Aquinas and Aristotle's Teleology

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FINAL CAUSES refer to purposes or goals. Typically, citing the final cause answers the question "why?" Why do I go to the grocery store? In order to buy food. Why does the heart beat? In order to pump blood around the body. Final causes therefore refer to the purposes or goals of natural substances, agents, or systems. For example, the human immune system has the goal of maintaining the health of the body; the artist's purpose is to produce paintings or sculptures. While nature's ends dominate the thought of Plato, Aristotle, and their ancient and medieval successors, it was not until the eighteenth century that the philosophical study of final causes became known as "teleology." ¹

The history of teleology is complex. In contrast to the Presocratics, who are frequently described as materialists with little or no sense of final causes or purposes in nature,² Plato and Aristotle place teleology at the

¹ The term *teleologia* is not conclusively attested until 1728 when, in his *Philosophia Rationalis*, *Sive Logica*, Christian Wolff uses the term to refer to a branch of natural philosophy which deals with the ends of things. Although obviously anachronistically, Aristotle's causes "for the sake of which" are frequently included under the broad banner of "teleology."

² An alternative to this common reading of the Presocratics is provided by David Sedley, *Creationism and Its Critics in Antiquity* (Los Angeles: University of California Press, 2007), chaps. 1–2. Sedley argues that this view may have more to do with Plato's and Aristotle's description of their predecessors than with the position of the Presocratics as revealed in their texts. Aristotle states that "Democritus, however, omitted to mention the Final Cause, and so all the things which Nature employs he refers to necessity. It is of course true that they are determined by necessity, but at the same time they are for the sake of some purpose, some Final Cause, and for the sake of that which is *better* in each case." Aristotle, *Generation of Animals*, trans. A. L. Peck (Cambridge: Harvard University Press,

heart of their respective philosophies. In antiquity and the Middle Ages, teleological cosmology in various guises was central to the philosophical enquiry into nature and the Christian doctrine of creation. Following Western Christianity's renewed acquaintance with Aristotle's works in the twelfth and thirteenth centuries, the Philosopher's understanding of causation became particularly influential. His intricate blending of material, efficient, formal, and final causes offered a comprehensive account of creaturely phenomena and gave Christian teachers the means to understand created causes in analogical relation to divine actuality. However, this approach to causation did not last. It is common to describe the demise of the mediaeval consensus and the rise of modern philosophy in terms of shifts in the understanding of causation, with the rejection of Aristotelian final causes and the explanatory dominance of efficient causation being key to this transition. Nevertheless, despite the apparent abandonment of final causes in early modern thought, exemplified, for example, in the work of Francis Bacon,³ the question concerning teleology is far from settled in contemporary philosophy, psychology, and natural science.⁴ Any investigation of final causation, which must perforce attend to Aristotle and his legacy, is of considerable importance to contemporary thought in numerous spheres.

In this essay, I will discuss Aristotle's understanding of final causation and Aquinas's deployment of this aspect of the Philosopher's thought. Like Aristotle, Aquinas regards final causes as basic and fundamental to any adequate explanation of creaturely phenomena because "Every agent, of

^{1953),}V.8, 789b4–b15. See Plato, *Phaedo* 98c–99d. However, Sedley seems to read these texts through the lens of the very modern concept of intelligent design. Unlike the Presocratics, Plato and Aristotle understood final causes not in relation to an extrinsic design or designer of anthropomorphic variety (assuming a non-literal reading of the *Timaeus*), but as intrinsic to all aspects of creation, whether animate or inanimate, yet orientated to a transcendent good.

³ See, for example, Francis Bacon, *The New Organon*, ed. Lisa Jardine and Michael Silverthorne (Cambridge: Cambridge University Press, 2000), Book II, aphorism 2, p. 102. On modern thinkers' ambivalence concerning final causes, see Margaret Osler, "From Immanent Natures to Nature as Artifice: The Reinterpretation of Final Causes in Seventeenth Century Natural Philosophy," *The Monist* 79 (1996): 388–407. Osler is not sufficiently clear concerning the *kinds* of final causes which remain influential in the thought of, for example, Robert Boyle, Isaac Newton, and Gottfried Leibniz. They are somewhat removed from final causes as conceived by Aristotle and Aquinas. In particular, final causes in early modern natural philosophy are not allied to formal causes.

⁴ See, for example, Mark Perlman, "The Modern Philosophical Resurrection of Teleology," *The Monist* 87 (2004): 3–51, and Ernst Mayr, "The Idea of Teleology," *Journal of the History of Ideas* 53 (1992): 117–35.

necessity, acts for an end."5 I will first outline Aristotle's teleological understanding of the natural. We will see that, for Aristotle, final causes are properly intelligible only in relation to an equally fundamental formal causation. I will be particularly concerned with the distinction between internal and external teleology. It is by means of this distinction that Aristotle divides the natural from the artificial. Although the division between internal and external teleology becomes very important in modern philosophy, I will argue that, for Aristotle, internal and external teleology do not always stand over and against each other in dualistic fashion. Following this discussion of Aristotle, I will examine Aquinas's deployment of Aristotelian teleology allied to dynamic substantial form with a particular focus on the doctrine of grace. Once again, I will be concerned to show that Aquinas resists a dualism of internal and external final causes, particularly in the field of divine causation. He thereby resists any sense of a discrete and autonomous nature that lies outside the field of divine grace which leads human beings to the vision of God. The unification of internal and external ends is found most profoundly and salvifically in the Incarnation, for in Christ we find the way, the truth, and the life.

Aristotelian Final Causes

In discussing Aristotelian causation we are used to the standard terminology of the "four causes": the material cause, the efficient cause, the formal cause, and the final cause.⁶ Although I will use these laconic terms in what follows, they are not Aristotle's but rather the invention of other ancient philosophers and their scholastic heirs.⁷ Aristotle describes not the four causes, but the different modes into which cause falls. The cause "out of which" something comes to be is matter. The primary source of motion—or, literally, the "whence the source of motion or rest"—is later labelled the efficient cause. The examples Aristotle gives of this mode of cause are a smith fashioning metal or a father begetting a child.⁸ These are the prime agents which produce an effect; they immediately precede it in time.⁹

⁵ St. Thomas Aquinas, *Summa theologiae* I–II, q. 1, a. 2, responsio: "omnia agentia necesse est agere propter finem." See also, for example, *ST* I, q. 5, a. 4; I, q. 19, a. 4, *responsio*; Aristotle, *Physics* II.5, 196b21.

⁶ Aristotle, Metaphysics V.2.

⁷ For example, Philoponus states that, "He sums up in brief form what has been said, [saying] that the types of the enumerated causes are four: the material cause, the formal, the efficient, the final." Philoponus, *On Aristotle's Physics* 2, trans. A. R. Lacey (London: Duckworth, 1993), 245.25 (p. 59).

⁸ Aristotle, *Physics* II.3, 194b25.

⁹ Unlike modern theories of causation, Aristotle does not think of causes as events. An example of a causal event might be the fusing of the sperm and ovum which

When Aristotle refers to the form as a cause, he means the "what it is to be something." ¹⁰ In other words, the form is that which makes something a "this" rather than a "that," and it indicates that, for Aristotle, nature is not merely composed of matter in different discrete arrangements.

Form is closely associated with nature itself. For Aristotle, nature is "the distinctive form or quality of such things as have within themselves a principle of motion, such form or characteristic property not being separable from the things themselves, save conceptually." ¹¹ In stipulating that the form is within the organism, Aristotle is distinguishing those things which are by nature from those things which are manufactured. Art does indeed imitate nature, but Aristotle uses the craft analogy as much to draw attention to the differences between human artefacts and natural entities as he does to draw attention to their similarities. In the case of human artefacts such as beds (to use Aristotle's example), it seems that the form has its source outside the artefact, namely in the mind of the craftsman, and is imposed upon an existing matter-form compound such as wood. In nature, form is not layered upon a more essential substratum; it emerges from within, passing from potentiality to actuality. Within the hylomorphic compound, the irreducibility of form to matter is crucial to Aristotle's view of nature and distinguishes his approach from classical modern science.

When it comes to that which we label the final cause, Aristotle uses the phrase "the cause for the sake of which." For example, I might fashion a sculpture for the sake of decorating my hallway. Within this "cause for the sake of which," Aristotle makes a crucial distinction between the goal as the aim of an action ("that of which") and the goal as the beneficiary ("that for which"). For example, the aim of the art of medicine

brings about a zygote, then a blastocyst, a fetus, and so on. Rather, he cites things or principles as causes.

¹⁰ Aristotle, *Physics* II.3, 194b25–b30.

¹¹ Aristotle, *Physics*, trans. P. H. Wicksteed and F. M. Cornford (Cambridge: Harvard University Press, 1957), II.1, 193b1–b5. Unless otherwise indicated, all translations of Aristotle are from the Loeb Classical Library editions of his works.

¹² Aristotle, *Physics* II.3, 194b30–b35; *Metaphysics* V.2, 1013a34.

Aristotle, De Anima II.4, 415b1-b7. See also Physics II.2, 194a35-b3; Metaphysics XII.7, 1072b2-b6. A detailed discussion of this distinction is available in Monte Ransome Johnson, Aristotle on Teleology (Oxford: Oxford University Press, 2005), especially chap. 3. Johnson claims that Aquinas misunderstands the distinction in his commentary on Aristotle's Metaphysics (71, n.17). However, Aquinas's text of Aristotle appears to be missing the crucial remark. Elsewhere, notably in his commentary on Aristotle's De anima and in the ST, it is evident that Aquinas is fully aware of Aristotle's distinction. See Aquinas, In De anima, II.7, 124-41; ST I-II, q. 1, a. 8, responsio.

is health. The beneficiary of the art of medicine ("that for which") is the patient. The builder who constructs a house has the house as his aim or goal. At the same time, there is another end, namely the person who will benefit from the shelter which the house provides. This distinction is important for Aristotle in a number of respects. For example, in $Meta-physics \Lambda$ it can be seen that the first unmoved mover is the end of motion not in the sense of being a beneficiary (because, in being fully actual, the first unmoved mover cannot benefit from anything) but in the sense of being the aim or focus of desire.

The link between the final cause—the "cause for the sake of which" and form is made very explicit and straightforward by Aristotle: "the form is the final cause." ¹⁴ How do form and the final cause relate? Form is intrinsic to any natural entity; it is already possessed potentially rather than actually. So the acorn becomes an oak and not a birch because it has within itself the form of oak tree in its potential aspect. The actualization of form by means of passage from potency to act is crucial to Aristotle's natural philosophy and it is the basis of his distinction between natural and violent motion.¹⁵ Natural motions are those characteristic patterns of behavior which are produced by a being in a given environment; the being in question has a certain intrinsic receptivity for "natural" motion because this kind of motion actualizes a form which is held potentially. For example, the acorn has a natural receptivity to becoming an oak by means of watering and nourishment from its environment. By contrast, a violent motion is one in which there is no intrinsic receptivity to that motion within or by the being itself. It is contrary to something's formal nature. Such violent or non-natural motions may be due to chance or extrinsic force.

So through form it seems that natural entities are always already orientated in specific directions and towards specific ends. There is an intrinsic receptivity within natural entities towards the actualization of their form. We might say that the acorn intends to become an oak, or a cygnet a swan, or a rock intends its appropriate low place. It is the intrinsic character of form which distinguishes natural entities from artificial entities. For the artificial, the goal is external; it lies *outside* the artefact, first in the mind of a designer or craftsman. In later philosophy, this becomes a distinction between internal and external which marks a division in different kinds of teleology. For Kant and Hegel, external teleology, such as the design of a chair or a pen, presents little difficulty. One ascribes the orientation of material towards certain ends through a human intentionality and purpose which lies outside the material elements of an artefact.

¹⁴ Aristotle, *Physics* II.8, 199a33.

¹⁵ Aristotle, *Physics* IV.8, 215a1–a25. See also *Physics* V.6, 231a5–a10.

By contrast, internal teleology is regarded as more problematic: is it merely an anthropomorphic projection based on the purposive orientation of human craftsmanship? Teleology might be regarded as an heuristic device for the understanding of nature which will last as long as an explanation in terms of efficient causality eludes us. ¹⁶ Later in this essay, we will see that the division between intrinsic and extrinsic teleology holds potential theological risks with regards to the doctrine of grace, but that Aquinas resists this dualism. However, to what extent does Aristotle resist a dualism between intrinsic and extrinsic teleology, despite his insistence on *intrinsic* real natures and their distinction from human artifice?

At first glance, it seems that teleology, because it seems to require some notion of "intention," belongs particularly to the animate realm. Regarding inanimate substances, they become teleological only in relation to their use by, or incorporation into, animate substances (for example, a plant's use of nutrients in the soil). In this sense, the ends of inanimate substances are external. The ascription of intention to any non-human creature raises the specter of anthropomorphic projection which can lead to the postulation of some kind of vitalism. A vital force is regarded as a mere metaphysical accretion—the postulating of a mysterious impetus which apparently orientates things towards certain ends yet which explains nothing. However, there is a notion of appetition (orexis) in Aristotle which indicates an intrinsic orientation of animate and inanimate natural entities towards the fulfilment of their formal natures. In the Eudemian Ethics Aristotle asks, "How can one suppose that things not possessing life can have appetition?"17 In the passage concerned, he is discussing whether there is, as the Platonists supposed, a universal good to which all things tend through appetition or desire. He concludes that there is no such universal good but that all things tend towards their particular good: the eye desires

¹⁶ See Immanuel Kant, Critique of the Power of Judgment, trans. Paul Guyer and Eric Matthews (Cambridge: Cambridge University Press, 2000), §77, p. 275: "certain products of nature, as far as their possibility is concerned, must, given the particular constitution of our understanding, be considered by us as intentional and generated as ends, yet without thereby demanding that there actually is a particular cause that has the representation of an end as its determining ground, and thus without denying that another (higher) understanding than the human one might be able to find the ground of the possibility of such products of nature even in the mechanism of nature . . ." Page numbers refer to the translation. The interpretation of Kant's intricate understanding of teleology, which falls beyond the bounds of this essay, remains contested.

¹⁷ Aristotle, *Eudemian Ethics*, I.8, 1218a25. My discussion of *orexis*, including this citation of *Eudemian Ethics*, is indebted to John M. Rist, "Some Aspects of Aristotelian Teleology," *Transactions and Proceedings of the American Philological Association* 96 (1965): 337–49, esp. 338–40.

sight, the body health. These examples clearly pertain to animate, living substances even if the eye is not itself animate. Is there any sense for Aristotle that all things, animate and inanimate, have an intrinsic appetition towards particular goals? While it is of course true that Aristotle distinguishes between the animate and the inanimate, life and the lifeless, often through the claim that self-motion indicates life, nevertheless it is the case that he has no concept of absolute inert and indifferent matter in anything like the Newtonian sense of the term. Such matter would be, in Aristotle's terms, devoid of form and therefore purely potential. A pure potentiality cannot exist because it is in absolute potential even to being. Matter is always en-formed in the sense of being in potency to some things and not to others, and therefore orientated to certain ends and not others.

The issue of the orientation of things towards certain ends and the question concerning their appetition for their appropriate end is important in the discussion of the motion of inanimate bodies in the Physics. When a projectile is thrown from the hand, after it has left the hand, what is it which preserves the motion of the projectile? When I drop a heavy object, what is it that moves the object downwards? The problem of projectile motion was much discussed in ancient philosophy and solved through the principle of impetus by later thinkers such as Philoponus, and the concepts of inertia and gravity in Newtonian mechanics. However, amongst the medieval philosophers one principle of Aristotelian natural philosophy, often deployed in considering projectile motion, caused much confusion: omne quod movetur ab alio movetur, whatever is moved is moved by another. 18 This principle was sometimes interpreted to mean that whatever is in motion, is here and now being moved by another. On this view, when the projectile leaves the hand of the thrower, it must continue to have some kind of mover connected to it to move it through the air. One theory was that the air moving around the projectile provided the moving force. The notion of a constantly conjoined mover would imply that there is no orexis intrinsic to inanimate substances. However, no such mover is required in the case of natural motion. Instead, the mover is that which first donated or actualized to some degree something's form. For example, there is a sense in which a father is always the mover of his son because the father is the generator of his son; he is the source of his son's form. In claiming that everything that is moved is moved by another, Aristotle is suggesting that all creatures are in some sense potential, and the actualization of their potential cannot be accounted for by reference to

¹⁸ Aristotle, *Physics* VII.1, 241b24–25. For an extended discussion of this principle, see Simon Oliver, *Philosophy, God and Motion* (London: Routledge, 2005), chapters 2 and 4.

the creature alone. There is, in the end, something fully actual—the first unmoved mover of Metaphysics Λ—which is the ultimate source of motion. With regard to the movement of inanimate substances, what, then, is the cause or source of that motion which is given by another? Its form. The form, the "what it is to be something," is the actualizing of the potentiality of matter. It is the orientation of matter to certain ends rather than others. Now, in the Physics Aristotle states that "if we were to think of 'existence' as something august and good and desirable, we might think of shortage as the evil contradiction of this good, but of matter as something the very nature of which is to desire and yearn towards the actually existent." 19 So matter, of its very nature, desires the good in the form of the actually existent. However, some care is needed. Aristotle might be read as claiming that something like Newtonian inert, base matter has some kind of vitalistic force and, in the history of philosophy, much energy has been invested in denying this claim. But this is not how he understands hylē, because such pure matter cannot be; it is always, in some way, however attenuated, en-formed and its form orientates it towards some ends and away from others. So it would be more correct to say that matter through its form has an intrinsic appetition to certain ends. If Aristotle does have a notion of "vital force" which extends as well to the inanimate as it does to the animate, that force is not something superadded to material nature. It is intrinsic to any matter-form compound.

This understanding of dynamic substantial form orientated towards certain ends can shed light on the notion of internal and external teleology. It seems that, in the case of so-called animate substances, they realize their end or goal of their own power. For example, unless hindered, the boy will turn into a man and the acorn into an oak. The ascription of causality to the telos in each case—the man and the oak tree—would, in Kantian terms, be a merely heuristic device which, in order to be properly explanatory, should be reduced to efficient causes. To take another example, namely that of a sculptor fashioning a block of marble, the goal appears to be external in the mind of the sculptor. The marble is purely passive or inert. The fashioning of the sculpture belongs to the sculptor as efficient cause and any sense of teleological orientation is "borrowed" from the intentional action of the sculptor. The goal of providing a focus of devotion in the church does not belong so much to the matter out of which the sculpture is being fashioned as it does to the sculptor who has been commissioned to provide a stature of the Virgin Mary. However, is the block of marble contributing only the material

¹⁹ Aristotle, *Physics* I.9, 192a19–a23.

cause? Is the form of the marble, even in its unfashioned state, not also contributing at least in the sense of being orientated towards certain ends and not others? The sculptor could not fashion the marble into a tree or a pen, but he can fashion it into a statue or a plinth. Why? Because the form "marble" is not purely potential but is orientated towards certain ends and not others. The goal, therefore, is not entirely external in the sculptor's intention, lying outside the material object being fashioned, but is also held in a potential form within the matter-form compound.

So there is a sense in which, even concerning human artefacts, there is an element of intrinsic purposiveness because the object in question provides not only the material cause but also the formal cause which is dynamically orientated towards certain ends rather than others. And we must remember that the form is the final cause. As Aristotle would say, there will always be a striving for the good. This does not mean, however, that the *orexis* in en-formed matter takes the form of a superadded efficient cause, which is the way in which such kinds of vitalism are often understood. It remains a formal cause which is at once also the final cause.

However, there is a reading of Aristotle which suggests that teleological causation is entirely intrinsic and restricted to particular organisms. In other words, there is no element of extrinsic or cosmic teleology.²⁰ This would not only suggest the self-sufficiency of nature but also hint at the self-sufficiency of individual organisms. One argument marshalled in favor of this reading is that Aristotle is clearly opposed to Plato's notion of a transcendent realm of Forms and what is sometimes called the paradigmatic cause. Through a literal reading of the Demiurge in the Timaeus and Plato's prioritization of art over nature, Plato is sometimes understood by his modern readers as offering a kind of design argument for the existence of a creating deity. The Demiurge forms the cosmos from the khora according to an eternal model or set of "paradigms." So the Forms after which the universe is created act as extrinsic final causes. Aristotle does indeed reject various theories of the Forms, some of them not being readily identifiable within Plato's texts. However, it is possible briefly to highlight the key reasons why Aristotle maintains a view of transcendent, cosmic teleology which balances his view of nature as an intrinsic formal and final cause.²¹

²⁰ For a recent example of this approach, see Monte Ransom Johnson, Aristotle on Teleology (Oxford: Oxford University Press, 2005), especially chap. 9.

Space prohibits a detailed discussion of this matter. For a more thorough treatment, see Lloyd Gerson, Aristotle and Other Platonists (Ithaca, NY: Cornell University Press, 2005), 122–30 and David Sedley, "Teleology, Aristotelian and Platonic," in Being, Nature, and Life in Aristotle: Essays in Honor of Allan Gotthelf, ed. James G. Lennox and Robert Bolton (Cambridge: Cambridge University Press, 2010), 5–29.

In *Metaphysics* Λ Aristotle discusses the nature of the good and whether that good is something separated, or whether it is immanent within the order of things: "We must also consider in which sense the nature of the universe contains the good or the supreme good; whether as something separate and independent, or as the orderly arrangement of its parts."22 He uses the example of an army: does its good lie in the ordered relation of the soldiers, or in the general who stands above them, or in both? Aristotle concludes that the good lies in both, but more in the general because "he is not due to the order, but the order is due to him." In any order, Aristotle concludes that all things are jointly ordered with respect to one thing in which they all share or participate (pros hen).²³ For some interpreters, this seems to imply that the good is immanent in the individual members of any order by virtue of the individuals they are. However, Aristotle surely wants to point out that all individuals work towards a good which transcends their individuality and constitutes a good for the whole. This would certainly be true of Aristotle's politics in which an individual realizes his good by realizing the good of the city which exists "for the good life."24 More importantly, it should be remembered that Aristotle does not think in terms of separated and discrete systems in either culture or nature. So we might say that any given order composed of individuals (say that of an army regiment) will itself be part of a wider order (say a nation's army) and work for its own good, which is constituted also by the good of the whole. So for any given order, there is yet another good which transcends that particular order. Aristotle can therefore state in the De Anima that "every creature strives for this [the divine], and for the sake of this performs all its natural functions."25 This maintains the distinction described earlier, namely between the goal as the aim of an action (the share in the divine) and the goal as the beneficiary (the creature whose nature is thereby actualized). The former denotes the external "reach" of the creature; the latter indicates an immanent fulfilment.

While it seems there are good reasons for concluding that Aristotle avoids a dualistic separation of intrinsic and extrinsic teleology, is a distinction not important for identifying those things which are by nature (which have an internal principle of motion and rest) as opposed to human artefacts whose principles of motion and rest are external? In Aristotelian terms, it can be said that the more exclusively external the prin-

²² Aristotle, Metaphysics XII.10, 1075a12-a15.

²³ Aristotle, *Metaphysics* XII.10, 1075a19: "πρὸς μὲν γὰρ εν ἄπαντα συντέτακται . . ."

²⁴ See Aristotle, *Politics* I.1, 1252b29–1253a19.

²⁵ Aristotle, *De anima*, trans. W. S. Hett (Cambridge: Harvard University Press, 1957), II.4, 415b1–b3, cited in Gerson, *Aristotle and Other Platonists*, 124.

ciples of any artefact, the more "violent" is the human use of nature, which is to say that the artefact involves the "forcing" of nature which is contrary to its internal principle of motion and rest. In such artefacts, nature contributes little if anything to the final product. The telos of any such product lies more particularly in the mind of the human artisan; less is contributed by the form of any substance used for the production of the artefact. However, Aristotle does identify forms of artisanship in which the imitation of nature becomes particularly apparent. In the second book of the *Physics*, he discusses the way in which the earlier and successive stages of natural operations are collectively performed for the achievement of a particular end. The same can be said of art. In both cases, the end will be achieved as long as there are no impediments to the realization of the goal. Human artisanship may involve the removal of impediments to the natural achievement of certain goals. Aristotle concludes that "as a general proposition, the arts either, on the basis of Nature, carry things further than Nature can, or they imitate Nature. If, then, artificial processes are purposeful, so are natural processes too; for the relation of antecedent to consequent is identical in art and in Nature."26

In this comment, Aristotle is saying a little more than simply "art imitates nature." Art, we are told, "carries things further than nature can." Yet art will certainly look like nature in as much as the relation of antecedent and consequent is the same. This means that art at its best will see itself as a consequent continuation or consummation of what has already been achieved by an antecedent nature. While we may distinguish between intrinsic and extrinsic teleology in such circumstances, the two are not juxtaposed. On the contrary, in the greatest artisanship an extrinsic teleology extends and perfects an instrinsic natural teleology.

Having sketched these aspects of Aristotle's understanding of final causes in nature and human deliberation, I now turn to consider Aquinas's use of this philosophy of nature within his doctrine of grace.

Aquinas and the Teleology of Grace

It is a commonplace to state that Aquinas's understanding of both nature and human action is teleological. At the very beginning of his commentary on Aristotle's *Nicomachean Ethics*, Aquinas states that

... a twofold order is found in things. One kind is that of parts of a whole, that is, a group, among themselves, as the parts of a house are mutually ordered to each other. The second order is that of things to an end. This order is of greater importance than the first. For, as the

²⁶ Aristotle, *Physics* II.8, 199a15–a20.

Philosopher says in the eleventh book of the *Metaphysics* [*Metaphysics* A], the order of the parts of an army among themselves exists because of the order of the whole army to the commander.²⁷

In the relatively early treatise *De veritate*, Thomas asks, "Do all things tend towards the good?"28 He uses the example of an arrow which is directed to its target by an archer. In this case, the arrow receives no "form" from that which moves it and such motion is regarded as violent. He also considers a second case in which "what is directed or inclined to an end acquires from the director or mover some form by which such an inclination belongs to it."29 So Aquinas, following Aristotle, concludes that "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 in the eighth book of the Physics."30 Aguinas goes on to say that, even in the case of inanimate things, there is a sense in which all things, by virtue of the form which is donated to them, seek their due ends by co-operating with that which moves them. Things are not simply led to the good; they tend towards it by virtue of their own formal nature. Recapitulating Aristotle's sense of orexis in all natural substances, he states, "To desire or have appetency is nothing else but to strive for something, to stretch, as it were, toward something which is destined for oneself."31 The notion of "stretching" (tendere) is important because it suggests far more than a general inclination towards something. Rather, it implies an ecstatic striving for the good in which something continually exceeds itself as it moves towards actuality.

Aquinas, Sententia libri Ethicorum, I.1.1: "Invenitur autem duplex ordo in rebus. Unus quidem partium alicuius totius seu alicuius multitudinis adinvicem, sicut partes domus ad invicem ordinantur; alius autem est ordo rerum in finem. Et hic ordo est principalior, quam primus. Nam, ut philosophus dicit in XI metaphysicae, ordo partium exercitus adinvicem, est propter ordinem totius exercitus ad ducem." Translation (slightly adapted) by C. I. Litzinger, O.P., in Aquinas, Commentary on Aristotle's Nicomachean Ethics (Notre Dame, IN: Dumb Ox Books, 1993).

²⁸ Aquinas, Quaestiones disputatae de veritate, 22.1.

²⁹ Ibid., responsio: "aliquando autem id quod dirigitur vel inclinatur in finem, consequitur a dirigente vel movente aliquam formam per quam sibi talis inclinatio competat." Translations (with minor amendments) are by Richard W. Schmidt, S.J., in St. Thomas Aquinas, *Truth*, Vol. 3 (Indianapolis: Hackett Publishing Company, 1994).

³⁰ Ibid.: "sicut ille qui dedit lapidi gravitatem, inclinavit ipsum ad hoc quod deorsum naturaliter ferretur; per quem modum generans est motor in gravibus et levibus, secundum philosophum in Lib.VIII Physic."

³¹ Ibid.: "appetere autem nihil aliud est quam aliquid petere quasi tendere in aliquid ad ipsum ordinatum."

There is, of course, a crucial difference between Aguinas and Aristotle concerning the guidance of natural substances towards their final end in God: creation. Whereas Aristotle taught that the cosmos is of everlasting time, having neither beginning nor end, and whereas Aquinas regarded this position as rationally coherent, nevertheless Christian theology maintains that God creates ex nihilo. As such, God is not simply the selfcontemplating unmoved mover who is the ultimate desire of natural substances but rather the creative source of all things. The doctrine of creation ex nihilo refers not only to a beginning of creation but also to the sustaining of created being at every moment. For Aquinas, created being is, in itself, nothing.³² Creation "is" only by virtue of an improper participation in being itself through a continual divine donation. Even with respect to existence (and not simply motion or desire), all things are, for Aquinas, teleologically orientated pros hen—towards one focus, namely being itself. The implication for an Aristotelian teleology transposed into the context of creation ex nihilo is that the form, which, in its potential guise, is the internal principle of the motion of a natural substance to its proper end, finds its ultimate origin and goal in God.³³ This means that the distinction between "internal" and "external" with respect to creation does not imply a self-sufficient or autonomous natural realm. The form by which natural substances make their motion towards their ultimate end in God their own motion is itself the result of God's gift of created being ex nihilo. The distinction between internal and external is therefore somewhat akin to Aristotle's distinction between matter and form: just as matter is nothing without form, so too creation is nothing outside of its participation in the divine ideas.

³² Aquinas, *Scriptum super Sententiis*, book II, d. 1, q. 1, a. 2, responsio: "Secundum est, ut in re quae creari dicitur, prius sit non esse quam esse: non quidem prioritate temporis vel durationis, ut prius non fuerit et postmodum sit; sed prioritate naturae, ita quod res creata si sibi relinquatur, consequatur non esse, cum esse non habeat nisi ex influentia causae superioris." (Secondly, in the thing that is said to be created, non-being is prior to being. This is not a temporal priority or one of duration, such that what was not before is later, but a priority of nature, so that if the created thing were left to itself, it would consequently not exist, for it has its being only from the causality of the superior cause.)

³³ See Aquinas, ST I, q. 15. Lloyd Gerson has shown how the Neoplatonic tradition (particularly Simplicius) sees a harmony between Aristotle and Plato concerning the paradigmatic cause as long as the paradigm, or divine idea, or Form, is not understood univocally with the forms of individual substances. In other words, the Third Man argument can be resisted by claiming that, for example, the Form of horse is not simply another horse. See Lloyd Gerson, Aristotle and Other Platonists (n. 21), 119.

With regard to the combination of appetition and guidance towards the good as a final cause, it is within Aquinas's doctrine of grace that he makes explicit use of Aristotle's teleological physics for theological purposes.³⁴ For creatures which do not possess knowledge and understanding, the teleological structure of their actions is straightforward: they imitate the divine by tending towards the actualization of their particular form.³⁵ A heavy object will fall, a bird will fly, and a lion will hunt in accordance with their natures, such behavior springing spontaneously and easily without the need for any kind of deliberation. The goal of their actions is connatural and those actions are achieved by habitual activity which emerges from a formal nature. For humanity, however, the situation is more complex because, although our ultimate end is a vision of the universal good which we will of necessity, the achievement of that good is by means of particular and contingent goods.³⁶ Unlike the universal good, those particular goods are not good from every point of view; humanity must pick its way through this thicket in order to achieve its end. Deliberation concerning the appropriate path to the good is undertaken through interactions of will and intellect.³⁷ These motions are collected to form habits (Aristotle's hexis), which Aguinas refer to as virtues. Such habits, which are acquired through repetition, practice, and training, are the result of an appropriate blend of intellective and appetitive powers of the soul which actualize a formal nature. Habits (such as the habit of generosity or the habit of learning) may be possessed with more or less intensity; the greater the intensity of a habit, the swifter and easier will be the motion to something's end by virtue of that habit.³⁸

However, the possession of habits known as virtues is insufficient for humanity to achieve its ultimate end. While there are ends which are connatural to man such as the building of dwellings and the formation of friendships—these being achieved through acquired virtue—because of the corruption of human nature even these connatural ends are difficult

³⁴ A more detailed examination of Aquinas's deployment of Aristotelian motion in the realms of virtue and grace can be found in Simon Oliver, "The Sweet Delight of Virtue and Grace in Aquinas's Ethics," in *International Journal of System*atic Theology 7(1) (2005): 52–71.

³⁵ Aquinas, ST I-II, q. 1, a. 8, responsio.

³⁶ Aguinas, ST I–II, q. 10, a. 2, responsio; ad 2 and 3.

³⁷ Aquinas, ST I–II, q. 14, a. 1. For a recent lucid account of this process, see Steven A. Long, The Teleological Grammar of the Moral Act (Naples, FL: Sapientia Press of Ave Maria University, 2007).

³⁸ Aquinas, ST I–II, q. 52, a. 2, responsio; Quaestiones disputatae de virtutibus, q. 1, responsio.

to achieve.³⁹ However, humanity's goal is beatitude, a vision of the eternal good and a partaking in the divine nature for "final and perfect beatitude can consist in nothing else than the vision of the divine essence."⁴⁰ This is connatural to God alone and is therefore beyond the nature of humanity. In describing this end, Aquinas uses Aristotle's distinction between the goal as the aim of an action and the goal as the beneficiary of an action.⁴¹ First, there is the thing in itself which we desire to attain; secondly, there is the benefit which is enjoyed by that which achieves the desired end. Humanity's end is therefore twofold. In the first sense, it is an eternal and uncreated reality, namely God whose infinite goodness is our greatest desire. In the second sense, humanity's end is a creaturely reality in us which is the enjoyment of the vision of God. However, for any being to tend towards its end, it must have not only a natural appetition for that end and the appropriate motion but also a nature proportionate to that end. In other words, if the form is the final cause, a natural substance must have that form potentially and internally. While humanity has a natural desire for the beatific vision, it has no intrinsic proper potency to sharing in the divine nature. It appears that the final end of humanity is defined, and yet it is not achievable. Yet for Aguinas it is impossible for a natural desire to be incapable of fulfilment. 42 Therefore, it seems that humanity is in need of a double aid, first to achieve even that which is connatural and, secondly, to attain its ultimate end in the vision of God which is beyond even humanity's incorrupt nature.

In explaining how God moves humanity to its ultimate end in the beatific vision, Aquinas deploys Aristotle's natural philosophy. His doctrine of grace, in which concepts are deployed analogically in new ways, is therefore in an important sense a continuation of his wider understanding of the

³⁹ Aquinas, *ST* I–II, q. 109, a. 2, responsio: "Sed in statu naturae integrae, quantum ad sufficientiam operativae virtutis, poterat homo per sua naturalia velle et operari bonum suae naturae proportionatum, quale est bonum virtutis acquisitae, non autem bonum superexcedens, quale est bonum virtutis infusae. Sed in statu naturae corruptae etiam deficit homo ab hoc quod secundum suam naturam potest, ut non possit totum huiusmodi bonum implere per sua naturalia." (But in the state of perfect nature, as regards the sufficiency of the operative power, man by his natural endowments could wish and do the good proportionate to his nature, such as the good of acquired virtue; but not surpassing good, as the good of infused virtue. But in the state of corrupt nature, man falls short of what he could do by his nature, so that he cannot fulfil it by his own natural powers.)

⁴⁰ Aquinas, ST I–II, q. 3, a. 8, responsio: "ultima et perfecta beatitudo non potest esse nisi in visione divinae essentiae."

⁴¹ Aquinas, ST, I–II, q. 3, a. 2, responsio.

⁴² Aguinas, Summa contra Gentiles III, 51, 1.

natural world to which humanity belongs. Things are moved by God in two senses. ⁴³ First, while all corporeal motion is reduced the motion of the first heaven, all motion, whether corporeal or incorporeal (for example, the motion of thought), is reduced to the divine first unmoved mover. In addition to this, all formal perfection is from God as first act. In other words, all things are moved by receiving the form whereby they make that motion their own. Of course, in receiving that formal nature from God any natural substances at once receive their own end or final cause because "the form is the final cause." Aquinas sums this up in his commentary on Aristotle's *Physics*: "it is clear that nature is nothing but a certain kind of art, i.e., the divine art, impressed upon things, by which these things are moved to a determinate end. It is as if the shipbuilder were able to give to timbers that by which they would move themselves to take the form of a ship."⁴⁴

Therefore, with respect to divine creativity and the motion of nature, the division between internal and external principles, and likewise intrinsic and extrinsic teleology, appears much less definitive than in the case of nature and human artefacts. Although God provides the external end of all things, nevertheless the divine is also the immediate and primary source of nature's substantial forms which are internal to substances. Although God moves all things to their requisite ends, he does so through the fulfilment of a formal nature in such a way that this motion becomes genuinely the creature's own. Were God to move a creature to its requisite end without that motion also being an expression of something's formal nature, the motion would, in Aristotelian terms, be violent and from a purely external source. Yet divine providence is not of this kind; it is at once divine and natural through the act of creation *ex nihilo*.

The importance of God as first unmoved mover and also the source of the form of natural substances whereby they make their actualization their own, is particularly important with respect to humanity's motion to beatitude. As we have noted, humanity cannot achieve its ultimate end—because of its corrupt nature, but more particularly because the vision of God is connatural to God alone. If humanity were moved directly to the beatific vision, this would constitute a violent motion, because human nature would not, of itself, contribute anything to this movement through its form. Therefore, explains Aquinas, for humanity to achieve its ultimate end prepared by God we require not only the requisite motion and some-

⁴³ Aquinas, ST I-II, q. 109, a. 1.

⁴⁴ Aquinas, *In libros Physicorum*, II, lecture14: "Unde patet quod natura nihil est aliud quam ratio cuiusdam artis, scilicet divinae, indita rebus, qua ipsae res moventur ad finem determinatum: sicut si artifex factor navis posset lignis tribuere, quod ex se ipsis moverentur ad navis formam inducendam."

thing which inclines the appetite towards that end, but also "some supernatural form and perfection must be superadded to man whereby he may be ordered suitably to the aforesaid end."45 In addition to God moving humanity to its appropriate end, grace is also given as an "habitual gift," namely a form or nature by which humanity can move and be moved to the supernatural end appointed by God. As we have seen, God's providence extends to creatures not simply by moving them to their appropriate ends but also through the bestowal of forms and powers by which they make that motion their own. Similarly, God provides his grace by which humanity may make its motion to beatitude its own. Importantly, with regard to natural bodies, "the movements whereby they are moved by God become connatural and easy to creatures, according to Wisdom 8:1: 'she . .. orders all things sweetly." "46 So too, by analogy, God "infuse[s] into such as he moves towards the acquisition of supernatural good, certain forms or supernatural qualities, whereby they may be moved by him sweetly and promptly to acquire eternal good."47 This grace is not a superadded efficient cause but a formal cause which is therefore internal. In a curious way, the motion to beatitude becomes "natural" in the sense that it genuinely belongs to the creature. The supernatural becomes natural, and the natural becomes supernatural.

Aquinas's distinction between operating and co-operating grace can also be seen to reflect Aristotelian teleology and the contrast between the goal as the aim of an action and the goal as the beneficiary. This operation is attributed to God alone; the divine is the mover, the human will is moved. When humanity moves and is moved towards beatitude, such grace is described as "co-operating." Although the interior act of the movement of the will is attributed to God, this in turn issues in an exterior act which is the will's own motion. For example, the human mind may be interiorly moved to will the good (operative grace), which in turn issues in an external act of generosity to one in need (co-operating grace). This latter variety of grace is described as "co-operating" because the divine co-operates with

⁴⁵ Aquinas, *ScG* III, 150, 5: "Ergo oportet quod homini superaddatur aliqua supernaturalis forma et perfectio, per quam convenienter ordinetur in finem praedictum." See also *De veritate*, q. 27, a. 2, responsio.

⁴⁶ Aquinas, ST I–II, q. 110, a. 2, responsio: "Et sic motus quibus a Deo moventur, fiunt creaturis connaturales et faciles; secundum illud Sap.VIII, et disponit omnia suaviter."

⁴⁷ Ibid.: "Multo igitur magis illis quos movet ad consequendum bonum supernaturale aeternum, infundit aliquas formas seu qualitates supernaturales, secundum quas suaviter et prompte ab ipso moveantur ad bonum aeternum consequendum."

⁴⁸ Aquinas, ST I–II, q. 111, a. 2, responsio.

the proper motion of the human will. God is the primary cause of both the interior and exterior motion of the will, yet with regard to the exterior motion the human will becomes a real and potent secondary cause of its own action. Such motions, when practiced and repeated, collectively become what Aquinas calls an "habitual gift." Such habits are actualizations of a formal human nature so that the works of grace spring naturally from that form. The habit can be characterized as the goal of an action although the actions proceeding from that habitual gift (for example, meritorious works) are beneficial to the agent and the patient. So for Aquinas, "habitual grace, insofar as it heals and justifies the soul, or makes it pleasing to God, is called operating grace; but inasmuch as it is the principle of meritorious works, which proceed from the free-will, it is called cooperating grace."⁴⁹

In referring to habitual grace, Aquinas is utilizing the Aristotelian concept of habit (*hexis*) which refers principally to the way in which a natural substance "holds" or "possesses" itself. Such habits are not the mindless repetition of particular actions but the fullest expression of something's nature. A concert pianist, for example, plays the piano after countless hours of repetition and practice, and does so as it were "by habit," without deliberation as her hands move across the keyboard. Yet when a pianist of this calibre plays the piano, she does not forget herself. On the contrary, this is the full actualization of the pianist's form when she "possesses" herself and is most self-aware. Similarly, with respect to habitual grace, these habits which make us pleasing to God and lead to meritorious works may be performed without deliberation with ease and delight (like a well-practiced pianist), and yet they are the fullest expression of someone's inner nature. Although the interior principle and the exterior source and goal can be distinguished, they remain also unified.

Conclusion

In beginning this essay, I described the way in which the distinction between internal and external teleology was important for Aristotle in identifying those things which "are by nature" from human artefacts. While art imitates nature, nevertheless the teleological orientation of those products of human intention and design is substantially exterior. A tree has within itself its own principle of motion and rest such that it moves itself from potency to actuality and the achievement of its proper end, whereas boats and houses do not make themselves. For Aristotle, neither internal nor external teleology is intelligible without a concept

⁴⁹ Ibid.: "habitualis gratia, inquantum animam sanat vel iustificat, sive gratam Deo facit, dicitur gratia operans, inquantum vero est principium operis meritorii, quod etiam ex libero arbitrio procedit, dicitur cooperans."

of dynamic substantial form. For those things which are by nature, the form is interior to the natural substance and contains, in its potential aspect, the end or goal of that substance. The form is the principle of the motion from potency towards actuality and the achievement of the requisite end. Concerning human artefacts, the form lies exteriorly in the mind of the artisan and, by intentional design and through the efficient causation of the use of his tools, the human manufacturer brings about the actualization of a form which is not intrinsic to the natural substances used in the process of making.

However, we saw reason to note the ways in which this distinction is not dualistic for Aristotle, for art and nature are not necessarily juxtaposed but can come closer together. This can be seen most particularly in the appetition (orexis) of both inanimate and animate substances towards particular ends and also in the extrinsic cosmic teleological orientation of all things towards the unity of the good. When Aristotle speaks of the tree's desire to bear fruit, a heavy object's search for the lowest place, or the marble's intended fulfilment in a work of art, he does so using language belonging particularly to the intentionality of sentient creatures. Yet his use of such language is not entirely metaphorical. Material nature is never indifferent or inert; by virtue of its form, it is always already orientated to certain ends. As such, material substances, even the inanimate, can contribute something to the achievement of a goal which belongs also to the intention of a human artisan. In certain instances of human artisanship "art may carry things further than nature can" in such a way that the teleology of human creativity can see the internal and the external perfectly united. The human artefact is at once the actualization of the natural materials and also the realization of the intended goal of the artisan. Therefore, the distinction between internal and external teleology is not so much a dualistic division for Aristotle as a way of distinguishing certain kinds of natural behavior from artificial creations, while also recognizing the possibility that, in certain kinds of human art, perhaps the highest human art, the boundary between nature and art is very delicate.

Nevertheless, the distinction between internal and external teleology becomes important in early modern philosophy because it allows the formal differentiation of mind and matter. Whereas material nature is subject only to efficient causation, the intentional operation of mind is governed by goals discerned by discursive reason. Teleology is a merely heuristic device for the understanding of those aspects of material nature whose explanation cannot be reduced to efficient causality. This much stronger division between the different varieties of teleology, in which

the internal is reduced to a more fundamental variety of causation, underlines a distinction between human culture, which is orientated towards certain ends, and nature, which is determined and mechanistic. Nature thereby becomes a discrete and self-sufficient realm. Transposed into a theological key, this leads to two characteristically modern points of view. The first is a teleological argument for God's existence, which understands the divine design of the cosmos as an external teleology which is layered upon a discrete material substratum after the fashion of certain kinds of human artifice. The second is also related to the notion of a self-sufficient nature that features its own internal teleological orientation to which is added an external and essentially foreign teleology in the form of grace. ⁵⁰

Aquinas deploys Aristotelian teleology to understand both nature and grace. As with Aristotle, there is no division of internal and external teleology in such a way that nature becomes a self-sufficient and autonomous domain. Nevertheless, although Aquinas can follow Aristotle's notion that all things are orientated exteriorly pros hen, towards the unity of a transcendent good, he can associate that transcendence more clearly with immanence because of the Christian doctrine of creation ex nihilo. The primary cause, which infuses itself more deeply in things than all secondary causes,⁵¹ is the immediate and intimate sustaining source of the being of all creatures. This means that, at every moment, no creature explains its own existence; instead, every creature points beyond itself to the eternal simplicity of being itself. God is therefore infused most intimately into the heart of every substance through both matter and form. Through the donation of form, which includes the potential orientation to specific ends in the imitation of the divine, God is the source of both the internal and external teleological orientations of creatures. As Aquinas states, God is the supreme artisan in which the internal and external are perfectly unified, for "it is as if the shipbuilder were able to give to timbers that by which they would move themselves to take the form of a ship."

Likewise, Aquinas's doctrine of grace does not involve the establishment of a teleology which is wholly foreign and external to nature.⁵² By grace, human nature is "stretched" to take on an enhanced form capable of making motion to its ultimate end its own through both operative

⁵⁰ On this issue in the thought of Henri de Lubac, see John Milbank, *The Suspended Middle: Henri de Lubac and the Debate concerning the Supernatural* (London: SCM, 2005), 20–22.

⁵¹ Aquinas, *Super librum De causis expositio*, lectio 1:"Omnis causa primaria plus est influens super suum causatum quam causa secunda universalis."

⁵² Aquinas, ScG III, 54, 8.

and, crucially, co-operative grace. Once again, the divine is both immanent in the transformation of human nature for its motion to beatitude, and transcendent in constituting the infinite end of humanity's deepest desire. However, is there another way in which Aquinas can specify theologically the intimate infusion of divine goodness into human nature in such a way that internal and external teleology are united in a mode beyond Aristotelian philosophy? Such a fusion we find in the Incarnation, for God is so immanent within human nature that he joins that nature to his own through the hypostatic union (that is, not by mixing but by uniting), while at the same time indicating humanity's final end in the wedding feast of the Lamb. Christ, in being the way, the truth, and the life (John 14:6) is both the intimation of our final end and the very means to that end.

Christ becomes the source of both freely bestowed and sanctifying grace.⁵³ Freely bestowed grace is that variety which is for the co-operation of human beings with one another, for example, when a Christian teacher moves another to God by example or prophecy. Christ offers this variety of grace because "it was necessary for man to be firmly grounded in virtue to receive from God made human both the teaching and the examples of virtue."54 Yet Christ is more than a good teacher and fine example; he is also the source of sanctifying grace, that variety by which God directly orders humanity to its final end. This is delivered through the Church, Christ's Body, of which he is the head: "Christ and his members are one mystical person. Consequently, the works of the head are in some way the works of the members."55 By the sacraments of the New Law, and particularly the reception of the Eucharist, that grace of Christ is communicated into the body of the Church for the orientation of its members to their final end in the vision of God and "for that reason it was fitting that the grace which overflows from the incarnate Word should be given to us by means of certain external sensible objects; and that from this inward grace, whereby the flesh is subjected to the Spirit, certain external works should ensue."56 In the sacramental reality of the Church, the distinction between an internal teleological orientation to

⁵³ Aquinas, *ST* I–II, q. 111, aa. 4 and 5.

⁵⁴ Aquinas, *ScG* IV, 54, 7: "Unde necessarium fuit homini, ad hoc quod in virtute firmaretur, quod a Deo humanato doctrinam et exempla virtutis acciperet."

⁵⁵ Aquinas, *De veritate*, q. 29, a. 7, ad 11: "Christus et membra eius sunt una persona mystica, unde opera capitis sunt aliquo modo membrorum."

⁵⁶ Aquinas, ST I–II, q. 108, a. 1, responsio: "Et ideo convenit ut per aliqua exteriora sensibilia gratia a verbo incarnato profluens in nos deducatur; et ex hac interiori gratia, per quam caro spiritui subditur, exteriora quaedam opera sensibilia producantur."

beatitude belonging intimately (yet by grace) to humanity, and an external teleology which "stretches" to both the natural creation and the eschaton, is brought into a perfect unity by the creative and redemptive act of God.