Introduction

Our everyday experience of the world reveals that the things around us are constantly changing. Clouds move across the sky, the grass outside grows taller, eggs hatch and chicks mature, fires consume forests and each day the sun rises and sets. It is apparent that the material world does not stay the same. Rather, material things differ as times goes on. Philosophers of every era have sought to answer the question of how and why things change. Why is it that new things come to be and old things pass out of existence? Why do persistent things differ over time? Theories of causation pose answers to these questions. They explain why the world in structured in such a way that one thing happens and another follows. Many, if not all, of our explanations of phenomena are causal. Typically, when we want to explain why something happened, we appeal to a causal history. We think that we have explained something once we have arrived at what caused it. Once we know that a certain type of thing causes another, we can predict future effects based on the presence of an adequate cause. We can even manipulate future effects by bringing about their causes. Natural scientists work to identify the specific causes of specific effects. It is the job of philosophers to explain what causation itself is.

Philosophical theories of causation are supposed to tell us what sorts of entities causes are. For example, when a fire consumes a forest, should the cause of the trees' perishing be identified as the fire or the event of burning? Philosophical theories are also supposed to tell us how causes relate to their effects and what conditions something must meet to be identified as the cause of an effect. For example, do causes merely make their effects probable or do causes necessitate their effects? Causation is a notoriously difficult concept to understand. Modern and contemporary philosophical work on causation has for the most part aimed to reduce causation to more familiar concepts. On most contemporary theories of causation, causation is analyzed as a certain logical relationship which obtains between events. For example, one prominent theory claims that

what it is for an event *A* to cause an event *B* is for *A* and *B* to exemplify a regularity such that when event *A* happens event *B* follows. Another theory claims that causation can be understood in terms of counterfactual dependence such that event *A* is the cause of event *B* if it is true that had *A* not happened then *B* would not have happened either.

The goal of this study is to reconstruct Thomas Aquinas's thinking about causation. Aquinas exemplifies an older, premodern way of thinking about causation which views causation as a *sui generis* phenomenon which cannot be reduced to any other more familiar concepts. According to Thomas Aquinas, causation is a relationship of ontological dependence. Causes are responsible for the being of their effects; and effects depend on their causes for their existence. Efficient causes are the type of causes which are responsible for bringing about changes in the material world. On the pre-modern view that Aquinas exemplifies, efficient causation essentially involves exercises of causal power. Aquinas thinks that substances are the entities which function as efficient causes; and they cause other things to change by exercising active powers. For example, fire causes other substances in the material world to undergo the change of burning by exercising its active power to burn. Substances undergo change on account of possessing a feature known as a passive power. For example, when a log is burned by fire it undergoes burning in virtue of its passive power to be burned. Iron, by contrast, cannot be burned because it lacks the relevant passive power. On Aquinas's view, efficient causation is a real interaction which occurs between substances in virtue of inherently causal features that each possesses. Thus, the causing of an effect cannot be reduced to a logical regularity or counterfactual about the cause and its effect. Rather, substances and their causal powers are what explain why certain regularities and counterfactuals are true. The goal of this study is to reconstruct the intriguing details of Aquinas's theories about efficient causation and causal powers.

The study focuses on Aquinas's views about instances of efficient causation that occur between non-rational, terrestrial material substances. These instances of efficient causation fall under the type of efficient causation that is called natural efficient causation. Natural efficient causation explains the changes we observe with regularity in the material world, such as grass growing and the sun rising. Other examples of natural efficient causation include a fire's burning of a log and a frog's begetting of another frog. Distinctively human actions that are done through the powers of intellect and will are excluded from the scope of natural efficient causation. Actions done by immaterial agents, such as God and angels, are

likewise excluded from the scope of natural efficient causation. Like his Aristotelian counterparts, Aquinas recognizes other types of causation beyond efficient causation, such as formal and final causation. This study treats of other types of causation only insofar as they are relevant for understanding efficient causation. The study reconstructs and analyzes Aquinas's views on three main topics regarding natural efficient causation: (1) the nature of the relationship that obtains between a natural efficient cause and its effect, (2) the various ontological elements that are involved in paradigm cases of natural efficient causation, and (3) how to understand more complicated cases of natural efficient causation, such as cases in which multiple efficient causes cooperate and cases in which efficient causes produce effects for which they have no active power.

Rationale and Methodology

Aquinas's views on the workings of natural efficient causes and powers are important since Aquinas is a central figure in the history of philosophy and causation is a central philosophical topic. Yet, Aquinas's views have additional significance given their placement in the trajectory of historical thinking about causation. In the early modern period, philosophers turned away from the ancient and medieval view that substances are endowed with inherently causal features by which they bring about changes in one another. Many of the assumptions at work in contemporary philosophical debates emerged in this period. Recent studies on causation in early modern philosophy have emphasized that modern discussions and theories of causation cannot be fully appreciated without understanding their medieval background.[1] For example, in their *Stanford Encyclopedia of Philosophy* entry on Hume and Causation, William Morris and Charlotte R. Brown write: "The medieval synthesis Thomas Aquinas (1224–74) forged between Christian theology and Aristotle's science and metaphysics set the terms for the early modern causation debate."[2] It should be noted that in many cases, early modern figures forged their views in opposition to later medieval Aristotelians, such as Suárez. However, the framework of

[1] Walter R. Ott, *Causation and Laws of Nature in Early Modern Philosophy* (Oxford: Oxford University Press, 2009) and Tad M. Schmaltz, *Descartes on Causation* (New York: Oxford University Press, 2008).

[2] See section 5 of William Edward Morris and Charlotte R. Brown, "David Hume," in Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), https://plato.stanford.edu/entries/hume/, accessed May 31, 2021.

Aquinas's thinking (e.g. his concepts, terminology and questions) exerted great influence on these later Aristotelians.

Though Aquinas is perhaps the most studied medieval figure, there is surprisingly little scholarship that focuses explicitly on his views on natural efficient causation and natural powers.[3] Most of the scholarship on Aquinas's views on efficient causation and causal powers focuses exclusively on the case of human beings and God. In recent decades there have been important studies focusing on the human powers of intellect and will, as well as the perceptual powers that humans share with other animals.[4] Recent studies have also examined the distinctive features of human action.[5] With respect to divine causation, there have been recent studies both on how the sacraments and grace are causes and on how God causes effects in the ordinary course of nature.[6] By recovering Aquinas's views on natural efficient causation and causal powers, the present study will complement the existing literature on human and divine exercises of efficient causation. Aquinas thought that through our observation of and reflection upon natural causes and their operations we can acquire insight into efficient causes with higher powers. When explaining the workings of the human intellect and will or even God's activity, Aquinas often makes references and analogies to natural causes.[7] Thus, by uncovering Aquinas's

[3] Three of the most extensive discussions of Aquinas's views on causality and action are these mid-twentieth century books: Cornelio Fabro, *Participation et causalité selon St. Thomas D'aquin* (Louvain: Publications Universitaires de Louvain, 1961); Joseph Finance, *Être et agir dans la philosophie de Saint Thomas* (Paris: Beauchesne, 1945); Francis X. Meehan, *Efficient Causality in Aristotle and St. Thomas* (Washington, DC: Catholic University of America Press, 1940). There are no more recent book length studies devoted principally to Aquinas's views on power, causation and action as such. There is a recent book chapter which summarizes some of Aquinas's views on causation: Michael Rota, "Causation," in *The Oxford Handbook of Aquinas*, ed. Brian Davies and Eleonore Stump (Oxford: Oxford University Press, 2012), 104–14.

[4] See for instance Anthony Kenny, *Aquinas on Mind* (London and New York: Routledge, 1993) and Robert Pasnau, *Thomas Aquinas on Human Nature: A Philosophical Study of Summa Theologiae 1a, 75–89* (Cambridge: Cambridge University Press, 2002). For a recent study of Aquinas's views on the operation of intellect, see Therese Scarpelli Cory, *Aquinas on Human Self-Knowledge* (Cambridge: Cambridge University Press, 2014). On perceptual powers, see Anthony J. Lisska, *Aquinas's Theory of Perception* (Oxford: Oxford University Press, 2016).

[5] Stephen Brock, *Action and Conduct: Thomas Aquinas and the Theory of Action* (Edinburgh: T&T Clark, 2000) and Can Laurens Löwe, *Thomas Aquinas on the Metaphysics of the Human Act* (Cambridge: Cambridge University Press, 2021).

[6] For recent studies on the sacraments, see Reginald Lynch, *The Cleansing of the Heart: The Sacraments as Instrumental Causes in the Thomistic Tradition* (Washington, DC: Catholic University Press, 2017) and Marilynn McCord Adams, *Some Later Medieval Theories of the Eucharist* (Oxford: Oxford University Press, 2012). On divine causation in the natural world, see Michael J. Dodds, *Unlocking Divine Action: Contemporary Science and Thomas Aquinas* (Washington, DC: Catholic University of America Press, 2012).

[7] See for example *ST* I q. 25, a. 2 and *ST* I q. 84, a. 3.

understanding of natural efficient causation, this study will deliver insights applicable to these other areas of his thought in which scholars of Aquinas have shown great interest.

Perhaps the reason Aquinas's views on natural efficient causation and causal powers have not been studied in great depth, despite their importance, is because Aquinas himself wrote no separate treatise on these topics. To reconstruct his views, a reader must look to discussions scattered throughout his corpus. Since the topics of efficient causation and causal powers are relevant to understanding many issues in philosophy and theology, we find Aquinas discussing these topics in both expected and unexpected contexts. There are passages in nearly every one of Aquinas's works which illuminate his views on efficient causation and causal powers. I have combed through Aquinas's corpus to find the most important passages about efficient causation and causal powers and using them as a basis, I reconstruct his views in a systematic way.

Whenever one aims to reconstruct a historical thinker's views using multiple texts written across the span of many years, one faces the question of whether the figure's thinking developed over time. Aquinas's views on causation and causal powers appear to have remained remarkably stable over his career. While there certainly are issues about which Aquinas changed his mind over time, these topics do not seem to be among them. To illustrate the consistency of his thought over time, the notes often include references to the same thesis in multiple works from different points in his career.[8] In the few cases in which there appear to be conflicts between the views that Aquinas asserts in different works, I explicitly discuss whether his claims can be reconciled or whether they must be interpreted as a change of position.

Organization of the Study

The book is organized thematically around the central elements of Aquinas's theories. The first chapter aims to introduce the reader to the big picture of Aquinas's thinking about efficient causation and causal powers. This chapter is a good place for all readers to begin, even those who wish to read the later chapters in isolation or out of order. In addition to discussing in more depth some of the key theses which were introduced above, the first chapter introduces some further ontological elements

[8] On the dating of Aquinas's works see Jean-Pierre Torrell, *Saint Thomas Aquinas: The Person and His Work* (Washington, DC: Catholic University Press of America, 1996).

which Aquinas thinks are involved in paradigm (i.e. *per se*) instances of efficient causation. The significance of Aquinas's views is highlighted by contrasting them with competing historical theories. The chapter also provides important information about Aquinas's sources and terminology.

The second chapter considers in more depth Aquinas's views on the relationship between an efficient cause and its effect in paradigm instances of efficient causation. It recovers Aquinas's thinking about the modal and temporal relationship between a *per se* natural cause and its effect. The chapter also discusses Aquinas's rejection of self-motion and action at a distance.

The next four chapters of the study explore Aquinas's views on the elements that are involved in paradigm instances of natural efficient causation. Chapter 3 recovers Aquinas's views on active power and examines in greater detail his thinking about the connection between form and active power and the diffusiveness of goodness. Chapter 4 examines Aquinas's views on another aspect of the agent that is crucial to explaining why it acts. Aquinas thought that in addition to active powers, natural agents had a natural inclination or impetus toward exercising those powers, and to the fullest extent possible. Powers explain why substances are able to act and natural inclination explains why they do in fact exercise their powers whenever they are in appropriate circumstances. This chapter also examines Aquinas's views on how ends or goals function as final causes of natural agents' actions. Aquinas's views on this topic are closely related to his understanding of natural inclination.

In addition to the agent's active power and natural inclination, Aquinas thought that the features of the substance upon which an agent acted, namely the patient, were also crucial to understanding efficient causation. Chapter 5 recovers Aquinas's thinking on passive potentiality, which is the feature of the patient through which it undergoes action.

The next chapter, Chapter 6, reconstructs Aquinas's thinking about what an agent's action is ontologically and how it relates to the passion that the patient undergoes and the motion or change that the agent causes. For instance, when fire burns a log, what is the fire's action of burning? Is it something distinct from the burning that the fire causes and the log undergoes? Or are all of these realities one and the same? Chapter 6 examines Aquinas's answers to these questions.

While the first six chapters of the book unpack Aquinas's views about the conditions and elements involved in the most proper and basic instances of efficient causation in the natural world, the final two chapters focus on more complicated cases of efficient causation. Chapter 7 examines various ways in

which an effect can be attributed to an agent as an efficient cause even when the agent acts at a prior time and is not active in the immediate production of the effect. The final chapter recovers Aquinas's thinking on various ways in which efficient causes can act through the power of other causes. It discusses how efficient causes can be used as instruments by other causes to produce effects, as well as how certain efficient causes essentially depend on the powers of higher efficient causes to act.

PART I

The Elements of Paradigm Instances of Efficient Causation

CHAPTER 1

Background and Overview of Aquinas's Theories

It is helpful for the reader to encounter a general overview of Aquinas's theories before delving into its particular details and complications in subsequent chapters. This chapter provides an introduction to Aquinas's views on efficient causation and causal powers, as well as some background and context necessary for appreciating his views. The chapter first introduces Aquinas's views on the nature of the relationship between an efficient cause and its effect and the various elements involved in paradigm cases of efficient causation. After presenting an overview of Aquinas's theories, the chapter next contrasts Aquinas's views with competing historical theories of causation. Comparison with these other theories helps to highlight what is philosophically significant in Aquinas's theories. The chapter also discusses Aquinas's sources and situates his views relative to medieval debates about causation. This background provides some context for appreciating what is original or controversial in Aquinas's theories. Finally, the chapter includes an introduction to the technical terminology in which Aquinas expresses his views on efficient causation and causal powers. Aquinas uses a variety of Latin terms to refer to the various conceptual elements in efficient causal situations. To aid the reader, these terms are introduced here at the beginning of the study.

1.1 Overview of Aquinas's Views on Efficient Causation and Causal Powers

As noted in the introduction, Aquinas understands the concept of causation in a much broader way than modern and contemporary philosophers. Since the early modern period, philosophers, for the most part, have conceived of causes as those things that are responsible for bringing about changes. Aquinas, by contrast, thinks of the causes which bring about changes, namely efficient causes, as only one type of cause alongside other species of causes. We can best understand Aquinas's views on efficient

causation by first examining the nature of causation in general and then what is proper to the class of efficient causes.

Causation in General and Defining Features of Efficient Causation

Aquinas conceives of the notion of a "cause" as a species of a wider category called "principle." A principle is a beginning or that from which anything else follows. For example, one thing can follow from another according to number, as six follows from seven, or according to time, as one thing happens after another. The lower number and the earlier times are considered principles since there is an order of numbers or times in which they precede another term which follows them. Causes are a specific type of principle and what is proper to causes is that existence follows from them.[1] In Aquinas's view, the relationship between causes and their effects is one of existential dependence. He writes regarding causes in general: "[T]he name cause implies a certain influence on the being of the thing caused."[2] Elsewhere he writes: "Indeed it is necessary for an effect to depend on its cause. For this is part of the notion of effect and cause."[3] In Aquinas's view, causation is a two-way ontological relationship: Effects depend on their causes for their existence; and causes give rise to the existence of their effects. Causes need not bring their effects into being *simpliciter*. A cause may be responsible for something which already exists coming to exist in a new way. For example, the sun might cause an already existing apple to exist as ripened or reddened. While all causes influence being, some causes only influence how something exists.

Aquinas's conception of the cause–effect relationship is noteworthy because alternative theories of causation, as will be explained below, deny that the causal relationship is an ontological one and instead see it as a logical relationship, such as counterfactual dependence or logical entailment. From Aquinas's perspective, it is the real dependence of an effect

[1] *De prin. nat.* c. 3 (ed. Leon., vol. 43, 42–43): "Sed tamen causa videtur addere supra principium communiter dictum, quia id quod est primum, sive consequatur esse posterius sive non, potest dici principium . . . Sed causa solum dicitur de illo primo ex quo consequitur esse posterioris: unde dicitur quod causa est ex cuius esse sequitur aliud." Meehan claims that unlike Aquinas, Aristotle did not distinguish between "principles" and "causes." See Meehan, *Efficient Causality in Aristotle and St. Thomas*, 170–71.

[2] *In V Meta.* lec. 1 (ed. Marietti, 208, n. 751): " nomen causa, importat influxum quemdam ad esse causati." All translations from Latin to English are my own unless otherwise noted.

[3] *De pot.* q. 5, a. 1 (ed. Pession, 35): "Effectum enim a sua causa dependere oportet. Hoc enim est de ratione effectus et causae . . ."