.g. at ST 2a2ae, q. 27, a. 4c) suggest that he thinks of an inclination as the actualization of an active power. If so, then there is always at least a conceptual distinction between a thing’s powers and its inclinations. Perhaps Aquinas could hold, however, that in cases where an active power is always actualized (as with fire, which is always inclined to heat anything in its proximity), there exists just one actual feature, which grounds the truth of both the claims that “this agent has power P” and “this agent has inclination I.”

²⁷ In Phys III.5.318.

²⁸ In Phys III.5.

²⁹ In Phys III.5.318.

³⁰ The reader might be puzzled by the fact that, for Aquinas, ‘the action of teaching’ refers to a change in the learner, and not to a change or process in the teacher. To motivate Aquinas’s use of language here, imagine that a teacher is writing at a blackboard and verbally explaining some argument. Now suppose that there is in fact no one else present in the room. There is a sense in which we would deny that the teacher is engaged in the action of teaching. The action of teaching (in this sense) actually occurs only when some learner is undergoing a certain type of cognitive change. This is the sense of ‘action of teaching’ that Aquinas is using when he holds that the action of teaching and the passion of learning are one motion taking place in the learner.

³¹ Or, a number of agents working together.

³² The word may also be used to refer to an action, as in “The production of one thing by another is one type of causation.”

³³ In Meta V.3.780.

³⁴ ST 1a, q. 82, a. 4c, In Meta VII.6, DPN 5.26.

³⁵ QDV q. 28, a. 8 ad 7: “Consent is the efficient cause of marriage”.

³⁶ See In Meta V.2.771, where Aquinas asserts that the (ancient medical) processes of reducing and purging can be called causes from which motion comes, i.e., efficient causes.

³⁷ ST 1a2ae, q. 26, a. 2c.

³⁸ SCG III.70 [5].

³⁹ See ST 1a2ae, q. 75, a. 4c (evil dispositions and habits, which are accidents, are efficiently caused by acts of sin).

⁴⁰ E.g., at In Meta V.2.765 Aquinas takes up Aristotle’s characterization of the father as “the cause of the child,” in which case the child (a substance) is being thought of as an effect.

⁴¹ QDM q 5, a. 5 ad 16: “the form itself is an effect of the agent.” See also *De aeternitate mundi*.

⁴² In DNN 4.5: “For these three things seem to belong to the notion of an efficient cause: to give being, to move, and to conserve.” On creation, see ST 1a, q. 45. On conservation, see ST 1a, q.104, aa. 1-2.

⁴³ The sense of ‘action’ at issue here is that of transitive action, as opposed to immanent action. A transitive action is, roughly, an action on something. This is to be contrasted with an action in the sense of the actualization of a potency of the agent, which actualization remains within the agent. When Feynman understands the fundamental theorem of calculus, for instance, Feynman is the subject of an action of understanding, which is an action remaining within him. Aquinas discusses the distinction between actions passing over into exterior things and actions remaining within the agent in several texts, including SCG II.1, ST 1a, q. 18, a. 3 ad 1, ST 1a, q. 23, a. 2 ad 1, ST 1a, q. 54, a. 1 ad 3, ST 1a, q. 85, a. 2, and In Meta IX.8.1862-1865. This distinction has been referred to by later thinkers as the distinction between (i) transitive (or transient or transeunt) action and (ii) immanent action.

⁴⁴ In Meta V.2.775. See also QDV q. 28, a. 8c.

⁴⁵ Thus Aquinas uses *agens causa* (acting cause) and *efficiens causa* (efficient cause) as synonyms (compare ST 2a2ae, q. 27, a. 3c and SCG III.10 [5]).

⁴⁶ In Sent 1.29.1.1c. See also In Sent 3.11.1.1 ad 5.

⁴⁷ In Meta V.1.751.

⁴⁸ QDV q. 22, a. 2c. The meaning of the second clause in this sentence is that a final cause has the influence it has by being the object of some inclination.

⁴⁹ In this way, the statement that an efficient cause influences by acting is not like the statement that one gets a promotion by doing good work, but is like the statement that a cyclist exercises by cycling. It’s not as if the cyclist does one thing (cycle), which in turn allows him to do a second thing (exercise). Rather, his cycling *is* his exercising.

⁵⁰ See ST 1a2ae, q. 85, a. 5c, QDM q. 1, a. 3c, In Meta V.3.789.

⁵¹ SCG III.69 [28].

⁵² See, e.g. Cartwright 1989, Ellis 2001, Ellis 2002, and Molnar 2003.

⁵³ I am grateful to Jeffrey Brower, Brian Davies, Colleen McCluskey, Kent Staley, and Eleonore Stump for their helpful comments on this material.