

Spinoza on Final Causality

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When historians of philosophy discuss the attitudes of early modern philosophers toward final causality, they often write as if what is at issue is the legitimacy of a certain style of explanation—let’s call it teleological explanation, and construe it broadly enough to take in both explanations involving conscious decisions (he went to the refrigerator in order to get a beer) and so-called functional explanations (the purpose of the heart is to help bring about the exchange of oxygen and carbon dioxide). A complaint by an early modern philosopher about final causes is taken to be a complaint about functional or purposive explanations.

In this way, the central issue quickly becomes—too quickly, I feel—how various early modern philosophers understand the relationship between mechanistic explanation and teleological (or functional or purposive) explanation: To what extent did early modern philosophers exclude teleological explanation from certain domains of inquiry? To what extent was their practice of using functional idioms consistent with their rejection of final causes? (Is, for example, Descartes’s claim to have excluded final causes from physics consistent with his employment of functional idioms in his physiological writings?) Did some thinkers reject teleological explanations completely or only in certain contexts? Did Spinoza, for example, reject all teleological explanations, or only those teleological explanations that involve attributing purposes to God or nature, making room for teleological explanations that involve human beings? And if Spinoza did reject all teleological explanations, is this consistent with what he had to say about human behavior?¹

¹ For Descartes, see e.g. Alison Simmons, ‘Sensible Ends: Latent Teleology in Descartes’ Account of Sensation’, *Journal of History of Philosophy* 39 (2001), 49–75, which explores the relationship between ‘teleological explanation’ and ‘causal explanation’ (p. 74). For Spinoza, see e.g. Jonathan Bennett, *A Study of Spinoza’s Ethics* (Indianapolis: Hackett, 1984), ch. 9, esp. §51, and the subsequent literature it inspired, Edwin Curley, ‘On Bennett’s Spinoza: The Issue of

If we think of teleology as a style of explanation and mechanism as another style of explanation, it is not obvious why early modern philosophers should have seen a conflict between mechanistic explanation and teleological explanation. Why couldn't it be the case that the heart is a pump and that it serves the purpose of facilitating the exchange of oxygen and carbon dioxide? Or why couldn't one employ mechanistic explanations at, say, the level of molecular biology, and functional explanations at the level of physiology?

We can achieve a much firmer grip on early modern thought concerning final causality, I claim, if we take pains to recover a scholastic Aristotelian conception of a final cause or end. The scholastic Aristotelian conception of a final cause will provide us with a sharper analytical tool than the rather blunt instrument of contemporary and somewhat free-floating notions of a teleological or functional explanation for understanding exactly what it was that Descartes tried to eliminate from the corporeal world, that Spinoza (I shall argue) tried to eliminate from the universe, and that Leibniz went to extraordinary lengths to readmit into the world.²

Perhaps the most important thing that will emerge is that, in Aristotelian theory, the final cause holds a preeminent place: it is the cause of the causality of the other causes. (What this means will be taken up below.) The final cause is, in particular, fundamental to how Aristotelians understand an *efficient* cause or an agent: part of what it is to be an agent, for them, is to intend an end. So when early modern philosophers advocated that we concern ourselves only with efficient causes and ignore final causes, they were in effect advocating a different conception of an *efficient* cause, one according to which efficient causes are 'blind' (exactly what 'blind' comes to in this context will also be taken up below).

In what follows, I take Thomas's writings to be representative of Aristotelian scholastic thinking about causation. While, obviously, his writings were not the most immediate scholastic Aristotelian influence

Teleology' and Jonathan Bennett, 'Spinoza and Teleology: A Reply to Curley', both in Edwin Curley and Pierre-François Moreau (eds.), *Spinoza: Issues and Directions* (Leiden: Brill, 1990), 37–48 and 49–52, respectively; and Don Garrett, 'Teleology in Spinoza and Early Modern Rationalism', in Rocco J. Gennaro and Charles Huenemann (eds.), *New Essays on the Rationalists* (Oxford: Oxford University Press, 1999), 310–55.

² Incidentally, it is unclear to me to what extent our contemporary notion(s) of teleological (purposive or functional) explanations would have been recognized by early modern thinkers.

on the period, the main lines of his thought exercised considerable influence in the seventeenth century. What is more important, his work has the virtue of being systematic and comprehensive enough to provide us with a philosophical feel for how Aristotelians thought about this topic. I then turn to early modern thinking about final causality, focusing on Spinoza (and to a lesser extent Descartes). I am particularly interested in what I take to be Spinoza's very ambitious attempt to present an interpretation of the universe that is free of traditional final causes. In the concluding section, I consider briefly the way in which Leibniz sought to make room for final causality, notwithstanding the fact that efficient causes within his physics are blind.

AQUINAS AND SCHOLASTIC NATURAL PHILOSOPHY

Aristotelian thinking about causation, perhaps not so surprisingly, has a lot to do with how Aristotelian natural philosophers thought about change. So let's start there.

Change, Motion, Matter, and Form

The Aristotelian account of change, *kinesis*—in Latin translations, *motus*—is the actualization of a being in potency insofar as it is in potency. Although some early modern thinkers ridiculed this characterization of change as gibberish,³ their contempt was more polemical than substantive. According to scholastic Aristotelians, a change takes place

³ Descartes writes in *The World* of the basic Aristotelian characterization of motion: they [the philosophers, i.e. scholastic Aristotelians] admit themselves that the nature of their motion is very little understood. To render it in some way intelligible they have not yet been able to explain it more clearly than in these terms: *Motus est actus entis in potentia, prout in potentia est*. For me these words are so obscure that I am compelled to leave them in Latin because I cannot interpret them. (And in fact the sentence 'Motion is the actuality of a potential being insofar as it is potential' is no clearer for being translated.) (AT xi. 94; CSM i. 94). Descartes also complains about this formula in Rule Twelve of the *Rules for the Direction of the Mind*, AT x. 426, CSM i. 48–9. Locke is no more sympathetic to the Aristotelian characterization of motion in his *Essay Concerning Human Understanding*: 'What more exquisite Jargon could the Wit of Man invent, than this Definition, *The Act of a being in Power, as far forth as it is in Power*, which would puzzle any rational Man, to whom it was not already known by its famous absurdity, to guess what Word it could ever be supposed to be the explication of. If Tully, asking a Dutchman what *Beveeginge* was, should have received this Explication in his own Language, that it was *Actus entis in potentia quatenus in potentia*; I ask whether anyone can imagine he could thereby have understood what the Word *Beveeginge* signified or have guessed what *Idea* a Dutchman ordinarily had in his Mind, and would signify to another, when he used that sound' (EIII.iv.8).

when something that has a perfection or reality only potentially comes to possess that perfection actually. When Socrates learns Greek, he moves from being a potential speaker of Greek to being an actual speaker of Greek. The change covers the ground between the onset of the actualization and its completion: before the actualization, the change has yet to begin, and by the time Socrates is an actual speaker (and so is no longer a speaker ‘in potency’), the change is over. Similarly, when an olive tree germinates, something that is potentially an olive tree—say, some mixture of seed and earth—becomes actually an olive tree. Hence the characterization of change as the actualization of a being in potency while it still remains to some extent in potency.

To simplify matters, let’s continue to focus on generation, a change that involves the coming to be (as opposed, for example, to a corruption, that is, a ceasing to be) of a form or perfection. There are two kinds of generation, qualified and unqualified. Qualified generation occurs when an already existing being comes to exist in a new way, so as to possess a new perfection, as when Socrates learns Greek. Unqualified generation occurs when a new being comes to exist *simpliciter*, as when an olive tree is generated.

Two of the four Aristotelian causes fall out of this picture of change. The subject that undergoes the change—that moves from potentiality to actuality in some respect—serves as the *matter* of the change, and so is the change’s material cause.⁴ In the case of a qualified generation, the material cause is the subject in which the change takes place (i.e. the being that already exists *simpliciter* but comes to exist with a new perfection), usually a substance. In the case of an unqualified change, the matter is what becomes the new being—e.g. whatever it was that used to be the earth and seed and is now the olive tree (according to some medieval theorists, prime matter). In Aristotelian metaphysics, *form* is the principle of actualization or perfection (one might think of form as what the olive tree has that the mixture of earth and seed lacks). In the case of a qualified change an accidental form serves as the formal cause

⁴ In moving thus from the form and matter as termini of changes, to their being constituents of a being, I am following Aquinas’s *De Principiis Naturae* in St Thomas Aquinas (Sancti Thomae Aquinatis), *Opera omnia: ad fidem optimarum editionum accurate recognita*, 25 vols. (Parma: P. Fiaccadorie, 1852–73), xvi. 340. English translation in *St. Thomas Aquinas: Selected Writings*, trans. Robert P. Goodwin (Indianapolis: Bobbs-Merrill, 1965), 16. It would be interesting to consider more fully how these two roles of form and matter are related.

of the change, and in the case of unqualified generation a substantial form does: as marking the difference between something's potentially being *simpliciter* and its actually being *simpliciter*, the substantial form is responsible for the olive tree's being, and not merely its being in a certain way.

According to an Aristotelian analysis, a generation has endpoints or termini. A generation is a movement from nonbeing (*simpliciter* or in some respect) to being (*simpliciter* or in some respect), that is, from potentiality to actuality. Other types of Aristotelian changes also have termini. An alteration is a movement from being to being (e.g. from being actually white to being actually black), and a corruption is a movement from being to nonbeing, that is, from actuality to nonactuality. The boundaries are set by the matter and the form or perfection that is acquired, exchanged, or lost. When Socrates has acquired the form of Greek grammaticality—that is, when he has become fluent in Greek—he has made a transition from potentiality to actuality and the learning is over; when the substantial form of an olive tree comes to inform the mixture's matter—so that now an olive tree exists—the generation of the tree is over. This point is worth highlighting because an important difference between a new science worldview and an Aristotelian conception of nature is that, according to the former, the fundamental motive principle—inertial motion—is unbounded: inertial motion goes on forever unless something gets in its way.

Hylomorphic Ontology within the Natural World

For an Aristotelian, any being that comes into existence through a process of (unqualified) generation is composed of what undergoes the change and a principle perfecting what we began with, that is, the matter and a substantial form. The substantial form confers upon the olive tree a characteristic set of powers and abilities to bring about and undergo changes; the form fixes the individual to a determinate genus and species. The powers are organized around ends, such as the maintenance of the individual form (nutrition) and of the species form (reproduction). In the case of a human being, its powers and abilities are organized around its highest end, which, according to scholastic philosophy, is to reach the *visio dei*.

Although possession of a substantial form and membership in a species is an all-or-nothing affair,⁵ not every individual exemplifies its species equally well. For example, while dogs are of such a nature that they ought to see, some do not. Blindness in a dog is a privation, the absence of a perfection or reality that it ought to have, where what it ought to have is set in this case by its substantial form. In other words, the internal constitution of a natural being—its matter and substantial form—brings with it certain standards by which it is measured. An individual's essence or nature internally orders the individual with respect to excellence and defect.

The Efficient Cause and the Final Cause

Aquinas, following Aristotle, remarks that 'what is potency cannot reduce itself to act' (*Opera omnia* XVI, 339; Goodwin, 14).⁶ What has a perfection only potentially—the matter—cannot give itself that perfection in actuality. Moreover, the form does not exist during the change but only when the change is complete, and so it cannot, as it were, 'draw itself out of potency to act'.⁷ In order for generation to take place, there must be an efficient or moving cause, from which the change begins and which operates until the change has been completed.

Aquinas, taking himself to follow Aristotle, holds moreover that nothing acts unless intending an end (*omne quod agit, non agit nisi intendendo aliquid*).⁸ In the *Summa contra gentiles* (SCG) 3.2, Aquinas argues at length for what I take to be the same thesis, that all agents act for an end (*quod omne agens agit propter finem*),⁹ and we will examine some of the arguments he gives below. But let's notice in a general way—and this I believe will prove crucial for understanding the principal difference between scholastic Aristotelian thinkers and early modern thinkers over

⁵ There are reasons to wonder whether Aristotle himself held this view. See *Generation of Animals*, 769^b7–13, and David Balme, 'Aristotle's Biology was not Essentialist', in Allan Gotthelf and James G. Lennox (eds.), *Philosophical Issues in Aristotle's Biology* (Cambridge: Cambridge University Press, 1987), 291–312.

⁶ Here's a place where it matters that we are concerned with generations, which seem to dominate Thomas's (and Aristotle's) thinking about causation, as opposed to, say, corruption. The exegetical issues here are complex, but one gathers that a corruption may happen without an efficient cause aiming at it. For example, as an animal ages, the various elements of its body—earth, water, air, and fire—by pursuing their ends lead to the dissolution of its body without anything intending this result.

⁷ *Opera omnia* xvi. 339; Goodwin, p. 14.

⁸ *Opera omnia* xvi. 339.

⁹ *Opera omnia* v. 160.

the nature of efficient causation—that this commitment makes obvious sense given what Aquinas thinks an efficient cause is supposed to do, namely, bring something from potency to act. If one's lead thought in positing an efficient cause is that things don't just, of their own accord, get themselves from a condition of potentially possessing a perfection into a condition of actually possessing that perfection,¹⁰ then it makes sense to think that whatever pulls off the trick has to be especially suited for the task. Such a cause will somehow have to be specially equipped for actualizing the perfection (as we shall see, this turns out to mean, according to Aquinas, that the perfection or some likeness thereof exists in the agent).

Consider an analogy. If, for example, one thinks that bricks, nails, and lumber are not likely to get themselves into the form of a house, one is not going to think that a hurricane is a much better candidate for getting them into that shape. Perhaps this sort of thing could happen, but only extremely rarely and not 'for the most part'. Rather, one will hold that we need an efficient cause that is somehow geared toward the actualization of a house, perhaps because that cause itself contains in some manner the perfection that it is trying to bring about (say, either in the builder's art or in the architect's plans). A 'blind' efficient cause won't help here.

Let's turn to Aquinas's development, in *SCG* 3.2, of the thesis that every agent acts for an end. He begins by emphasizing the idea that agents tend toward something definite and rest when this definite thing is achieved (see e.g. ¶¶ 2 and 3). One might agree that the activity of a given agent is in some sense determined to some definite result, without seeing why it is appropriate to think in terms of acting for an end. (Don't blind efficient causes—say, two colliding pieces of matter—have a set result, and so, in this sense, tend toward 'something definite'?) One important idea that is lying in the background here,¹¹ I think, is the

¹⁰ More precisely, Aristotelians hold that, without a cause aiming at this result, things could move from a condition of potential to actual perfection only rarely and not for the most part.

¹¹ There may be other considerations at work here connected with an Aristotelian conception of change: for example, we may wish to distinguish sharply between (a) a series of random occurrences, after which a house-like entity appears on the scene and (b) the process of a house's being built, or the activity of building a house. If we do, we may want to deny that the hurricane built a house, and even that the thing left in the wake of the hurricane, as fit for habitation as it is, is really a house. It is possible to see Aquinas's emphasis on an agent's tending toward 'something definite' as connected with such ideas—and, in particular, with the view that part of what it is to be as a motion or activity (as opposed to being a random collection of

point we just noted, that this something definite is a form or perfection, and that the agent has to be structured in such a way as to be able to bring about this form or perfection. This idea explicitly surfaces in an argument that Thomas gives in ¶ 6:

¶ 6: Furthermore, for every agent the principle of its action is either its nature or its intellect. Now, there is no question that intellectual agents act for the sake of an end, because they think ahead of time in their intellects of the things which they achieve through action; and their action stems from such preconception. This is what it means for the intellect to be the principle of action. Just as the entire likeness of the result achieved by the actions of an intelligent agent exists in the intellect that preconceives it, so, too, does the likeness of a natural resultant pre-exist in the natural agent; and as a consequence of this, the action is determined to a definite result. For fire gives rise to fire, and an olive to an olive. Therefore, the agent that acts with nature as its principle is just as much directed to a definite end, in its action, as is the agent that acts through the intellect as its principle. Therefore, every agent acts for an end. (*Opera omnia* v. 161; Bourke, iii, pt. 1, 36–37)¹²

Aquinas thinks of the result of the agent's activity as achieved by some 'likeness', so that the likeness of the effect in the fire or the olive tree is doing the same sort of work as the likeness of the effect in the mind of the cognitive agent. That the agent's exercise of its agency is directed by the likeness is why it is appropriate to characterize the agent as acting for an end or intending an end. I shall refer to such agents—that is, agents the exercise of whose agency is directed by some end—as end-directed temporarily consecutive goings on) is to be end-directed. (Sean Kelsey instructively develops these considerations in 'The Argument of E3' (unpublished) in the context of Aristotle's philosophy.) I am focusing on a different aspect of the Aristotelian account of a *motus*, the idea that a *motus* is an actualization, a bringing of perfection into the world. It is this aspect of a *motus* that triggers the need for an efficient cause; without this aspect, there is no reason why a process could not take place of its own accord, i.e. without an efficient cause aiming at the situation that it 'terminates', as is perhaps the case with corruptions. I think there is an especially sharp and illuminating contrast here between Aristotelian thought and early modern thought about causal transactions within *res extensa*: in early modern thought, external efficient causes are brought into play to explain deviation from inertial motion, that is, to explain a thing's failure to remain in the same state. By contrast, in Aristotelian thought, the efficient cause must not only dislodge the thing from its current state, but also bring it (all the way) to its 'next' state, a state of actuality or perfection. It seems to me that Spinoza's account of the sense in which human beings have 'ends' (see below) makes it unlikely that he would see a deep metaphysical difference between (a) and (b), and that, on this point, he would be, to use Strawson's terminology, a revisionist metaphysician.

¹² I have used Vernon J. Bourke's translation of the *Summa contra gentiles*, iii (Notre Dame: University of Notre Dame, 1975).

or end-governed; I shall refer to agents whose agency is not so directed as blind.

This helps us to understand an important commitment in Aristotelian thinking about causation. The final cause holds a preeminent place within the order of causality. Aquinas explains that ‘the end is the cause of causes, inasmuch as it is the cause of the causality of all the causes’ (*Opera omnia* xvi. 340; Goodwin, 19). By this he means that, absent the direction of the end, the agent’s actions would be undetermined (and so could not make potential perfection actual), matter would not receive form, and form would not perfect matter:

Hence, the end is the cause of the causality of the efficient cause, for it makes the efficient cause be an efficient cause. Similarly, it makes the matter be matter, and form be form, since matter receives a form for some end, and form perfects matter for an end. Wherefore the end is said to be the cause of the causality of all the causes. (*Opera omnia*, xvi. 340; Goodwin, 19)

In his *Metaphysics* Commentary, Aquinas explicates the relation between the final cause and efficient cause in this way:

The final cause is the cause of the efficient cause, not in the sense that it makes it be, but inasmuch as it is the reason for the causality of the efficient cause. For an efficient cause is a cause inasmuch as it acts, and it acts only because of the final cause. Hence the efficient cause derives its causality from the final cause. (n. 775; *Opera omnia* xx. 584; Rowan, 308)¹³

If agents intend ends, then one might think that they are subject to various forms of evaluation depending on how well they achieve their ends. Aquinas takes it to be obvious that they are subject to such evaluation. Moreover, since he holds the converse thesis—i.e. that they would not be subject to such evaluation unless they intended ends—he even argues from agents’ being subject to evaluation to their intending ends:

¶ 7: Again, there is no fault (*peccatum*) to be found, except in the case of things that are for the sake of an end. A fault is never attributed to an agent, if the failure is related to something that is not the agent’s end. Thus, the fault of failing to heal is imputed to the physician, but not to the builder or the grammarian. We do find fault with things done according to art, for instance, when the grammarian does not speak correctly, and also in things done according to nature, as is evident in the case of the birth of monsters. Therefore, it is just as true of the agent

¹³ English translation, *St. Thomas Aquinas: Commentary on the Metaphysics of Aristotle*, trans. John P. Rowan (Chicago: Henry Regnery Co., 1961).

that acts in accord with nature as of the agent who acts in accord with art and as a result of previous planning that action is for the sake of an end. (*Opera omnia* v. 161; Bourke, iii, pt. 1, 37)

We shall canvass below Spinoza's reaction to this way of thinking about natural agents.

One might object that the idea of being governed by an end makes sense only in the case of a cognitive agent, an agent who knows where she is headed, so to speak. This is an important issue that we'll want to consider more fully at the end of this section, but we should note for now that, as the argument in ¶ 6 indicates, Aquinas sees the conscious planning in view of an end as just one example of a certain general structure, where the agency of an efficient cause is directed by some likeness that an agent possesses of a perfection to be achieved. In *De Principiis Naturae*, he argues for the coherence of the thesis that noncognitive beings intend ends thus:

And although every agent, be it natural or voluntary, intends an end, we should realize nevertheless that it does not follow that every agent knows or deliberates about the end. Knowing the end is necessary for those whose actions are not determined, but for whom opposed goals are possible (*sed se habent ad opposita*), as is the case for voluntary agents. These, therefore, must know the end, through which knowledge they determine their actions. However, the actions of natural agents are determined; hence, there is no necessity for their choosing the means to their end. Avicenna offers the example of the cithara player, who need not deliberate as to which notes form a chord by striking each individually, since they are predetermined. If the player did deliberate, there would be a delay between the notes, producing an arpeggio. Furthermore, deliberation is especially apparent in the voluntary agent, as opposed to the natural agent. So an even stronger argument can be made if one sees that if a voluntary agent (whose deliberation is especially evident) does not always deliberate, then, certainly, neither does the natural agent. Therefore, it is possible for a natural agent to intend an end without deliberating about it. To intend in this way is nothing more than to have a natural inclination toward something (*habere naturalem inclinationem ad aliquid*). (*Opera omnia* xvi. 339–40; Goodwin, 15–16)

If one reflects on nondeliberative aspects of human agency, one will see, Thomas thinks, that cognition is not essential to something's intending an end. What is essential for him seems to be what we noticed above (in SCG 2.6), that the end shape or determine the agent's activity.

Appetite, Natural Inclination, and the Good

There is in Thomas's thought a basic connection between the ideas of the end and the good that runs through the idea of appetite or natural inclination. Thomas takes his basic characterization of good from the *Nicomachean Ethics*, where Aristotle says that good is what all desire (1094^a1).¹⁴ The Latin used for this was *bonum est quod omni appetunt*. *Appeto*, a cognate of appetite, was used to render the Greek *epithēmi*. Because there is no verb in English that matches *appetere* and we'll want to preserve its connection to appetite (as well as reserve 'desire' for cognitive beings), I will translate *appetere* somewhat awkwardly as 'to have an appetite for', flagging exceptions. Aquinas himself explains the meaning of the word *appetere* in this way: 'to have an appetite for (*appetere*) is nothing other than to seek after something (*aliquid petere*), stretching (*tendere*), as it were, toward something ordered to oneself.'¹⁵ Thus good is what all things have an appetite for (*appetunt*).

Goodness is a transcendental property, according to Aquinas, coextensive with being. Good and being differ only in account, in *logos* or *ratio*. What goodness brings into view that being does not, is a relation to appetency (*appetibilis*): to consider something as good is to consider it as the object of some appetite.

What then is an appetite for Aquinas? (The concept of appetite will prove important, because Spinoza, as we shall see, connects *conatus* and appetite.) Taken in the most general way, an appetite is simply a natural inclination. Aquinas makes this clear in *Summa theologiae* (*ST*) I, Q. 80, A. 1:

[W]e must observe that some inclination follows every form: for example, fire, by its form, is inclined to rise, and to generate its like. Now, the form is found to have a more perfect existence in those things which participate [in] knowledge (*quae cognitionem participant*) than in those which lack knowledge. For in those which lack knowledge, the form is found to determine each thing only to its being—that is, to its nature. Therefore this natural form is followed by a natural inclination, which is called natural appetite. (*Opera omnia* i. 318)¹⁶

¹⁴ Aristotle seems to have intended this formulation in a more circumscribed way, restricting it to art, inquiry, action, and decision, than it was understood by Aquinas.

¹⁵ *De veritate*, Q. 22, A. 1, *Opera omnia* ix. 315; MMS, pp. 36–7. Translations of *De veritate* have been taken from Robert W. Mulligan, S.J., James V. McGlynn, S.J., and Robert W. Schmidt, S.J., trans., *Truth* (Chicago: Henry Regnery Co., 1952–4), henceforth MMS.

¹⁶ Translations from Aquinas's *Summa theologiae* are taken from Fathers of the English Dominican Province, trans., *Summa theologiae*, 4 pts. in 5 vols. (Westminster, MD: Christian Classics, 1981; first published 1911).

We might think of these natural inclinations or appetites as constituting an agent's tendency to move or act: the fire's tendency to rise, the olive tree's tendency to generate an olive tree. Moreover, we saw above that natural inclinations or appetites are end-directed: Aquinas writes, in *De principiis naturae*, concerning the end-directedness of noncognitive beings: 'To intend in this way is nothing more than to have a natural inclination toward something (*habere naturalem inclinationem ad aliquid*).'¹⁷ Finally, the defining characteristic of good is that which all things have appetite for (*appetunt*). Putting these ideas together in *SCG* 3.3, Aquinas moves from the thesis that every agent acts for an end to the thesis that every agent acts for a good (*omne agens agit propter bonum*).

¶ 3: Again, the end is that in which the appetitive inclination of an agent or mover, and of the thing moved, finds its rest. Now, it is of the nature of the good (*ratione boni*) that it provides a terminus for appetite, since 'the good is that for which all have an appetite (*appetunt*).'¹⁷ Therefore, every action and motion are for the sake of a good (*propter bonum*). (*Opera omnia* v. 161; *Bourke, iii, pt. 1, 38)¹⁷

Cognitivity and End Seeking: Internal (natural) Motion versus External (violent) Motion

Much of Thomas's thinking about final causality is built around the thesis that when an agent exercises its power what the agent is doing is actualizing perfection, and this cannot happen blindly. Something in the agent must guide the exercise of its power, if the agent is to be able to move something from being merely potentially perfect in some respect to being actually perfect in that respect. If we develop final causality in this way, it seems plausible enough to think of noncognitive agents as exercising their agency through final causes, that is, to think of them as seeking (as having appetites for) ends.

Yet, the vocabulary of seeking, of having an appetite for (*appetere*), and intending (*intendere*) has cognitive overtones, and when defending his view that all natural agents intend ends and have appetites, Thomas considers repeatedly the objection that only cognitive (or deliberative beings) do so. In some contexts, as we have seen, he simply argues that there is no conceptual obstacle to an end's being intended without reflection or consciousness—this was what the example of the cithara

¹⁷ In the cases where an English source has an '*', I have modified the translation.

player was supposed to help show—but sometimes he adds another layer of theory, which I want to consider now. (In describing this as another layer of theory, I do not mean to suggest that Aquinas himself thought that these two sets of ideas should be separated, but only that the fuller story we are about to consider can be usefully distinguished for our purposes from the constellation of ideas we have examined thus far.)

According to Thomas, noncognitive beings intend their ends through their relation to a cognitive being who has set the end for them (for natural beings, the relevant end-setting cognitive being is God). So, for example, in his *Physics* commentary, here's how Thomas explains Aristotle's thesis that matter seeks [*appetit*] form:¹⁸

For we must note that everything which seeks (*appetit*) something either knows that which it seeks and orders itself to it, or else it tends toward it by the ordination and direction of someone who knows, as the arrow tends toward a determinate mark by the direction and ordination of the archer. Therefore, natural appetite is nothing but the ordination of things to their end in accordance with their proper natures. However a being in act is not only ordered to its end by an active power, but also by its matter insofar as it is potency. For form is the end of the matter. Therefore for matter to seek form is nothing other than matter being ordered to form as potency to act.¹⁹ (n. 138; *Opera omnia* xviii. 239; BST 65)

This passage is about natural inclination or natural appetite in general, and so it covers both the natural powers with which we have been concerned and the inclination of matter to receive form. For Aquinas, it is a sort of background condition of natural things seeking (*appetere*) something that they have been ordered so as to do by an intelligent being. While this condition is part of Thomas's thinking about final causality, as I indicated above, I believe that the position that natural beings act for an end could be coherently developed independently of this condition. My own sense is that Aristotle himself, for example, may have held that (noncognitive) natural beings intend ends, without maintaining that their doing so depends on those beings having their ends set for them by some intelligent being. (One of the things that may ultimately

¹⁸ The Greek for 'seeks' in the text that Thomas is commenting upon (*Physics* 192^a18) comes from *epiēmi* and *oregō*; the latter has both the sense of being inclined toward and having an appetite for.

¹⁹ English translation taken from Richard J. Blackwell, Richard J. Spath, and W. Edmund Thirkel, *St. Thomas Aquinas: Commentary of Aristotle's Physics* (New Haven: Yale University Press, 1963); abbreviated as 'BST'.

be at issue here, I think, is how far one pushes back the request for an account of how perfection gets into the universe: Is one content to stop at the fact that the perfection already exists in the agent in some form or other, or does one feel the need to ask now, how did perfection, perhaps in the form of some likeness, get into the agent?)

Be that as it may, there is a way in which, if we are not careful, Aquinas's remarks about cognitive beings setting ends for noncognitive beings may make it too easy for a noncognitive being to acquire an end, may allow a noncognitive being to acquire an end on the cheap, as it were. For example, while one might agree that there is a sense in which an arrow has the end of hitting the target, or the chair seeks to hold me up (or has an appetite for holding me up)—after all, that's what I, or the people at IKEA, designed it to do—this does not seem to be the sort of thing that we were talking about when we talked about the rock's seeking its natural place or the olive tree's appetite to produce another olive tree. The arrow is not exercising *its* causality in order to strike the target; the various pieces of the chair are not exercising *their* causality in order to hold me up: rather, things have been arranged by cognitive beings so that if the arrow exercises its causality (stays intact, falls toward the ground), the target will be struck, or so that if the various pieces of the chair do whatever it is they do (e.g. resist dissolution), I will be held up.

How should we understand, then, the difference between an arrow's having the end of hitting the target, and a heavy thing's seeking its natural place? Aquinas draws this distinction in terms of what activities of a thing follow from its nature and what activities are external or constrained, that is, in Aristotelian terminology, 'violent':

The natural necessity inherent in those beings which are determined to a particular thing, is a kind of impression from God, directing them to their end; as the necessity whereby an arrow is moved so as to fly towards a certain point is an impression from the archer, and not from the arrow. But there is a difference, inasmuch as that which creatures receive from God is their nature, while that which natural things receive from man in addition to their nature relates to violence. Wherefore, as the violent necessity in the movement of the arrow shows the action of the archer, so the natural necessity of things shows the government of Divine Providence. (*ST I, Q. 103, A. 1, ad 3; *Opera omnia* i. 595)

So whereas the motion of the heavy thing is natural, the instrumental motion of an artifact is violent.

Aquinas elaborates this contrast in *De veritate* Q. 22, A. 1, 'Do All Things Tend to Good?' He begins his defense of an affirmative answer by adducing considerations similar to those we have already seen. In particular, he appeals to Aristotle's criticism of ancient philosophers, who 'taught that well-suited effects in nature come about from necessity of their prior causes (*necessitate praecedentium causarum*), though the natural causes themselves have not been disposed in that particular way with a view to the suitability of effects.' According to Aristotle, 'unless such suitabilities and aptnesses were in some sense intended, they would come about by chance and so would not happen most of the time but only rarely, like other things which we say happen by chance.' Thomas proceeds from there to note that a thing 'may be ordained or directed to something else as an end' in two ways, first, 'by itself, as a man directs himself to the place where he is going' and, second, 'by something else, as an arrow is aimed at a definite spot by the archer.' The self-direction requires knowledge; being directed by another does not. Within the class of those beings that are directed by another, he draws a further distinction:

(1) Sometimes what is directed to an end is merely driven or moved by the one directing it without acquiring from the director any form by which such a direction or inclination belongs to it. Such an inclination, like that by which the arrow is aimed by the archer at a definite target, is violent. (2) Sometimes what is directed or inclined to an end acquires from the director or mover some form by which such an inclination belongs to it. In that case the inclination will be natural, having a natural principle. Thus He who gave heaviness to the stone inclined it to be borne downward naturally. In this way the one who begets them is the mover in regard to heavy and light things, according to the Philosopher.

It is after this fashion that all natural things are inclined to what is suitable for them, having within themselves some principle of their inclination in virtue of which that inclination is natural, so that in a way they go themselves and are not merely led to their due ends. Things moved by violence are only led, because they contribute nothing to the mover. But natural things go to their ends inasmuch as they cooperate with the one inclining and directing them through a principle implanted in them. (*De veritate*, Q. 22, A. 1; *Opera omnia* ix. 315; MMS 3:36)

Some of the things that acquire their ends from another—the ones whose motion is violent—are 'only led'. They have no internal form or natural impression directing their activity toward the inherited end.

Other beings, natural things exercising their activity through their own principles, ‘go themselves’ through a ‘form’ (as we saw above, Aquinas says in *ST I*, Q. 80, A. 1, that ‘some inclination follows every form’) or a natural ‘impression’. We might term end-direction of the second sort *internal* or *natural* end-direction, since the end is viewed as part of the agent’s natural make-up, internal to it; and we might call the other sort of end-direction *external* or *violent* end-direction, since the end is external to the agent’s nature and, as such, guides it violently.

Let’s note, finally, that what might count as a failure from the internal point of view of the agent might count as a success from the point of view of an external agent, using it as an instrument. For example, in *De veritate*, Q. 5, A. 4, Aquinas notes that there is no power ordained to the production of ‘natural monstrosities’ even if the generation of such monstrosities is ‘directed by God to some useful purpose’; rather, the monstrosities result from the failure of a natural agent to reach its end (see also *SCG* 3.2.70). Similarly, Aquinas endorses the account of chance and fortune presented by Aristotle in Book II of the *Physics*, according to which an outcome that occurs outside the intention of an agent is owed to chance (in the case of a natural agent) or fortune (in the case of a voluntary agent).²⁰

SPINOZA

Although some early modern thinkers do have things to say about external end-direction—Spinoza complains in the Appendix to Part I of the *Ethics*, for example, about our tendency to read divine purpose into natural calamities—I do not think that the issues raised by this topic

²⁰ That fact that Aquinas traces both the internal end-directedness of natural beings and external end-directedness of failed natural causation to God, as both the author of the heavy thing’s nature and the author of the plan for the universe, means that, for him, there are two very different species of ‘divine teleology’. This makes it hard to determine when early modern figures complain about divine teleology—e.g. when Descartes says that we cannot know God’s ends and ‘for this reason alone I consider the customary search for final causes to be totally useless in physics’, or when Spinoza suggests in the Appendix to Part I of the *Ethics* that we should not attribute ends to God at all—whether they had in view end-directedness of natural beings or speculation concerning God’s plans or both. (In these cases, Descartes’s qualification ‘in physics’ suggests to me that he primarily has natural beings in mind, and the range of examples that Spinoza presents, encompassing natural disasters as well as the organization of living things, would seem to indicate he has both in view.)

run as deep as questions raised by internal end-direction. Consider the thesis that every agent acts for an end. It concerns internal end-direction. Every agent, according to Thomas, is structured so as to realize some perfection that it seeks/has an appetite for, regardless of what other agents are seeking to do with it. The thesis falls out of a certain conception of what an efficient cause is, and connects up with a constellation of ideas, about what a change (*motus*) is, about why we need efficient causes (to actualize perfection), and about how they must be structured (guided by ends) if they are to play the role assigned to them. Together, these ideas help to define the basic causal architecture of the universe.

Each of these points comes under pressure from the new science. Early modern philosophers reject the Aristotelian characterization of a change (*motus*) as the actualization of something in potency insofar as it is in potency. Causal transactions in the corporeal world, as they understand it, do not have natural termini. Inertial motion goes on forever; motive activity in the universe is conserved rather than ending as the relevant agents 'rest' upon the completion of their work. Hence, early modern thinking about why we need corporeal efficient causes (within the corporeal world) and what they are supposed to do differs from Aristotelian thinking. They are now understood to be blind, as opposed to end-guided. The very conception of what a corporeal efficient is has been altered at its root.

One of the more impressive—though, it seems to me, perhaps not yet sufficiently appreciated—aspects of Spinoza's philosophy is his attempt to rethink systematically the nature of agency and activity in general in view of the new conception of activity and causation that one finds within the corporeal world. He presents a theory according to which the sort of causality the new scientists find in the corporeal order is found throughout all of nature. This, I believe, is the significance of his striking announcement in the Preface of Part 3 that whereas others 'seem to conceive man in nature as a dominion within a dominion' and 'believe that man disturbs rather than follows, the order of nature, that he has absolute power over his actions, and that he is determined only by himself', he, Spinoza, is going to 'treat men's vices and absurdities in Geometrical style' because:

Nothing happens in nature which can be attributed to any defect in it, for nature is always the same, and its virtue and power of acting are everywhere one

and the same, i.e. the laws and rules of nature, according to which all things happen, and change from one form to another, are always and everywhere the same. (EIIIpref.; G ii. 138; C i. 492)

Plainly, what Spinoza is saying here goes beyond the thought that human beings cannot be free in a deterministic universe; he is claiming that activity or agency ('the virtue and power of acting') are 'everywhere one and the same'.

It is not obvious, of course, what it *means* to claim that activity or agency is everywhere one and the same. I find it helpful to approach this question in two steps. First, we need a working understanding of how Spinoza understood the basic structure of corporeal systems. Second, we will want to understand how Spinoza understands motivation and activity in general and human activity in particular.

From a Hylomorphic Ontology to Pattern-like Beings

As we saw above, the scholastic view of change as the actualization of potential perfection leads to an ontology where generated beings are a composite of a principle of actualization (form) and potentiality (matter). How are corporeal individuals (bodies) structured, according to Spinoza? His general picture of the physical order is deeply indebted to Descartes,²¹ so let's begin there. When, in the Sixth Meditation, Descartes describes the clock as something 'constructed with wheels and weights' (AT VII, 84; CSM I, 58), he is asking us to consider the clock simply as a corporeal structure, as a collection of various pieces of matter of different sizes and shapes, juxtaposed in certain ways (in particular, he is asking us to abstract from the fact that this system of matter happened to originate in a certain way, so that it is an artifact). Descartes maintains further that the extended world is a plenum of a uniform extension in motion, so that the differences among the various materials found in the clock depend on the internal patterns of motion associated with iron, tin, and so forth. So, for Descartes, a clock is a very complex pattern of motion running through extension.

²¹ Allow me to put to the side what differences between Spinoza and Descartes result from the fact that Spinoza regards bodies as modes of *res extensa*. While not irrelevant to the present discussion, to get into this controversial topic would take us very far afield. For the present discussion, I'll use the term 'body' in a way that is neutral between whether a body is a mode or a substance (or a part of a substance). I discuss the difference between Spinoza's and Descartes's positions on this question in 'Monism in Spinoza', in Olli Koistinen and John Biro (eds.), *Spinoza: Metaphysical Themes* (Oxford: Oxford University Press, 2002), 38–59, esp. pp. 49–54.

Spinoza works with a similar conception of a corporeal individual. In the very schematic account of body that he provides after *EIIP*₁₃, he writes, ‘If the parts composing an Individual become greater or less, but in such a proportion that they all keep the same ratio of motion and rest to each other as before, then the Individual will likewise retain its nature, as before, without any change of form’ [Lemma 5; G ii. 100–1; C i. 461], and adds, ‘Furthermore, the Individual so composed retains its nature, whether it, as a whole, moves or is at rest, or whether it moves in this or that direction, so long as each part retains its motion, and communicates it, as before to the others’ [Lemma 7; G ii. 101; C i. 461]. In this material following *EIIP*₁₃, Spinoza is providing an extremely schematic picture of an enduring physical system, in the context of the flux of *res extensa*, what we might think of as a very rough first-cut account of what a corporeal system that persists over time is.

Corporeal beings, for Descartes and Spinoza, then, are relatively stable, more or less complex, currents and eddies within a sea of fluidlike extension. Some have wondered whether we can get any foothold in such a chaotic world of flux, and some have taken Leibniz to be arguing that it is impossible to do without reintroducing scholastic notions, such as the idea of a substantial form. I do not see any problem here in principle: one might live in a world that is too chaotic to get any purchase on it, and one might not. We are indisputably able, at least on occasion, to track and comprehend patterns in fluxes—consider, for example, rainbows, hurricanes and tornadoes, the jet stream and the Gulf Stream, and, one might add, even galaxies, which from our point of view might as well be nothing more than such patterns. We should think of watches, ferns, snails, and even the human body, in Descartes and Spinoza’s metaphysics, along the lines of especially complex and stable tornadoes. What natures these beings have are given through more or less stable patterns of motion; I shall characterize these beings as ‘pattern-like’.²²

²² There is an issue here about how to think about patterns that typically evolve over time: hurricanes usually gather intensity and weaken, and plants and animals have considerably more complicated courses of development. My sense is that this additional complexity, while important and not really addressed by Spinoza’s rather sketchy treatment of this topic, can probably be accommodated within the framework of pattern-like beings. I should mention that the issues concerning final causality that we are concerned with do not seem to hang on whether one adopts a plenum version of the new science or a corpuscular version, according to which corporeal beings are composed of tiny corpuscles moving about in various ways.

Internal Final Causality and Pattern-like Corporeal Systems

Where do these pattern-like corporeal systems fall vis-à-vis Aquinas's distinction between something whose activity is internally or naturally directed by some end, and something that is externally or violently directed by an agent to an end? That is, does a system of matter in motion that we call a clock 'go itself' so as to keep the correct time, or is it 'led' to do so by the clockmaker? Does the system of matter in motion we call a plant 'go itself' to seek nourishment, or is it 'led' to do so by God? Does it matter that in the one case the system is artificial in that it has been arranged by a human being, whereas in the other case the system is natural and (to suppose something that Spinoza would deny) that it results from the way in which God has planned things?

If we focus on an Aristotelian-style distinction between natural and violent motion—to the extent that one can locate such a distinction within a mechanistic framework—one might be tempted to conclude that a plant system naturally pursues the ends of nutrition and reproduction. After all, nothing is forcing the matter in motion from its natural course, which in this context would mean the course set by the laws of motion. Growth and reproduction do not occur violently but rather naturally.

However, even if growth and reproduction are the natural outcome of the activities of the plant system, those activities, as understood in the new science, are not directed by ends. All of the pattern system's activities are (already?) set by the motive tendencies of its parts (the interaction of those parts with the environment). There is no place in a pattern-like being for a 'form' or 'impression' of the ends of growth and reproduction to shape the exercise of its agency. Moreover, this is true however the system came into being, whether artificially via a clockmaker or naturally through God. The human or divine artificer has set things up so that certain things will likely result in the clock or the plant, so that the clock's hands will move at a constant angular velocity or that over time the plant will, *ceteris paribus*, grow. But after things have been set up, these results eventuate independently of the ends, through motive tendencies blindly following their course. And so, even if it is true that the plant's movements and the clock's movements are natural, not violent, their situation is more like that of the arrow's being led to do the archer's bidding and not a heavy body's having implanted within it a form that directs its motion. In other words, there is no internal final causality here.

Descartes briefly explores this point in the Sixth Meditation when he explains the philosophical basis of the idea of something's deviating from its nature. (The idea of something's deviating from its nature is approximately related to the idea of being internally end-directed as follows: when an internally end-directed being fails to achieve some end, it deviates from its nature. So if an end is not internal to a thing's nature, the failure to achieve it doesn't count as a deviation from its nature.) In this discussion, Descartes does allow that there is a sense of nature according to which we can say that a clock that does not keep correct time or a human body that is in ill health 'deviates from its nature', but insists that this sense of nature is 'extrinsic' to the clock or body (AT vii. 84–4; CSM ii. 58–9). This is because the sense of nature depends on comparisons of the clock or body with other things (viz. the intentions of the clockmaker, or to other, healthy, human beings). (We'll see below how Spinoza works these ideas out.) If we focus only on the individual physical system itself—the 'wheels and the weights', in the case of the clock, and 'a kind of machine equipped and made up of bones, nerves, muscles, veins, blind and skin', in the case of the body—we will see that a badly made clock 'observes all the laws of its nature just as closely as' one that tells the correct time and that it is 'just as natural' for the diseased body to do what it does as for a healthy one to do what it does.²³

Although the activities of a pattern-like being, say, a plant, are not violent or constrained, they are not internally governed by ends. Plants do

²³ In 'Descartes, Mechanics, and the Mechanical Philosophy', *Midwest Studies in Philosophy* 26 (2002), 185–204, at 197–8, Daniel Garber offers a reading of this passage according to which its point is to remove teleology from the science of mechanics. In particular, it is supposed to support the following conclusion: 'For traditional mechanics, a machine is an artifact, something made for a particular purpose. For Descartes, I suggest, a machine has become simply a collection of parts whose states are determined by the size, shape, and motion of those parts, as well as the collisions among them. The focus of Cartesian mechanics, a Cartesian mechanical philosophy, is not on the things that we can do with machines and the purposes for which we might construct them, but on the means at our disposal for constructing them, on the different configurations of size, shape, and motion that produce those effects' (p. 198). I read the passage differently, as simply making the point that the clock and, on Descartes's telling, the human body, are more like Aquinas's arrow than his heavy thing (which is supposed to have an impression within it directing it to earth): whatever finality is involved in their activities is not internal, but external. As far as I am aware, that is how everyone thought of artifacts like machines. This makes it difficult for me to see that what Descartes is saying about the clock (as opposed to the human body) should come as news to anyone, and so hard to see why it should reorient the science of mechanics in some new, 'nonteleological' direction.

regularly and naturally assimilate nourishment and reproduce, but not because they are internally guided to do so. It is worth recalling that Aquinas, of course, does not think such a thing is naturally possible. From his point of view, assimilation of nourishment and reproduction involve the actualization of potential perfection, and he, following Aristotle, took it to be impossible that regions of matter blindly following some laws of motion could in general bring about such a thing: that perfection should be actualized by the by-product of regions of matter blindly colliding could happen only rarely, by chance. (To be sure, it lies within God's power to bring about such occurrences frequently; but we are not interested in what might happen via some miraculous activity of God's part, but rather what happens in the ordinary course of events.) This being so, Thomas takes the fact that a plant regularly secures certain perfections as evidence of the plant's being internally directed by ends.²⁴

Pattern-like Natures and 'Fault'

One of Aquinas's arguments for the claim that natural being seeks ends is that we find 'fault (*peccatum*)' with things 'done according to nature, as

²⁴ In 'Sensible Ends', Simmons suggests that Descartes would have no objection to 'directed powers', when taken as 'placeholders for latent or insensible processes that underlie regular and observable changes'; he would object only when 'they are put forward as *simple* and *basic* efficient causes that therefore admit of no further analysis': 'Descartes' charge, I submit, is that the Aristotelian natural philosophers effectively allow ends to masquerade as ultimate efficient causes, thereby putting a premature halt to their inquiry. When Descartes replaces directed powers with micro-mechanisms, he is not so much denying that natural processes have ends as he is denying that the Aristotelians have the right story about the mechanisms by which those ends are achieved' (p. 71). It is not clear to me to what extent Descartes does make such a charge, but, in any case, the charge's intelligibility rests on a conception of efficient causality alien to an Aristotelian outlook. It wasn't some sort of methodological stubbornness on the part of the Aristotelians that prevented them from allowing for the 'replacement' of their directed powers by (blind) micro-mechanisms. The Aristotelians thought that (in general: for the most part) the generation of perfections cannot take place in the ordinary course of events as the result of a series of accidental occurrences, but instead requires beings whose agency is directed by an end in order to bring this about. From their point of view, Descartes is not simply replacing 'directed powers' by underlying mechanisms; he's saying that something can get from potency to act blindly—that is, we can get from potency to act through a series of causes that are not governed by the relevant end—something that they did not think could happen naturally. Conversely, it is not obvious that, from Descartes's point of view, changes within *res extensa* involve the movement from potency to act, or that the generation of a tree involves the introduction of a new perfection in the world (see his comments about 'plants, flies, etc.', at AT vii. 134). How one stands on very basic questions about the nature of change and when and why efficient causes are called for affects whether it even makes sense to think that a 'directed power' might be 'replaced by' an underlying mechanistic process.

is evident in the case of the birth of monsters' and 'no fault (*peccatum*) to be found, except in the case of things that are for the sake of an end'. The idea that exercise of the natural agent's power might involve fault rests in part on the idea that monsters are not as they should be, that a monster is a defective being. In 4Pref, Spinoza offers an extended discussion of fault in nature, which can be instructively read in the context of Aquinas's argument.

We saw above that Descartes holds that a judgment that a corporeal pattern-like being deviates from its nature rests on an 'extrinsic denomination', a comparison of the individual with other things. This is to provide a basis for such judgments—they are not wholly capricious or arbitrary—without locating that basis in the very metaphysical constitution of the individual being assessed.²⁵

Consider first artifacts. If, for example, we think of a clock in terms of the intentions of the clockmaker, we can say the clock is operating in a faulty way (what's wrong with this watch?). But this involves an 'extrinsic denomination', thinking of the clock in relation to something else (the clockmaker's intentions). If we consider the clock in itself, that is, simply as a physical thing, a particular pattern of motion in matter, there

²⁵ It is easy to think that Descartes brings up the 'extrinsic' sense of nature only to dismiss it, as when he writes: 'For this one [sc. acceptance of nature] is nothing but a denomination (*denominatio*) that depends on my thought (*cognitione*), comparing a sick man and a poorly made clock with the idea of a healthy man and correctly made clock, and is extrinsic to the things that it is said of (*haec enim nihil aliud est quam denominatio a cogitatione mea hominem aegrotum & horologium male fabricatum cum idea hominis sani & horologii recte facti comparante dependens*). By the other use I understand something that is in fact (*vero*) found in things, and for that reason possesses some truth (*veritatis*)' (AT vii. 85). But I think Descartes has a constructive role for his extrinsic sense of nature; it provides the basis for certain teleological idioms, telling us what we mean when we say that a body is sick or defective. In brief, Descartes's idea is that such idioms depend on comparisons between the defective thing and either the intentions of an artificer or other systems that strike us as similar, to which we compare the original system in terms of stability, complexity of activity, and so forth. I think Descartes thinks we can do this pretty much across the board, e.g. we evaluate weather systems, lichen, coral reefs, slugs, cats, and dogs along these lines. These assessments, while not grounded in the metaphysical constitution of the individual being evaluated, do tell us something about the individual and have their point and use. What Spinoza is doing in 4Pref seems to be very similar in spirit. For a different account of Descartes's views on these matters, according to which teleological idioms, when used in connection with the human body, depend on its union with the mind, and when used in connection with animals are 'based on an (admittedly compelling) analogy with the organs of the human body' (p. 62, n. 17), see Simmons, 'Sensible Ends'. Her view may be encouraged by her translation of the relevant part of the above extract, so as to read that the extrinsic sense of nature rests on an 'arbitrary denomination extrinsic to the things of which it is predicated and dependent only on my thought' ('Sensible Ends', 58). However, I don't see anything in the Latin (or French) that licenses the 'arbitrary' here.

is no basis for an attribution of defect: the pattern-like being is doing exactly what it 'should' do, what any such pattern-like being would do in similar circumstances. As Descartes remarks, a clock 'observes all the laws of nature just as closely when it is badly made and tells the wrong time as when it completely fulfills the wishes of the clockmaker' (AT vii. 84; CSM ii. 58).

We do not find fault just with artifacts, however. We also find fault with natural entities, such as three-legged dogs or monsters. How do we come to attribute defect to nonartificial, pattern-like beings? In *EIV*pref., Spinoza presents an extended treatment of this topic, explaining along the way how he would have us understand some key vocabulary (perfect and imperfect, good and evil) that he employs in his own ethical theorizing. According to Spinoza, the dichotomy between perfect and imperfect was originally drawn in terms of how well an author of a work realizes his intentions in that work.²⁶ Next, people came to have standing ideas about a large class of artifacts and 'to form universal ideas, and devise models of houses, buildings, towers, etc.' and make judgments of imperfection and perfection in terms of these models rather than fabricators' intentions. Finally, this practice was transferred to the natural order, 'So when [people] see something happen in nature which does not agree with the model they have conceived of this kind of thing, they believe that Nature itself has failed or sinned, and left the thing imperfect' (*EIV*pref.; G ii. 206; C i. 544). So 'perfection and imperfection, therefore, are only modes of thinking, i.e. notions we are accustomed to feign because we compare individuals of the same species to one another' (*EIV*pref.; G ii. 207; C i. 545).

Here is what I think Spinoza has in mind. If we take a given system of matter and compare it to other, similar systems of matter, we may develop views about how things usually go with such systems. Doing so is not without pragmatic value: it can help us, for example, decide what to do if a pattern-like cat is hot (we might say feverish), if we know what has happened with other systems that strike us as reasonably similar. But the comparison of the cat with other, similar pattern-like beings, even if useful and informative, involves relating the cat to something external (to our ideas, and perhaps, through the ideas, to other felinish systems).

²⁶ Spinoza's remarks about the 'the purpose of the Author of' a work and the author's carrying the work 'through to the end which its Author has decided to give it' should be understood in the context of his claim that a final cause is nothing but an appetite (see below).

Whatever pragmatic or epistemic use these comparisons may have, they are not grounded in the constitution of the individual system: all *it* is is a pattern of matter in motion.

Of particular importance here is how a pattern-like being's relation to a species—what Spinoza terms a 'universal idea [one] forms of this kind of thing' (EIVpref.; G ii. 206; C i. 544) differs from an Aristotelian natural being's relation to its species. An Aristotelian natural being is a composite entity, composed of a (substantial) form and matter, which form and matter serve to place the individual in a determinate genus and species.²⁷ Thus, it follows from its metaphysical constitution that it belongs to the genus and species it does. So if we were to make judgments of defect concerning a scholastic natural being by adverting to its genus and species, we would not be relating it to something external. The defect (say, having only three legs) would be based on what it is (something with the substantial form canine), which tells us something about how it should be (four-legged). By way of contrast, if natural beings have pattern-like natures, what God did was to create the matter and the motion, and any classification into a genus or species is subsequent to what the individual is, based on the comparisons with other individuals. In itself, a pattern-like being simply has whatever reality or perfection it happens to have: there is no level of reality that it ought by nature to have. It is what it is.

Spinoza goes on to explain, in this setting, his preferred use for the terms 'perfect' and 'imperfect'. He proposes that we drop the reference to genera and species and simply consider things as beings. If we understand perfection in this way, when we say something is imperfect, we will mean only that it is limited in some way, i.e. that there is something else that has more perfection than it in some respect; we won't mean that it lacks something that it by nature ought to have:

So insofar as we refer all individuals in Nature to this genus [being], compare them to one another, and find that some have more being, or reality, than others, we say that some are more perfect than others. And insofar as we attribute something to them that involves negation, like a limit, an end, a lack of power, etc., we call them imperfect, because they do not affect our Mind as much as those we call perfect, and not because something is lacking (*deficiat*) to them which is theirs, or because Nature has sinned (*peccaverit*). (EIVpref.; G ii. 207–8; C i. 545)

²⁷ In *De ente et essentia* (*Opera omnia* XVI, 331–2; Goodwin, 41–2), Aquinas claims that the genus is taken from the matter and the difference from the form.

(Some might find it surprising that pattern-like systems should admit of comparison in terms of reality or perfection. But Spinoza holds that plants are more impressive than rocks, animals more impressive than plants, people more impressive than animals. This is connected with, I believe, what Spinoza calls their ‘power of acting’, which functions as a sort of place holder for the way the system behaves. Canine anatomy is in many ways more remarkable than slug anatomy: a dog is able to react in more complex and varied ways to its environment, can negotiate more obstacles in its course, is more resilient, and so on.²⁸) In this passage, Spinoza grounds the vocabulary of perfection and imperfection without supposing that beings fall into kinds that carry with them canonical standards of excellence and deficiency for their members. His proposed usage effaces the scholastic distinction between a privation (the absence of perfection a being ought to have by its nature, such as blindness in a dog) and a negation (the simple absence of a being, such as blindness in the rock). Since there is no level of perfection or reality that a thing ought to have, it doesn’t make sense to maintain, as Aquinas did, that natural causes sin: they bring about as much reality or perfection as they do; there is no specific amount of reality or perfection that they are supposed to bring about.

In fact, Spinoza links his claim that there are no privations in nature and that nature does not sin to the character of efficient causality. The passage cited above continues: ‘For nothing belongs to the nature of anything except what follows from the necessity of the nature of the efficient cause. And whatever follows from the necessity of the nature of the efficient cause happens necessarily’ (*EIV*pref.; G ii. 208; C i. 545). By ‘the necessity of the nature of the efficient cause’ I take Spinoza to mean what I have referred to as a blind efficient cause. Consider Aquinas’s example of monstrous birth. In order to find fault—to think that nature has sinned (*peccavit*)—here, we would have to think of causes as aiming at something and failing. But the relevant pattern-like beings, say, the sperm and egg, blindly fix the structure of their ‘issue’; the prior motive tendencies found within them absolutely determine the outcome. There’s nothing here that is not going as it should, nothing trying to do something and failing.

²⁸ In the Aristotelian tradition, differences in the character of activities were understood in terms of differences in the objects or ends of those activities; I take Spinoza’s idea of a generalized ‘power of acting’ to be an attempt to measure individuals and their activities without making the objects or ends of those activities primary.

While Spinoza's handling of good and evil, and human perfection and imperfection, is similar in spirit, it is somewhat more complex because of the use he wishes to make of these dichotomies in his moral theory. Like perfection and imperfection, good and evil are merely comparative or relational and do not indicate anything real in the world: 'As far as good and evil are concerned, they also indicate nothing positive in things, considered in themselves, nor are they anything other than modes of thinking, or notions we form because we compare one thing to another' (*EIV*pref.; *G* ii. 208; *C* i. 545). For his purposes, good and evil are understood in terms of one of the species ideas constructed by us, 'the idea of man'. Like all such ideas, it is based on comparisons that are external to the beings being compared: I am no more constituted by nature a human being than Fido is constituted a dog. Good and evil are defined by reference to this model.²⁹

But though this is so, still we must retain these words. For because we desire to form an idea of man, as a model of human nature which we may look to, it will be useful to us to retain these same words with the meaning I have indicated. In what follows, therefore, I shall understand by good what we know certainly is a means by which we may approach nearer and nearer to the model of human nature we set before ourselves. By evil, what we certainly know prevents us from becoming like that model. Next, we shall say that men are more perfect or imperfect, insofar as they approach more or less near to this model. (*EIV*pref.; *G* ii. 208; *C* i. 545)

In this way, Spinoza provides a meaning for the terms 'good' and 'evil', human 'perfection' and 'imperfection', that is compatible with his position that we are not constituted by some kind we belong to, and that we do not come equipped with ends that shape the exercise of our activity. It is compatible with the guiding idea that our appetites or motive tendencies are not structured from the top down, that is, not via some ends that we are 'ordained' by our nature to seek, but rather from the bottom up, that is, from the motive tendencies of the simplest bodies, to the motive tendencies of the bodies that they form, up through to the very complex system of matter in motion that counts as the human body.

²⁹ Consider also Spinoza's comment in the *Short Treatise*, 'I say, then, that I must conceive a perfect man, if I want to say anything regarding man's good or evil' (ii. 4; *C* i. 103).

Motivation and Human Psychology

Let's turn to Spinoza's handling of motivation, which is one of the most interesting and important aspects of the *Ethics*. The main presentation of his theory of motivation comes at the beginning of Part 3. There Spinoza tells us that the basic motive principle (at least for finite beings) is the so-called conatus principle: 'Each thing, as far as it can by its own power, strives to persevere in its being' (*EIIIIP6*; G ii. 146; C i. 498). It is not immediately obvious how to understand the conatus doctrine. The language of 'striving' and the clause 'as far as it can by its own power' have been taken by many to suggest something that is, broadly speaking, teleological. However, if we step back and consider the role that the doctrine plays within Spinoza's overall theory, I think a rather different picture emerges.

We might think of the conatus doctrine as the specification of a principle of sufficient reason with respect to transactions among finite beings. It tells us what a thing will do when left to its own devices; implicitly, it also tells us when we need an external cause, namely, when a thing has not done what it would have done, left to its own devices. This way of thinking about the conatus principle is encouraged by the fact that, as has often been observed,³⁰ Spinoza's statement of the principle recalls seventeenth-century statements of the conservation of motion. There is an obvious similarity, for example, between Spinoza's formulation of *EIIIIP6*, *unaquaeque res, quantum in se est, in suo esse perserverare conatur* (each thing, as far as it can by its own power, strives to persevere in its being), and (the first part of) Descartes's first law of motion in *Principles*, II.37, *unaquaeque res, quantum in se est, semper in eodem statu perseveret* (each thing, as far as it can by its own power, always perseveres in the same state). Moreover, in *Cogitata metaphysica*, which is a sort of appendix to Spinoza's exposition of the first two parts of Descartes's *Principles of Philosophy*, Spinoza, echoing a line of thought that is found in Descartes himself, argues that motion has a tendency to persevere in its present state.³¹ He writes in a section

³⁰ See e.g. David Bidney, *The Psychology and Ethics of Spinoza* (New Haven: Yale University Press, 1940), 93–9; Edwin Curley, *Behind the Geometrical Method* (Princeton, NJ: Princeton University Press, 1988); Alan Donagan, *Spinoza* (Chicago: University of Chicago Press, 1988), 152.

³¹ Although the *Cogitata metaphysica* was written in close connection with an exposition of Descartes's *Principles of Philosophy*, I see no reason to doubt that the argument here reflects Spinoza's own thinking, or that he changed his views on this topic by the time he wrote the *Ethics*.

headed ‘How the thing and the striving it has to persevere in its state are distinguished’:

To make this clear, let us take an example of a very simple thing. Motion has a force of persevering in its state; this force is really nothing other than the motion itself—that is, the nature of motion as such. For if I say that in this body, A, there is nothing but a certain quantity of motion, it follows clearly from this that, so long as I attend to A, I must always say that it is moving. For if I were to say that it was losing, of itself, its force of moving, I should necessarily have to attribute to it something else, besides what we have supposed in the hypothesis, through which it was losing its nature. (I.6; G i. 248; C i. 314)

On the one hand, if a thing is left to itself, its current motive tendencies will account for its continuing to do what it is doing; on the other, if something ceases to do what it is doing, this will require an external cause (i.e. ‘something else’).

So things will continue to do what they are doing unless they get in one another’s way (of course, in a plenum, things are continually getting in one another’s way). This way of thinking about activity is fundamentally opposed to the Aristotelian one we surveyed earlier. Arguably, this is one of the deepest places of opposition between mechanistic natural philosophy and Aristotelian natural philosophy. Spinoza rejects the idea that motion is some special state bridging potentiality and actuality. Things are naturally in motion. If we think in terms of pattern-like beings, there is a sense in which a thing simply is the totality of its motive tendencies. This may be the thought behind the admittedly obscure *EIIIP7*, ‘The striving by which each thing strives to persevere in its being is nothing but the actual essence of the thing’ (G ii. 146; C i. 499). In any case, *EIIIP7* seems to characterize better a pattern-like being than an Aristotelian hylomorphic being, because Aristotelian beings are supposed to fall into kinds that serve as a prior ground for its motive tendencies, i.e. its appetites and inclinations. Finally, left to itself, a pattern-like being will simply go on as it has been forever (cf. *EIIIP8*, ‘The striving by which each thing strives to persevere in its being involves no finite time, but an indefinite time’ (G ii. 147; C i. 499)).

As I emphasized above, Aristotelian thinking about the nature of motion is connected to Aristotelian thought about why we need efficient causes and how efficient causes are structured: efficient causes are necessary to bring something from potency to act, and have to be end-governed to accomplish this. Inasmuch as Spinoza has a different

conception of motion, we would expect him to have a different conception of causation. The conatus principle implicitly divides finite causal activity into two sorts: (1) There's what happens through A's striving to persevere in its being and (2) there's what happens when A is acted on by an external cause (I speculate that A is, in the former case, what Spinoza terms an 'adequate cause', and in the latter case, 'a partial or inadequate cause' (EIIID1) of what is going on).

Let me begin with external causes. The conatus principle tells us that, left to their own devices, things will continue as they are. So the principle also tells us that when something veers from its current course we need an external cause, and that cause will be, at least in the case of extension, some other extended system that has got in its way. What triggers the requirement for an external cause is not that a potential perfection has become actualized, but rather that something has changed from its previous state. There is no reason, moreover, to think of the interfering agency as directed toward changing the state of the first being: it simply gets in the way of the first being. In fact, the transaction is the outcome of the conatus of both systems, the motive tendencies of both, as far as they can, to remain in their present state (which is why, I think, each is a 'partial cause' of the outcome).

Next, let's consider what A does through its own striving to remain in its current state. Even if external causes do not act for ends, couldn't it be the case that the conatus principle itself involves an end-governed agency? After all, one of the ways in which the conatus principle becomes manifest in human beings is through our desire for self-preservation. Any activity that we undertake in connection with self-preservation, on its face, seems end-directed.

I believe the answer to this question is no. Let me summarize the view that I'll defend. The main idea behind Spinoza's account of agency is to take the picture of agency that he finds in simple situations in the new science and to apply it systematically. Simple bodies, when not interfered with by other bodies, just continue to do what they are already doing through a metaphysical inertia. Their motive tendencies are not structured about ends. The motive tendencies of more complex bodies are set by the motive tendencies of their components; their activities are no more end-governed than are the activities of their components. And because of his basic commitment to the view that what goes on in the mental realm is parallel to what goes on in the corporeal realm, adding mentality or

consciousness to the picture does not alter the fundamental structure of a motive tendency or appetite. In this, there is both deep agreement and disagreement between Spinoza and Aquinas. They agree that all motive tendencies, natural inclinations, or appetites are uniformly structured: there is not, for example, one structure for noncognitive beings and another for cognitive beings. Where they disagree, of course, is on what that structure is. For Aquinas all inclinations or appetites are end-governed and for Spinoza no motive tendency or appetite is.

We can get something of the flavor of Spinoza's approach from a well-known discussion of freedom. After discussing God's freedom, Spinoza writes:

Let us, however, descend to created things, which are all determined by external causes to exist, and to act in a definite and determined manner. In order that this may be clearly understood, let us think of a very simple thing. For instance, a stone receives from an external cause, which impels it, a certain quantity of motion, with which it will afterwards necessarily continue to move when the impact of the external cause has ceased. This continuance of the stone in its motion is compelled, not because it is necessary, but because it must be defined by the impact of an external cause.³² (G iv. 266; The Letters, 295)

After making this point about the stone, Spinoza next notes that the same holds good of more complex systems:

What is here said of a stone must be understood of each individual thing, however composite and however adapted to various ends it may be thought to be (*quantumvis illa composita, & ad plurima apta esse concipiatur*): that is, each thing is necessarily determined by an external cause to exist and act in a definite and determinate manner. (G iv. 266; *Correspondence*, 295)

Then, finally, he considers the difference that cognition makes to this:

Next, conceive, if you please, that the stone while it continues in motion thinks, and knows that it is striving as much as possible to continue in motion. Surely this stone, inasmuch as it is conscious only of its own effort, and is far from indifferent, will believe that it is completely free, and that it continues in motion for no other reason than because it wants to. And such is the human freedom which all men boast that they possess, and which consists solely in this, that men are conscious of their appetite (*appetitus*), and ignorant of the causes by which they are determined. (G iv. 266; *Correspondence*, 295*)

³² The translation is taken from A. Wolf, *The Correspondence of Spinoza* [*Correspondence*] (London: George Allen & Unwin, 1928).

Spinoza is suggesting here that (a) there is no significant difference between the rock's acquisition of a motive tendency and a complex system's acquisition of a motive tendency (all are set by external causes and remain until an external new cause comes along), and (b) human motive tendencies (here, 'appetite (*appetitus*)') work in the same way. To judge from this passage, the only difference between us and the cognitive stone is that the motive tendencies of which we are aware are more complex (namely, those associated with a system of matter that counts as the human body), not a difference in how we acquire motive tendencies or in their internal structure (viz., in whether or not they are internally end-directed).

The passage we have just considered is about freedom, and it is conceivable that Spinoza does think that human motive tendencies are somehow acquired differently or somehow structured differently, but that this is irrelevant to the point he wished to make there. To get a fuller picture of his thought, let's look at his comments about appetite, desire, ends, final causes, and the perceived good in the *Ethics*.

In *EIIP9S*, after introducing his conatus doctrine, Spinoza offers a series of definitions based on the idea of conatus. Although I think that Spinoza holds that the defined terminology can be applied very generally, I think he also holds that the terminology is especially associated with human activity:

Schol.: When this striving is related only to the Mind, it is called Will;³³ but when it is related to the Mind and Body together, it is called Appetite. This Appetite, therefore, is nothing but the very essence of man, from whose nature there necessarily follow those things that promote his preservation. And so man is determined to do those things.

Between appetite and desire there is no difference, except that desire is generally related to men insofar as they are conscious of their appetites (*quatenus sui appetitus sunt conscii*). So *desire* can be defined as *appetite together with consciousness* (*conscientia*) of the appetite. (G ii. 147–8; C i. 500)

Notice, to begin with, that there is a single motive tendency, 'this striving', that is found in both the human body and the human mind. This

³³ On Spinoza's account of 'will' the will is not characterized through its object, the good, as it was for the Aristotelians. In fact, on Spinoza's telling, there is not really a faculty of will at all—there is just the joint product of the striving of all the constituent ideas of the mind. This breaking of the 'will' into pieces was adumbrated first in *EIIP48*.

was a point that Spinoza had emphasized earlier in Part 3, in *EIIP2S*:

All these things, indeed, show clearly that both the decision of the Mind and the appetite and the determination of the Body by nature exist together—or rather are one and the same thing, which we call a decision when it is considered under, and explained through, the attribute of Thought, and which we call a determination when it is considered under the attribute of Extension and deduced from the laws of motion and rest. (G ii. 144; C i. 497)

The most obvious way to take these remarks is that there is a single basic structure that can be related to body, mind, or both together. In particular, if the motive tendencies connected with the human body are blind, that is, if they are not end-governed, then it is difficult to understand how the same thing when ‘considered under, and explained through, the attribute of Thought’ could be end-governed.

The reason that motive tendencies line up in this way is rooted in Spinoza’s so-called parallelism, his basic metaphysical thesis that ‘the order and connection of ideas is the same as the order and connection of things’ (*EIIP7*; G ii. 89; C i. 451). According to Spinoza, this means that the human mind is a complex entity (*EIIP15*), composed of many ideas in the same way that the human body is composed of many bodies. Spinoza’s parallelism is obviously a difficult doctrine, and a careful explanation and exploration of it would take us too far afield. But, however the doctrine is ultimately understood, I take Spinoza to be indicating here that motive tendencies are among the ‘order and connection’ that is common to things and thought, so that for every motive tendency that is found under the attribute of extension there is a structurally similar motive tendency (indeed, in some sense, the same motive tendency) found under the attribute of thought. Further, I believe that Spinoza holds that in the same way that the human body is the totality of its motive tendencies, the human mind is the totality of its corresponding motive tendencies, and the human being is the totality of those motive tendencies related both to mind and body. This would explain Spinoza’s comment in *EIIP9S* that ‘Appetite’—that is, *conatus* or motive tendency as it is related to both mind and body together—‘is nothing but the very essence of man’.³⁴

³⁴ The idea that the human being and human mind, like the human body, are fundamentally composite entities, made up of their subparts, while clearly present in the *Ethics* (*EIIP15*), is not as much emphasized as might be. I think it comes from the way physical systems are thought of in the new science. Leibniz will try to find room for the idea that physical systems

These passages lend credence to the idea that Spinoza is taking the picture of motion and activity he finds in the new science's corporeal world and systematically interpreting all forms of activity of finite beings in terms of it. But where does this leave what we might call phenomenal agency, our sense of ourselves as beings who act through ends? How does Spinoza's account of the deep structure of activity as inertial in character hook up with our everyday conception of our own agency? Let me pull out for examination two basic aspects of our everyday conception of agency. (A) We do, after all, tend to think of ourselves as beings whose agency is governed by or directed by ends. (B) And we tend to think of ourselves as pursuing ends because of something we find valuable in them, so that our activity tracks our judgments about good. One way to capture this second thought, perhaps, is in the traditional motto that nothing is willed except under the aspect of some good.

Let's turn to (B). In an interesting comment at the end of *EIIP9S*, Spinoza discusses the relation of appetite and the good: 'From all this, then, it is clear that we neither strive for, nor will, neither want (*appetere*), nor desire anything because we judge it to be good; on the contrary, we judge something to be good because we strive for it, will it, want it (*appetimus*), and desire it' (G ii. 148; C i. 500). 'From all this' seems to refer to the definitions of will, appetite, and desire that we considered earlier, and through these definitions to the general conception of motive tendency as *conatus*. I take the first half of Spinoza's claim to follow immediately from the idea that motive tendencies are simply given—externally caused—and not end-responsive at all, and so, in particular, not responsive to our judgments of what is and what is not good.

The basis for the second half of Spinoza's claim—that we judge something good because we have an appetite for it, that is to say, because we have a motive tendency toward it—is perhaps less clear. It is, I think, part of the inertial character of a motive tendency that in those cases where the motive tendency is accompanied by awareness, we tend to affirm it (in a *pro tanto* way), which affirmation is expressed in the (again, *pro tanto*) belief that where the tendency is taking us is good. (Spinoza's assumption that if a stone were conscious of its motive tendency it

are the product of their parts (and the parts, the product of their parts) and that this complexity is reflected in the mental world—the complexity of the perceptual state of the monad (which expresses its body completely) mirrors the internal complexity of body—without endorsing the conclusion that the monad itself is composite.

would think that it continues in motion because it wants to, seems to be a special case of his view that beings feel their motive tendencies in this manner.) Conversely, a motive tendency that, when accompanied by consciousness, was in its own right (and not through other motive tendencies incompatible with it) experienced negatively would seem to contain the seeds of its own destruction in violation of the basic conatus idea (*EIIP4*).

However we interpret the basis for this second half of Spinoza's claim, he is clearly affirming an alignment between what we decide to do and what we judge to be good. His point is that, contrary to what one might think, the conatus, motive tendencies, appetites, or what he terms in *EIIP2S* 'the decisions of the Mind' are prior to our evaluation of something as good. Our appetites don't track our evaluations; our evaluations track our appetites. Spinoza explains his position further later in Part 3, at *EIIP39S*. After recalling the claim about appetite and good he set out in *EIIP9S* (reported here as 'that we desire nothing because we judge it to be good, but on the contrary we call it good because we desire it'), he writes:

So each one, from his own affect, judges, or evaluates, what is good and what is bad, what is better and what is worse, and finally, what is best and what is worst. So the Greedy man judges an abundance of money best, and poverty worst. The Ambitious man desires nothing so much as Esteem and dreads nothing so much as Shame. To the Envious nothing is more agreeable than another's unhappiness, and nothing more burdensome than another's happiness. And so, each one, from his own affect, judges a thing good or bad, useful or useless. (G ii. 170; C i. 516)

Apparently, the general run of one's appetites, motive tendencies, establishes (or can in certain cases establish) a standing affect, so that, for example, the greedy man is put together so that he gravitates toward money and away from poverty. This standing affect determines his valuations. This is an application of Spinoza's point that our appetites, our motive tendencies, are prior to our judgments or evaluations of good.

Spinoza's comments about the relationship between my appetites and the perception of the good can make it seem as if my life as an agent ought to be a much happier affair than it is—that I find myself headed in a certain direction, and like the cognitive stone or the greedy man, I find myself pleased with where I am heading and pronounce it good. In *EIIP2S*, Spinoza, anticipating his doctrine that our affect is primary

and that our ‘decisions’, rather than tracking anything, are really just appetites, fills the story out a bit:

So experience itself, no less clearly than reason, teaches that men believe themselves free because they are conscious of their own actions, and ignorant of the causes by which they are determined, that the decisions of the Mind are nothing but the appetites themselves, which therefore vary as the disposition of the Body varies. For each one governs everything from his affect; those who are torn by contrary affects do not know what they want, and those who are not moved by any affect are very easily driven here and there. (G ii. 143; C i. 496–7)

A reason, then, why our affective life does not always run smoothly is that, complex systems of motive tendencies that we are, we can find ourselves ‘torn by contrary affects’ or without any strong motive tendencies of our own, in which case we ‘are very easily driven here and there’.

Let’s turn to (A), our sense of ourselves as beings whose activities are directed by ends. Spinoza does not deny, of course, that we think of ourselves in this way. He holds that this way of thinking, however, involves a certain amount of confusion. Let me explain.

After claiming that ‘as [God] has no principle or end of existing, so he has none of acting’, Spinoza goes on to remark, ‘What is called a final cause is nothing but a human appetite insofar as it is considered as a principle, or primary cause, of something’ (EIVpref.; G ii. 206–7; C i. 544), which is reinforced by EIVD7: ‘By the end for the sake of which we do something I understand appetite’ (G II, 210; C I, 547). These are striking, if difficult, remarks. As we have seen, in the Aristotelian tradition the final cause is the cause of causality of the other causes, directing in particular a thing’s exercise of its agency, and an appetite was a natural inclination that is in some way guided by an end. So what does Spinoza mean when he says that final cause is the appetite, considered in a certain way? He offers this illustration:

For example, when we say that habituation was the final cause of this or that house, surely we understand nothing but that a man from the fact that he imagined the conveniences of domestic life, had an appetite to build a house (*ex eo, quod vitae domesticae commoda imaginatus est, appetitum habuit aedificandi domum*). So habituation, insofar as it is considered as a final cause, is nothing more than this singular appetite. It is really an efficient cause, which is considered as a first cause, because men are commonly ignorant of the causes of their appetites. (EIVpref; G ii. 207; C i. 544–5)

Notice, to begin with, that my thinking of myself as having a final cause involves a mistake: I think of a motive tendency, an efficient cause, as a first cause, when it is not a first cause but simply an element in an infinite chain of motive tendencies. I take it that Spinoza is implying that if we were not ignorant of the causes of our appetites (or perhaps even if we were not ignorant of the fact that our appetites are the sorts of things they are, with the sorts of causes that they have), we would drop talk of final causes and stick with appetites or efficient causes. So while it is true that Spinoza says final causes are appetites, I think we need to be alive to the hint of an error theory here.³⁵

What Spinoza is doing here is simply hooking up his conception of the underlying causal architecture of activity to the surface phenomenology of human agency. We saw above that our awareness of our motive tendencies is accompanied, for Spinoza, by some sort of pro-attitude toward where the tendencies are carrying us (this pro-attitude can be expressed in a judgment that what we desire, that is, where our motive tendencies are taking us, is good). So imagine that I, somewhat the way we might imagine a bee or wasp,³⁶ find myself headed toward nest construction or house building. The way in which I experience this motive tendency is that I find myself being visited by images of domestic bliss and so forth—that's what 'imagin[ing] the conveniences of domestic life' is, for Spinoza—as I go about stacking bricks and so on. Since I do not know where these images come from, I think of them as the first items in a causal chain and come to see the subsequent items in the chain as done for their sake.

³⁵ Others have taken this illustration and related doctrine as more straightforward than it is, not giving enough weight to the fact that our attribution of ends is based on ignorance. For example, Edwin Curley and Don Garrett take this passage to provide a *prima facie* example of Spinoza's locating 'the cause of human action in the *present representation* of a future effect' (Garrett, 'Teleology in Spinoza'; see also Curley, 'On Bennett's Spinoza'). In my view, they do not provide a plausible account of the 'nothing but' when Spinoza claims 'a final cause is nothing but human appetite' or the penumbra of confusion he claims surrounds our thinking about final causes. As I understand them, the point of Spinoza's identification of final cause with appetite is to avoid some form of causation whereby the future (final cause) exercises some mysterious influence over the present. Such a motivation is, in my view, idle. According to the traditional doctrine of final causality, the final cause, the end, is registered in the 'current' structure of the agent (hence the role of the likeness in the case of an olive tree's causing an olive tree, or 'the impression' on the heavy thing in the case of heaviness). For this reason, I do not find it credible that the force of Spinoza's identification of the final cause with appetite is to get a coherent temporal ordering of cause and effect.

³⁶ Spinoza compares us with the lower animals in *EIIP2S* (see below).

Of course, a much better way for me to view these matters, Spinoza thinks, would be for me to realize that the images themselves are but links in an enormously complex causal chain that runs parallel to a similarly complex chain of corporeal causes involving my body. If I think of myself as going about the house-building in a purely mechanical way, in the way we might think of a wasp or bee building its nest, and think of the mental side of this activity as running parallel to the corporeal side, I will come to realize that the house-building appetite is in fact an enormously complicated tendency that involves a vast number of more subtle tendencies or urges. As these various tendencies work their way through my system (or better: through the system that is me), a house results. The key thing here is that all of this happens blindly, without the subsequent motive tendencies being directed by or ordained to some end.

I would not want to stake myself to every detail here, but I think the preceding affords a pretty good picture of how Spinoza thinks about final causes and the way in which we come to have misguided views about them. In any event, his claim that final causes are really efficient causes amounts to the collapse of the end-structured agent of scholastic Aristotelianism into the blind mechanical efficient cause of the new science. One might wonder, in an Aristotelian frame of mind, whether we don't need to make room for the idea that at least our higher-level activities are controlled by ends. Don't I need an end to control my activity if I am to do anything so remarkable as to build a house? Houses cannot, it might be suggested, simply result from blind motive tendencies hashing things out, or at least they cannot do so 'for the most part'.

Does Spinoza show any sympathy for the idea that, putting aside what is going on elsewhere in the universe, at least in the case of human achievements we need final causes to direct our activity? Although he does not directly address this question in the context of final causality, I think it is evident, from what he says in connection with his defense of his view that the mind does not control the body, that the answer is no. In *EIIP2S*, he considers this objection:

They will say, of course, that it cannot happen that the causes of buildings, of paintings, and of things of this kind, which are made only by human skill, should be able to be deduced from the laws of nature alone, insofar as it is considered to be only corporeal; nor would the human Body be able to build a temple, if it were not determined and guided by the Mind. (*EIIP2S*; G ii. 142-3; C i. 496)

His reply:

But I have already shown that they do not know what the Body can do, or what can be deduced from the consideration of its nature alone, and that they know from experience that a great many things happen from the laws of nature alone which they never would have believed could happen without the direction of the Mind—such as the things sleepwalkers do in their sleep, which they wonder at while they are awake. (EIIIP2S; G ii. 143; C i. 496)

The ‘But I have already shown’ refers back to an earlier passage in the Scholium:

And of course, no one has yet determined what the Body can do, i.e. experience has not yet taught anyone what the Body can do from the laws of nature alone, insofar as nature is only considered to be corporeal, and what the body can do only if it is determined by the Mind. For no one has yet come to know the structure of the Body so accurately that he could explain all its functions—not to mention that many things are observed in the lower Animals that far surpass human ingenuity, and that sleepwalkers do a great many things in their sleep that they would not dare to awake. This shows well enough that the Body itself, simply from the laws of its own nature, can do many things which its Mind wonders at. (EIIIP2S; G ii. 142; C i. 495)

Spinoza is suggesting here that our more impressive achievements—‘buildings, paintings, and so forth’—happen in more or less the same way as the impressive achievements of the lower animals, i.e. through the laws of corporeal nature alone, which do not involve end-directed activity.³⁷ The point about sleepwalkers is especially salient. He is implying that they are able to pull off whatever it is they pull off without the guidance of mental images or whatnot—what they do is supposed to follow from the laws of body alone. This makes it hard to see how in those cases where we are conscious, where we are visited by images of

³⁷ It is worth noting here that one of the aspects of Descartes’s philosophy that Spinoza seems least happy with in his exposition *Descartes’s ‘Principles of Philosophy’* are the causal principles that Descartes employs in his argument for the existence of God, namely, ‘What can bring about the greater, or more difficult, can also bring about the lesser’ and ‘It is greater to create, or . . . preserve, a substance than the attributes, or properties of a substance’. Spinoza comments: ‘But what he means by this I do not know. What does he call easy, and what difficult? Nothing is said to be easy or difficult absolutely, but only in relation to a cause. So one and the same thing can at the same time be called both easy and difficult in relation to different causes’ (G i. 161; C i. 248). Spinoza gives as an example ‘the spider which easily weaves a web that men could weave only with the greatest difficulty’. (For how Descartes might respond, see Curley’s helpful comment in note ‘d’; see also, AT vii. 134.)

domestic bliss or whatever, those images serve to guide or control our activity.

So when Spinoza says in *EIVD*7, ‘By the end for the sake of which we do something I understand appetite’, I take him to be denying that we have ends in the Aristotelian sense of something that is the cause of the causality of the other causes, something that, in particular, directs an agent’s exercise of its activity, so that the agent might bring about a transition from potency to act, or, less metaphysically and more informally, so that an agent may bring about some impressive achievement, such as a building or, for that matter, the writing of the *Ethics*. Rather, an end, according to him, is really my imperfect cognition of a motive tendency—that is, an appetite—that is embedded in a complex of other motive tendencies, other appetites.

In the cases of both (A) and (B), Spinoza makes certain concessions to what might be called the phenomenology of agency. It is the case that my appetites and the perceived good (or my evaluations of good) are aligned. I misunderstand what brings this alignment about, however, when I take my appetites to follow my perfection of the good. Similarly, when I do think of at least some of my activities, say, house-building, as having final causes, this results from my erroneously thinking that some of my appetites initiate (and, I think, control) my subsequent activities.

FINAL CAUSALITY AND TELEOLOGY

I have been using the traditional idea of a final cause to focus Spinoza’s thinking about conatus, appetite, final causes, and ends. In this way, it is possible, I think, to achieve a fairly clear and consistent picture of his thought on these topics. Activity and change in his universe result from (more or less complex) beings, with (more or less complex) inertial tendencies, that is, tendencies to persevere in their being, that both strive to keep going as they are and continually get in each other’s way. This is what we would expect him to hold if he thinks of corporeal beings as the pattern-like entities depicted above, and if the mental world runs parallel to the corporeal world. Moreover, when carefully examined, the remarks that Spinoza makes about human beings and ends do not, in my view, encourage the thought that he sought to reintroduce the

end-governed appetites in the mental world that he banished from the corporeal order. Rather, they seem to reflect a strategy of taking motive tendencies in both orders to be similarly structured and interpreting the phenomenology of human agency around this fact. In this way, reflecting on the basic nature of motive tendencies as found within the corporeal order envisioned by the new science, Spinoza is ultimately led to present an account of the universe that is free from anything that an Aristotelian would have recognized as final causality.

The picture of ourselves as agents that Spinoza leaves us with can seem rather stark. It is hard to think of ourselves as (at least on our better days) not much more than a relatively complex bundle of motive tendencies or appetites. It is hard to give up the idea that we genuinely pursue ends, where those ends are prior to our activity and guide our exercise of our causality. It is also hard to give up the idea that our decisions, at least some of them, are responsive to value, or at least to our perception of value.

What is causing the difficulty here, I think, is that it is extremely difficult to find a way to integrate these beliefs about ourselves as agents with the causal architecture of the corporeal world, as understood in the new science, an architecture that is *prima facie* alien to our agency. Most thinkers took it as obvious that the motive tendencies of new science matter are not (internally) end-directed. But, then, how can we fit together in a satisfying way this conception of matter and the human body with our ordinary sense of ourselves as agents? We may gauge something of the enormity of the task if we look at what Leibniz had to do, in order to return to us our agency. On his theory, we do genuinely pursue ends and our appetites are responsive to perceived good. But in order to secure this he had to replace parallelism—in particular, the view that the order and connection of things within the attribute of thought is the same as the order and connection of things within the attribute of extension—with pre-established harmony, which, as I understand it, while allowing that there is a systematic relationship between the monadic order and the corporeal order, sees the two orders not as parallel, but as fundamentally different: ‘Souls act according to the laws of final causes through their appetitions, ends, and means. Bodies act according to the laws of efficient causes or the laws of motion. And the two kingdoms, that of efficient causes and that of final causes, are in

harmony with each other' ('Monadology', §79, GP vi. 620).³⁸ Notice how un-Aristotelian Leibniz's segregation of final causality from efficient causality is. We do genuinely pursue ends, we do genuinely track the perceived good, but we had to posit monads to get this result. Moreover, this activity is now viewed as metaphysically prior to—and in a certain sense, separate from—the physical world, which is now (in large part for this very reason, I think³⁹) regarded as merely phenomenal. Spinoza and Leibniz are both having trouble getting the blind efficient causality of the new science and the end-governed efficient causality of human activity into the same frame, so to speak. Spinoza's solution is to take the physical order as fundamental and reinterpret human agency in terms of it, arguing that there is less to our pursuit of ends and good than meets the eye. Leibniz goes in the other direction, taking our agency at face value, arguing that there is less reality to the physical order than meets the eye. Surely the lengths to which each philosopher went is a testament to the difficulty of the problem with which they saw themselves faced, in accommodating us to a corporeal order in which efficient causation is blind.

In recent years, there has been a fair amount of discussion of Spinoza's attitude toward 'teleology', where this has been taken to mean his attitude toward a certain style of explanation.⁴⁰ While it may be an interesting exercise to look to his texts for an answer to this question, it is important to recognize that when he's discussing final causality, what he's discussing is not whether a certain form of explanation is legitimate, illuminating, or useful, but rather how motive tendencies and agents are structured, and, in particular, whether those motive tendencies and agents are end-governed or directed as opposed to blind. One may speculate that what objections Spinoza had to teleological explanations would run through the sorts of underlying agents that these explanations

³⁸ The translation is from Gottfried Wilhelm Leibniz, *Philosophical Papers and Letters*, ed. and trans. Leroy E. Loemker (Dordrecht: Reidel, 1976), 651.

³⁹ I argue for this in 'Substance and Teleology in Leibniz' (unpublished).

⁴⁰ Although I have come to think it is not a good idea to use the notion of teleological explanation to frame an interpretation of Spinoza on final causality, I want to record my debt to Bennett's work, which sparked my interest in this topic. I am particularly sympathetic to his insistence that Spinoza's rejection of final causality is quite general and of high importance—as Bennett puts it, 'Miss that and you miss most of what is interesting in Part 3' of the *Ethics* (*A Study of Spinoza's Ethics*, 215). For the view that Spinoza's rejection of final causality applies only to the attribution of divine purpose within nature, see Curley, 'On Bennett's Spinoza'; for the view that Spinoza is a thoroughgoing teleologist, see Garrett, 'Teleology in Spinoza'.

presupposed. If a given form of teleological explanation does not require final causality, that is, does not require end-directed agents, it is not clear to me that Spinoza would object to it. By way of contrast, if a given form of teleological explanation does require end-directed agents, it is hard to see how it might be helpful for understanding any of the goings on within Spinoza's universe.⁴¹

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