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Efficient Cause as Paradigm? From Suárez to Clauberg

This paper critiques a narrative concerning causality in later scholasticism, due to, among others, Des Chene (1996), Carraud (2002), Schmaltz (2008), Schmid (2010), and Pasnau (2011). On this account, internal developments in the scholastic tradition, culminating in Suárez, lead to the efficient cause being regarded as the paradigmatic kind of cause, anticipating a view explicitly held by the Cartesians. Focusing on Suárez and his scholastic reception, I defend the following claims: a) Suárez's definition of cause does not privilege efficient causation; b) Suárez's readers, from Timpler to Arriaga, did not interpret him as privileging efficient causation; c) it is only much later, in Clauberg, that we find a narrowing of the meaning of causation to efficient causal action; but d) this shift is better explained by Clauberg's rejection of substance hylomorphism in favor of Descartes's doctrine of substance, rather than by any troubles within the Aristotelian causal framework.

1. Introduction

The early modern period witnessed a narrowing of the meaning of cause. Whereas the scholastic tradition had worked with a broad notion of cause as an explainer, inherited from Aristotle's multifaceted concept '*aitia/aition*,' the mechanical philosophy sought to restrict it to that which explains in virtue of acting. Seventeenth-century theories of cause are seen as having resulted from the dismissal of Aristotelian formal and final—and to a lesser extent, material—causes as proper objects of inquiry, with the consequence that efficient causation—God creating the world, a builder building a house, one ball striking and setting into motion another—comes to mean causation as such.

While this shift has long been associated with mechanists such as Descartes, in recent times scholars have drawn attention to the mediating role of later scholastics, especially Francisco Suárez.¹ As they see it, Suárez and his fellow Jesuits had already prepared the ground for the dismantling of the Aristotelian causal framework by treating, tacitly or explicitly, the

¹ Descartes's own position on causation has been the subject of intense debate. For the purposes of this paper, I set aside issues of Descartes-interpretation to focus on seventeenth-century scholastics and, in the final section, on a 'Cartesianizing' scholastic, Johann Clauberg.

efficient cause as the paradigm of what it is for something to be a cause. It has been argued, in particular, that Suárez models his notorious definition of cause, as “a principle *per se* flowing being into another,” on the notion of efficient cause. That is, for Suárez, the meaning of causation as such tracks efficient causal action better than it does the attraction of ends or the union of form and matter. Consequently, in Suárez’s hands, the other species of cause have diminished or restricted application. The upshot, on this narrative, is that some of the novelty of the mechanistic approach to causation is anticipated in Jesuit scholasticism. As Robert Pasnau (2020, 95) writes, in the later medieval period,

there was already a tendency to think of efficient causation as the paradigm case for what it is to be a cause [...] This is an important part of the story of why later medieval metaphysics became increasingly vulnerable to the reductive approach of early modern mechanism.²

The object of this paper is to assess this account with respect to the role in it of Suárez and his followers. It begins in the next section by laying out Suárez’s doctrine of cause, and arguing that it does not privilege efficient causation. Suárez’s notion of causality as influx expresses the idea of ontological dependence in a broad sense, of which dependence due to the action of an agent is one species. Section Three then surveys the recent literature that has attributed to Suárez the thesis of the priority of efficient causation. Building on the criticisms of Kara Richardson (2015) and Sydney Penner (2015), it concludes that the textual evidence in support of the priority thesis is ambivalent at best. Section Four gathers further evidence against

² Similar positions are present in Des Chene (1996), Olivo (1997), Carraud (2002), Schmaltz (2008; 2014), Schmid (2010, 2015), Pasnau (2011), Åkerlund (2011), and Hattab (2012). The priority of the efficient cause thesis is prefigured in the important work of Anneliese Maier (1955), and the recent literature may well be seen as extending her reading of fourteenth-century discussions of cause to the sixteenth.

the priority thesis by turning to Suárez's reception among seventeenth-century academics who, we may reasonably suppose, were his primary audience. By examining the questions on cause in representative texts, including those of Eustache de Saint-Paul, Abra de Raconis, Rodrigo de Arriaga, Clemens Timpler, Jakob Martini, and Christoph Scheibler, it concludes that the priority of the efficient cause is not affirmed by prominent scholastics, all of whom are defending or modifying Suárez's theory of cause. These authors interpret Suárez's notion of causality as influx as wide enough to cover all four Aristotelian causal categories, and consistently reject the view that the efficient cause alone counts as a true cause.

Nevertheless, by the end of the century a clear narrowing of cause to mean efficient cause occurs. Section Five highlights the role in this process of certain post-Cartesian academics who attempted to reconcile the old and new metaphysics. Focusing on Johann Clauberg, it shows how his adjustments to the Aristotelian causal framework to fit a Cartesian theory of substance leads to the fragmentation of the former. To summarize: efficient causation does acquire prominence by the mid-to-late seventeenth century. But, in the scholastic tradition, this shift only occurs with the rejection of substance hylomorphism, not on account of perceived problems internal to the Aristotelian causal model.³

³ Caveat: the labels 'scholastic' and 'Aristotelian' are problematic, to put it mildly. Here, by 'scholastic' I mean university and gymnasium professors, specifically those—still the majority in early seventeenth-century Europe—whose teaching and writing was guided by Aristotle and the Aristotelian commentary tradition. My focus is the Aristotelian revival, led by the Jesuits, that was partly a response to new currents, including Ramist logic, Neo-Platonic metaphysics, and a host of alternatives in natural philosophy (e.g. hermeticism, alchemy, Stoicism, and the so-called 'Mosaic' physics). The Aristotelian camp is far from homogeneous, and displays significant departures from medieval authorities such as Aquinas and Scotus. Yet, it is also unified in crucial methodological and substantive respects, and values the Aristotelian curriculum for its systematic character. This is appreciated not only by the Jesuits, bound by their order to follow Aristotle in philosophy, but also by Protestant academics post-1600. See Menn (1998), and Blair (2000) for a survey of anti-Aristotelian trends in this period. See Hill (2012) for an assessment of Suárez's project vis-à-vis these trends, and for his place in the modern historiography of

2. Suárez's Doctrine of Cause

Suárez's *Metaphysical Disputations* (1597) include an extraordinarily lengthy discussion of causation.⁴ Much of it deals with the four Aristotelian causes—material (DM 13-14), formal (15-16), efficient (17-19), final (23-24), and their comparison (27)—as well as divine causation (20-22), exemplar causation (25), and whether causes are more noble than their effects (26).

Introducing these topics is a disputation on cause in general, or what makes it the case that something counts as a cause of any sort whatsoever (12). Suárez first establishes that cause is a common (though not properly transcendental) attribute of being, so that “there is no being that does not participate in some character of cause” (12.1.1), and that cause is a species of principle (12.1.25).⁵ In the next section (12.2), he elaborates his influential doctrine of cause.⁶

philosophy. For the Jesuit influence in the revival of Aristotelian metaphysics in Protestant academies, see Petersen (1921, 259-338); Eschweiler (1928); Lewalter (1935); Leinsle (1985, 206-70); and Courtine (1990, 405-35). See Grant (1987) for insightful discussion of the use of the label ‘Aristotelian’ in this period.

⁴ I cite Suárez's *Metaphysical Disputations* as [DM], by disputation, section, and paragraph, from the Vives edition (1866). I have consulted Freddoso's (1994, 2002) translations of DM 17-19, and DM 20-22, Kronen and Reedy's (2000) translation of DM 15, and Penner's unpublished translations of DM 12 and DM 23 (available at <http://sydneypenner.ca/SuarTr.shtml>). Final responsibility for translations rests with me.

⁵ Aertsen (2012, 608-11) shows that Suárez rejects the Scotistic innovation in the doctrine of transcendentals that treats disjunctive predicates as convertible with being in the same way as one, true, and good. Aertsen explains that, for Suárez, Scotus's disjunctive transcendentals are not properly *passiones* of being but *divisiones*. That is, *causa/causatum* contract being completely into two divisions, but are not predicated in common of each division, and thus should not properly count as ‘transcendentals.’

⁶ Suárez's treatment of the general notion of cause is part of an ongoing sixteenth-century discussion of articulating what the different genera of causes have in common, or what makes a cause be a cause as such. Capriati (2020) situates Suárez's account in the background of his Jesuit superiors and peers, Benito Pereira, Pedro da Fonseca, and Francisco Toledo. Freddoso's (2002) excellent introduction to his translation of *Disputations 20-22* places Suárez's treatment of cause in the larger frame of his metaphysics.

Suárez begins by identifying three elements in what we may call a causal situation: the “thing that causes” (*res quae causat*), “causation itself” (*causatio ipsa*; also, *causalitas*), and “the relation that either follows or is thought” (*relatio quae vel consequitur vel cogitat*). By ‘cause’ he means a being that is the source of reality in the effect. By ‘causation’ or ‘causality’ is meant that feature in virtue of which a cause actually grounds its effect, or through which “a cause is formally constituted in act” (DM 12.2.1). Resulting from actualized causation is a causal relation, a fuller discussion of which Suárez postpones until Disputation 47, “On Real Relations.”

Suárez expresses the relationship between these elements in two definitions. The first is borrowed from his fellow Jesuits, Pedro da Fonseca and the Coimbra Commentators: “a cause is that on which something else per se depends” (*causa est id a quo aliquid per se pendet*). The second is Suárez’s own formulation: “a cause is a principle per se flowing being into something else” (*causa est Principium per se influens esse in aliud*) (DM 12.2.4).⁷ Suárez declares the first to be correct, and offers the second as his preferred gloss, for reasons that are largely formal. First, he notes that his version makes explicit that cause is a species of principle, one that is a source of being (as opposed to a principle of knowledge, or a logical, or temporal principle). In the case of fire heating water, for instance, the cause is the fire itself, rather than, say, the causal event or the motion preceding the effect. Second, Suárez prefers his formulation for clarifying the specific difference that is combined with the genus in the definition. The first formulation

⁷ The verb ‘*influere*’ and its participles ‘*influens*’ and ‘*influxus*’ are notoriously difficult to translate in this context. The most literal meaning of ‘*influere*’ is ‘to flow into,’ as a river flows into (*influit*) the sea. The verb has been variously translated as ‘to influence,’ ‘to infuse,’ ‘to impart,’ and ‘to inflow.’ Suárez’s usage is non-standard, in that he sometimes uses the verb transitively, as in ‘*influit esse*.’ I am inclined to preserve the non-standard, technical character of Suárez’s Latin and, for that reason, follow Penner in translating transitive uses with the awkward locution ‘inflows being,’ or ‘flows being into.’ For the participles I use ‘flowing’ and ‘influx.’

expresses the idea that an effect *per se* depends on a cause insofar as the being of the former is grounded in the latter. The qualifier ‘*per se*’ is meant to exclude non-beings such as privations, *per accidens* features, and *sine qua non* conditions from counting as causes. While these figure as necessary conditions in causal situations—heat must be absent in water prior to its becoming hot; the color of fire is always present in the heating event; and fire and water must be in sufficient proximity—they are not sources of the heat that comes about in water.⁸ Suárez thinks his version, by characterizing dependence as influx of being, better highlights the special grounding work of the causal principle. A cause grounds a new reality in another thing; it does so in virtue of possessing through its essence a formally similar reality; and the reality in the cause is the source of the new reality in the effect. *Esse* ‘flows’ from the cause into the effect.

The term ‘*influens*’ scarcely illuminates, though, just what it is in virtue of which something is a cause. For the moment, we can turn to Suárez’s closely related notion of ‘causality.’ Causality designates that feature of a cause in virtue of which it grounds its effect: “that by which a cause in act is formally and proximately constituted in the being of cause.” It is also glossed as, “nothing other than that influx or concourse [*influxus ille, seu concursus*] by which each cause in its genus flows being into the effect” (DM 12.2.13). Suárez distinguishes causality from the relation of cause and effect. Causality is prior to the relation and gives rise to it. The relation between cause, causality, and the effect can be expressed as follows: the cause is the subject, its causality or influx the foundation in its nature, and the effect of actualized causality is the term of a causal relation. Causality or influx is then “some medium between the entity and the relation of the cause,” or what makes it the case that a certain agent is

⁸ Sangiacomo (2020, 218-23) shows that Suárez excludes *sine qua non* conditions from counting as causes; see also, Freddoso (2002, xlv).

appropriately constituted to bring about a formally similar reality in a patient under the right conditions (12.2.13).

Suárez is quite aware of the wooliness of this account of causality. Causality and influx seem to be equally opaque terms for whatever it is that distinguishes the grounding role of the agent/subject from the roles of mere necessary conditions in a causal situation. He continues:

what that [medium, i.e. causality or influx] is, and whether it is something in the cause itself or in the effect, and whether it is some mode distinct from them or merely a denomination taken from both, cannot be explained more clearly here, until we have come around to explaining the individual genera of causes.”⁹ (12.2.13)

What it is that makes something a cause, Suárez tells us, cannot be understood except by reference to a particular genus—material, formal, efficient, final (and exemplar, which for Suárez is a kind of efficient cause). ‘Causality’ and ‘influx,’ in other words, are placeholders for the different sorts of real grounds in the nature of an agent in virtue of which it is apt to produce determinate effects. Suárez’s reasons for preferring his formulation of the definition in terms of ‘principle’ and ‘influx’ over the Coimbran one in terms of ‘that’ and ‘*per se* depends’ are formal, that it better indicates the genus and difference combined in the definition.

In fact, Suárez makes it clear that the awkward locution, ‘*influens esse*,’ is meant to gloss the notion of causal dependence. One crucial motive behind his terminology lies in his concern that the definition should clearly exclude the relations among the Persons of the Trinity. The Father is the principle of the Son, and both together are the principle of the Holy Spirit, but in

⁹ “Est igitur ille influxus aliquid medium inter entitatem, et relationem causae: quid autem illud sit et an sit aliquid in ipsa causa vel in effectu, et an sit aliquis modus distinctus ab illis, vel tantum denominatio ex utroque desumpta, non potest hic distinctius explicari, donec ad singula causarum genera declaranda veniamus.”

neither case is the principle the cause of the *principiatum*, for the three are one in essence. Suárez thinks his formulation better satisfies this demand by making explicit the condition that causal dependence should require distinctness of essence between cause and effect, or that the latter should not have its dependent reality from itself, “but to have it given and communicated by another” (*datum et communicatum ab alio*) (DM 12.2.6). He reckons that this feature of causal dependence is more precisely expressed with ‘*influere*’ than with ‘*pendere*.’ Yet, he emphasizes that the two phrases are equivalent: “I said that a cause is that which flows being into another. For these words declare the same thing that is implied in the word ‘depending’” (12.2.7). Causal dependence is ontological dependence of one thing on another, essentially distinct, thing.

Causal dependence in virtue of the communication of being does not, however, amount to a transfer of property instances from cause to effect. For ‘*influens esse*’ not only signifies distinctness in the essences of agent and patient but also distinctness in what the cause communicates to the effect from “the proper being that the cause has in itself.” The picture is admittedly mysterious. Something in the nature of a cause makes it apt to produce ontologically distinct but formally resembling states in another thing, but without giving away a part of its own being. Suárez’s summation does not shed further light: for an effect “to depend in its being on another” is for it “to have being that is distinct from [the cause], and to participate in [the cause] or in some way flow from its [i.e. the cause’s] being” (DM 12.2.7).¹⁰

At any rate, what is relevant for present purposes is that the equivalence of the two definitions speaks against interpreting Suárezian influx-causality as a literal transfer of properties from one substance to another, a view that has often been ascribed to ‘the Scholastics,’ and to

¹⁰ “Unde hoc est proprie pendere in suo esse ab alio, habere scilicet esse distinctum ab illo, et participatum seu aliquo modo fluens ab esse illius.”

Suárez as their leading representative, since the later seventeenth century. Louis de la Forge (1997, 145), in arguing for occasionalism, ascribes such a view to unnamed scholastics. He contends that, if force is conceived as real qualities are “in the Schools,” then motion would absurdly entail that an instance of force “subdivides itself when one body moves another and that it gives part of its movement to the other body.” Leibniz (1969, 269; 494) similarly finds it impossible “how anything can pass over from one thing into the substance of another,” an implication he finds in the “system of physical influx” he attributes to “the Scholastics.”¹¹

Whoever La Forge or Leibniz may have had in mind, these cannot be fair criticisms of Suárez. They rest, first, on a narrow focus on the formulation of causality as influx, and second, on an interpretation of influx as physical transmission of qualities. But Suárez, as we have seen, works with two coextensive definitions of cause, each of which highlights different features of causation. The first, in terms of *‘per se pendere,’* sufficiently expresses the condition that not every relation of following (*consequi*) is causal, by excluding privations and *sine qua non* conditions from the concept of cause. Cause is not a principle simply in the sense of having temporal or logical priority, but rather in virtue of having ontological priority. To emphasize this positive feature, Suárez prefers the language of *‘influere,’* which he thinks, perhaps optimistically, better conveys the thought that a cause is the real ground of a quality produced in

¹¹ Leibniz characterizes physical influx as the view that created substances exert “mutual influence” on one another, or that one acts upon another in such a way that it results in the transfer of a quality. In his Reply to Bayle, he hints that this system “when taken in the popular sense is that of the Scholastics” (1969, 494). O’Neill (1993) highlights the lack of clarity in Leibniz’s ascription of the label ‘physical influx,’ and concludes that we may hold him responsible for inventing the system that he then criticizes. That Suárez is among Leibniz’s targets has been reasonably assumed in recent scholarship; e.g. Rozemond (2009), McDonough (2017). Tuttle (2017) also notes the Cartesian/Leibnizian misinterpretation of Suárez. It is also worth noting that the ‘influx’ terminology is not Suárez’s innovation. It occurs in relation to cause as far back as Aquinas, and is also used by some of Suárez’s immediate predecessors. See Capriati (2020, 132) for some references to these earlier uses of ‘influx.’

an effect. Furthermore, given Suárez's comments on his definition, the view that influx amounts to the transmission of properties between substances is an overinterpretation. Suárez, at least, does not propound Leibniz's system of physical influx.

An interpretation of influx as transmission also creates the impression that Suárez has in mind above all the efficient cause, for that is what most directly brings about a new quality in a patient. Yet, Suárez explicitly rejects that implication, and insists that his definition ranges over the distinct causalities of form, matter, and end: "this mode of dependency [i.e. of influx] [...] can be found in all the causes that we experience; it can quickly be shown for every genus of cause" (DM 12.2.7). Suárez, at least, thinks his notion of cause is capacious enough to include several sorts of causal grounds that do not reduce to efficient causation.

One could perhaps criticize Suárez's definition of cause as being empty, or uninformative about any concrete domain of causal experience, as Leibniz (1969, 126) complained in his Preface to Nizolius's *Antibarbarus*, or unsatisfactory as a unified definition of the four Aristotelian causes, as Fink (2015, 42) charges.¹² But it is not the case that it privileges efficient causation, or that it treats causation as property transfer. In the next section I argue that the

¹² To the objection that the project of defining cause is idle because uninformative, I think Suárez would respond that it is not meant to be ampliative but only explicative. That is, he does not think that by defining cause in its genus we would learn something new about how burning, or cutting, or, flying, or growing happens. Rather, what the definition aims to draw out is the common semantic core implicit in empirical causal predications. For Suárez, everyday causal concepts express much more than regularities or generalized dispositions to burn, cut, fly, or grow. For him, such concepts are inferentially bound up with more general concepts, of which 'cause' *simpliciter* is one. The motivation behind the Jesuit project of defining cause is echoed, I think, in Elizabeth Anscombe's response to the Humean rejection of the general concept of cause for the reason that we never observe causality as such. As she puts it, "the word 'cause' can be *added* to a language in which are already represented many causal concepts" (1993, 93). The project of explicating 'cause' is not to find a new concept to describe some particular domain of phenomena, but rather to articulate what ordinary causal concepts already have in common.

textual evidence for the comparative priority of efficient causation in Suárez is far from conclusive.

3. Efficient Cause as Paradigm?

According to a prevalent view in recent scholarship, by the late sixteenth century internal developments in the scholastic tradition had led to the efficient cause being considered the paradigm of what it is for something to be a cause. On this story, by Suárez's time, efficient causal action comes to express the core meaning of causation. Tad Schmaltz (2008, 11), for instance, writes that Suárez "anticipates Descartes's views in taking efficient causality to provide the paradigmatic instance of causation." And Stephan Schmid (2015, 419-20) declares that "there is no doubt that Suárez's *influxus*-theory of causation privileges efficient causes in rendering them the paradigm kind of cause: the kind of cause after which all other kinds of causes are modelled."

This narrative has emerged partly through interest in the fate of the other Aristotelian causes. The problem of final causes has received especial attention. Briefly, the story goes, the traditional priority of final causes, that 'every agent acts for an end,' was gradually undermined as pessimism grew about how aimed-at ends, which do not yet exist, could be proper causes. On Anneliese Maier's classic account (1955, 273-335), one solution, originating with Avicenna, restricted final causation to fully cognitive agents, thus to humans, angels, and God. She argues that Avicenna's cognitivist model had become dominant by the fourteenth century, culminating in Jean Buridan, for whom all of non-rational nature could simply be treated as a divinely ordered system of efficient causes. In recent decades, Maier's account has been extended to the sixteenth and early seventeenth centuries. Dennis Des Chene (1996, 168-211) finds the Jesuits

distinguishing ends and final causes, and confining the latter to moral action. On his reading, although the Jesuits affirm the universality of ends in nature, they not only acknowledge difficulties in how ends cause but also conclude that natural agents are end-directed only as instruments of divine efficient causality.

But while Des Chene hesitates to attribute to Suárez a full-blown reduction of final causes to efficient, that is what Gilles Olivo (1997, 102) and Vincent Carraud (2002, 161) conclude is entailed by Suárez's account. Others have drawn similar lessons. Schmid (2015) resists Carraud's reductive interpretation, but does not find in Suárez any place for final causes in non-human nature, attributing to him a kind of "finality without final causes." Åkerlund (2011) defends a still more radical thesis, that not only are Suárezian ends not causes, they are not even real beings. For, if ends figure in action only as objects of the will, they need not have reality as *termini* of categorical causal relations. It suffices that ends be mere beings of reason. Surveying the scholastic tradition from Aquinas to Suárez, Pasnau (2020, 90) finds "little enthusiasm for Aristotle's naturalized approach to teleology as goal-directed, non-cognitive impulse, and grave doubts over whether final causes are a legitimate kind of cause at all."

To a lesser extent, claims of the priority of efficient causation have arisen from considerations having to do with formal causation. Pasnau (2011, 557-65) has argued that later Aristotelians such as Suárez tend to emphasize a 'physical' rather than 'metaphysical' role for form. That is, they regard forms more as internal efficient causes than as abstract entities that individuate substances and supply conditions of their synchronic and diachronic unity. As physical principles, substantial forms explain how a material substance is internally regulated; why, for instance, water naturally turns cold after heat is removed, or a stone moves to a lower place in the absence of obstacles. Pasnau stresses the difference between the metaphysical and

physical conceptions of form. The former is meant to explain the deep structure of the world, but has little to do with causal explanations in the modern sense. The latter, meanwhile, ascribes to form a causal role insofar as it is supposed to explain the behavior of a material substance. He concludes that the shift in emphasis has “profound consequences for the subsequent history of philosophy,” inasmuch as treating form “as a kind of internal efficient cause is to diminish the distinctness and autonomy of formal explanations” (2011, 564). Helen Hattab (2012, 116) similarly contends that, “in Suárez’s hands the substantial form was transformed into something more like an internal efficient cause than a formal cause.”

Evidence of the relative priority of efficient causation is not hard to find in Suárez. He seems to restrict final causation to rational agency: “the causality of the end [...] is better known to us in created intellectual agents and it has more of a certain quality and special mode in them” (DM 23.1.8). He also wonders how ends could be real causes, if final causation is understood as the “metaphorical motion” of the will toward a represented object—the standard Aristotelian locution for describing the causality of ends: “if an end has the character of a cause only under this account, then, at least with respect to natural agents, the end cannot be a real cause, because it cannot move or entice [such agents]” (23.1.4). Further, Suárez’s comparisons of the four causes suggest the priority of efficient causation. He writes: “because the influence of the final cause is very obscure, especially with respect to real and physical change, one may briefly say that even though the final cause might be prior in the order of intention, the efficient cause is nonetheless first in execution,” and that “the efficient cause alone really has an influence—that is, effects motion—*per se* and extrinsically” (17.1.3). The two intrinsic causes appear similarly diminished. Form and matter are said to be “less perfect according to their own genera, in being as much as in causality” (27.1.2). Compared to the efficient cause, they “do not as properly flow

being as compose it through themselves,” and therefore the title of cause “is said in the first place of efficient causes” (27.1.10). Finally, in a much-quoted passage, he suggests that the efficient cause best accords with the general definition: “the whole definition of cause is most properly suited to the efficient cause” (*ergo tota definitio causae propriissime convenit efficienti*) (12.3.3).

The impression conveyed by such passages, however, is far from decisive. There is plenty of textual evidence pointing in the other direction, that Suárez does not grant priority to efficient causation either ontologically or conceptually. He would deny that form, matter, and end cannot exist without efficient causes but efficient causes can exist without them. He would equally deny that the other causes cannot be conceived without the efficient, but efficient causes can in the absence of the others.

We can begin with the last of the above-quoted passages, which appears most directly to assert priority. As Sydney Penner (2015, 134-5) argues, the context of this passage undermines the priority claim. At DM 12.3.3, Suárez is giving a summary defense of the four-cause model, that matter, form, efficient, and final are coequal causes of being. Indeed, in the same paragraph, Suárez also affirms that matter has “proper influx,” forms are “proper causes,” and that “the definition of cause is also truly and properly suited to the end.” At best, the import of ‘*propriissime*’ amounts to priority in the order of inquiry, that we begin investigating nature by observing an agent’s patterns of interaction with its environment. As we shall see in the next section, some of Suárez’s followers make this weak sense of priority explicit while denying stronger ones.

Attention to context also softens the force of the comparative claim at DM 17.1.3, that the efficient cause alone has real influence and final causality is obscure. Here Suárez is addressing an objection to his definition of the efficient cause as a “*per se* extrinsic principle from which a

change first exists” (17.1.2). The objection is that the definition does not sufficiently distinguish efficient and final causes, since both are *per se* extrinsic principles, and the end is traditionally understood as “first in the order of intention,” and thus prior to the efficient cause. Suárez’s emphasis in this passage, accordingly, is on the distinction between the directionality of the two causes: the efficient cause is a principle “whence” or “from which” (*unde, vel a quo*) change occurs, the end a principle “for the sake of which” (*propter quam*) it occurs. His concern is to defend the distinctiveness of efficient causation, not to question final causation. As for the unintelligibility of the latter, Suárez does not think that understanding efficient causality is without its own difficulties. In the same section, he also concedes that, “an action’s proper nature and its distinctness from the agent and from the effect are rather obscure” (17.1.5).

Another reason offered for the priority thesis is that Suárez’s characterization of final causation as the metaphorical motion of the will entails its dependence on efficient. Schmaltz (2008, 34) argues that, if final causation requires the actualization of a will or similar power to pursue a represented end, then it would seem to depend on efficient causation. He stresses the contrast between the genuine, efficient causal action of the will from its ‘merely’ metaphorical motion, or its attraction toward a represented end. Suárez certainly marks the distinction: “insofar as [the action of the will] is caused by the will it is effective causality but insofar as it is caused by the end it is final causality” (DM 23.4.8). Yet, the conclusion, that final causation is therefore dependent on efficient, or that it is not real and proper causation, is hasty. For one thing, the locution, ‘metaphorical motion,’ is standard in discussions of the final cause, taken from Aristotle’s gloss on the role of the end of health in the doctor’s healing action in *De generatione et corruptione*. And, as Penner (2015, 135-6) observes, Suárez clearly affirms it as a kind of real motion: “Its [i.e. the end’s] motion [...] is called metaphorical, not because it is not

real, but because it does not happen through effective influx nor through physical motion (23.1.14). For another, while it is true that final causation requires the action of efficient causes, it is equally the case, for Suárez, that efficient causes would not act except for the sake of ends. The actualization of the will depends on the attraction of the end just as much as the causality of the end depends on the actualization of the will. In good Aristotelian fashion, Suárez treats efficient and final causes as co-causes, and indeed, the latter as the “cause of causes” (27.1.8).¹³

Turning now to the formal cause: Suárez’s comparisons of efficient cause with the intrinsic causes are likewise not unequivocal pronouncements of the priority of the former. Again, the contexts for his remarks—that form and matter “are less perfect according to their own genera,” and that “the name ‘cause’ is said in the first place of efficient causes”—are important (DM 27.1.2; 27.1.10). In the first case, by declaring form and matter less perfect “according to their own genera,” Suárez notes that they are by their nature incomplete beings. That is, form and matter, “from the meaning of their concepts and by their entire extensions,” are such that they seek unity with each other for their reality (27.1.2). In this respect form and matter are contrasted with the supreme efficient cause and the supreme end, namely God, who surpasses any matter or form. That is, God is the efficient cause and the end of all things, but is not composed of forms inhering in matter, as finite substances are. The purpose of the second passage, meanwhile, is not to compare intrinsic and extrinsic causes but to explicate the analogical sense in which ‘cause’ is applied to all four. As Suárez later makes clear, none of the

¹³ Des Chene, Schmaltz, Schmid, and others similarly take Suárez’s cognitivist view of final causation, that “in order for the end to cause, it is entirely necessary for it first to be cognized” (DM 23.7.2) to amount to a diminution in the status of the final cause vis-à-vis the efficient, and perhaps even rendering it otiose in the case of natural creatures. I refer the reader to Penner (2015, 136-43), who has responded in detail to this view, drawing on Suárez’s account of divine concurrence, on which the debate around natural final causation turns.

four causes is said univocally of God and creatures but only analogically. There is a large enough gap between the causalities of the first cause and of secondary causes that they cannot be called ‘causes’ in the same way (27.1.9). Suárez’s language in the next paragraph confirms that the comparative claim is not dogmatic. He says only that, because matter and form are intrinsic principles of being in virtue of composition rather than external action, “they seem [*videntur*] to be called causes through the mentioned analogy” (27.1.10).

Furthermore, Disputations 15 and 16 amply demonstrate that Suárez considers form to exercise proper causality that is not conceivable as a kind of efficient causality. In DM 15.6, he affirms the distinct character of formal causality as its union with matter. Union is a manner of ontological dependence of a hylomorphic compound on a prior principle. Causality as union of form with matter fits Suárez’s general definition. First, there is proper separation between the elements of the causal relation: the causal principle, its causality, and the effect. The principle is the form, which has its own being apart from the matter with which it unites. The union of the two principles also has its separate being. It cannot be identical with the form, for, if “all these other things are posited and the union is taken away, it would be impossible for the form to exercise its causality.” For the same reason, it cannot be identical with matter. It thus counts as a third entity without which neither form nor matter would qualify as principles of the compound. Second, form properly gives being to the resulting compound insofar as it “communicates itself through itself to matter, that is, not by efficiently causing another similar perfection, but by communicating to matter its own perfection and entity” (15.6.7). Here he emphasizes the difference between union and action as distinct types of causality. In the former, an ontological principle gives its own being to the effect by constituting it; in the latter, the principle remains external to the effect. The comparison with efficient cause again highlights a consistent theme in

Suárez's doctrine of cause, that different genera of causes do different kinds of work in accounting for one thing's *per se* dependence on another.

Suárez certainly departs from earlier tradition in giving greater attention to what Pasnau calls the 'physical' aspect of the substantial form, its role in regulating a material individual. Again, however, the dialectical context is crucial. Kara Richardson (2015) has effectively countered that Suárez's recognition of a quasi-efficient causal role for substantial form does not displace the core sense of formal causality as union, or diminish its fundamental role in explaining the unity and individuation of substances. She argues that the impression of a choice between the metaphysical/formal and physical/efficient causal roles of substantial form is misleading. Suárez equally affirms both. His comparative emphasis on the latter (mainly in DM 18.2-3, on the generation of material substances and the production of species-appropriate properties), is rather due to a recent circumstance in which the physical role has been contested by Thomas Cajetan.¹⁴

Finally, Suárez directly rebuts the view that the efficient cause is primary. This opinion is associated in his time with non-Aristotelian sources, specifically Augustine and Seneca. He handles a statement in Augustine's *Eighty-Three Questions*, that "every cause is efficient," by pointing to its context in the discussion of divine causation. According to Suárez, Augustine's intent in the passage is to urge against inquiring into the causes of the divine will in its decision to create the world. Augustine's emphasis on efficient causality in this case has to do with the

¹⁴ Suárez rejects Cajetan's opinion at *Summa theologiae* 1.54.3 and 1.77.6, that the relation between substantial form and accident is that of "natural resulting," so that the latter emanate from the former without any mediating efficient causal action. See Shields (2011) for a clear account of the various explanatory roles of substantial forms in Suárez, such as to account for property subordination, systemic equilibrium, and above all the special compositional unity that certain material aggregates but not others seem to have.

problem, which Suárez also recognizes and deals with in DM 23.9, that God cannot be said to act for the sake of external goods. For Suárez, Augustine does not wish to deny, however, that efficient causes can be conjoined with other genera of causes (DM 12.3.5). Suárez is less delicate with Seneca's view, that form, matter, and end play the same kind of role in causal explanation as place, time, and local motion, that is, as mere necessary conditions. Briefly, Suárez insists on a distinction, central to his definition of cause, between explanatory grounds in the essence of an agent and those extrinsic to its essence. Although every (natural) change necessarily involves temporal and spatial conditions, time (*ubi*) and place (*locus*) are unlike form, matter, and end inasmuch as they are not grounded in agential natures but follow merely as accidents of the effect. The measure of duration and the place where change occurs are simply necessary consequences of forms uniting with matter or of end-directed action. But, unlike the latter principles, they do not *per se* give being to the effect (12.3.7).

More to the point, what these passages reveal is that, for Suárez, the priority of the efficient cause thesis is the product of the humanist retrieval of non-Aristotelian ancient sources, rather than an option generated from within the scholastic commentary tradition. In fact, this is not the only non-Aristotelian view in the sixteenth-century waters. Suárez also acknowledges and rejects another heterodox position, associated with Socrates in the *Phaedo*, that only the end is a true cause and all other factors mere necessary conditions for its realization (12.3.4). If the efficient cause did come to enjoy paradigmatic status in later scholasticism, it could only have been in spite of Suárez.

To be sure, textual reasons in favor of the priority thesis cannot be outright dismissed. Yet, evidence that Suárez adhered to more traditional positions on the four causes is no less compelling. He nowhere makes the strong claim that ends or forms reduce to efficient causes.

Nor does he claim that efficient causality is more intelligible than final and formal causality. One general lesson from Suárez's lengthy examination in DM 12-27 seems to be that the concepts 'cause' and 'causality' remain murky until spelled out in one of four respects, as form, matter, end, and efficient. It is not the case that one of these better fits the general account of cause than the others. Instead, Aristotle's four genera fill out the definition in distinct ways. The immediate scholastic reception of Suárez's theory of causation provides further evidence against the view that he accorded priority to the efficient cause.

4. The Reception of Suárez's Doctrine of Cause

This part of the paper is guided by the thought that the contemporary reception of a text, and especially how it is read by its primary intended audience, can furnish valuable clues for understanding its meaning. This is not to advocate a radical reception theory of textual meaning, so that we could understand the *Metaphysical Disputations* simply by its reception history. Nor is to become oblivious to the possibility of early misinterpretation under the influence, say, of its readers' polemical entanglements. Nevertheless, within suitable constraints, attention to how Suárez was read by his scholastic contemporaries serves important, albeit partial and defeasible, evidence for his views.

The influence of the Iberian Jesuits on seventeenth-century thought has long been recognized. Suárez, Fonseca, Toledo, and the Coimbra Commentators not only had a profound impact on Catholic philosophy but also injected fresh energy in Lutheran and Calvinist contexts.¹⁵ Leading texts from this period embrace Fonseca's and Suárez's innovative method of

¹⁵ Suárez's *Disputations* went through seventeen editions between 1597 and 1636, not only in Spain, France, and Italy, but also in Mainz, Cologne, and Geneva. For publication details of

commentary on Aristotelian metaphysics, of organizing it topically rather than following the order of Aristotle's books. Their construction of metaphysics as a distinct science, separate from theology and which it should serve as an instrument, was a crucial reason behind their cross-confessional appeal. Suárez's prefatory remark, that "he is doing philosophy in such a way as to always keep in mind that our philosophy should be Christian and a servant to divine theology" is echoed, for instance, in the Lutheran Christoph Scheibler's "Proemium" to his widely reprinted *Metaphysica* (1617), a work that earned him the title of 'the Protestant Suárez.' Jesuit discussions of causation too leave a clear imprint. This section focuses on representative Catholic and Protestant authors in the first half of the century.

Among the most successful disseminators of Jesuit philosophy was the French Cistercian monk and Sorbonne professor, Eustache de Saint-Paul (1575-1640). Eustache's *Summa philosophiae quadripartita* (1609) is an instance of the increasingly popular genre of the *cursus*, a compendium of philosophical theses with brief explications but without the rigorous examination of objections and replies characteristic of the commentaries of Suárez or Fonseca. Texts such as Eustache's are primarily teaching aids and, for that reason, especially valuable sources for judging the standard reception of the leading authorities.¹⁶

Suárez and the authors discussed in this section, together with brief biographies, see Lohr's (1988) bibliography of sixteenth- and seventeenth-century editions of Aristotelian commentaries.

¹⁶ Authors in this section are cited as follows:

Eustache, *Summa philosophiae*, by part, tractatus, disputation, and question.

Abra de Raconis, *Tertia pars philosophiae seu Physica*, by page.

Arriaga, *Cursus philosophicus*, by book, disputation, section, and page.

Timpler, *Metaphysicae systema methodicum*, by book, chapter, question, and page.

Martini, *Exercitationum metaphysicarum*, by volume, exercise, theorem, and page.

Alsted, *Metaphysica*, by book and chapter.

Scharff, *Metaphysica exemplaris*, by book and chapter.

Scheibler, *Metaphysica*, by part, chapter, heading, article, and question.

In the physics part of his *summa*, Eustache acknowledges three ways in which ‘cause’ is used: wide (*lata*), narrow (*stricta*), and proper (*propria*). In the wide sense, it is synonymous with ‘principle,’ as what is prior to another in any sense whatsoever. This usage confuses principles of being and knowing, treating, for instance, the premises of a syllogism as causes of its conclusion in just the same way as fire is the cause of heat in water. In the narrow sense, cause denotes the efficient cause alone. Between the two is his preferred meaning, common to Suárez and the Coimbrans, as “that on which something else *per se* depends” (*Id a quo aliquid per se pendet*). He glosses ‘*pendere*’ or ‘*dependere ab aliquo*’ as dependence with respect to essence of something posterior and numerically distinct from its cause, in order to exclude relations among the Persons of the Trinity from counting as causal. Following Suárez, Eustache takes the ‘*per se*’ qualification to exclude *per accidens* factors and mere necessary conditions. To gloss this special mode of ontological dependence, he adopts Suárez’s terminology, that causality is influx of being from the cause into the effect (1.2.1.1). Like Suárez, he treats the two formulations of the definition as equivalent. ‘*Influere*’ glosses ‘*pendere*,’ emphasizing the admittedly mysterious communication of *esse*.

Eustache flatly rejects identifying cause with efficient cause. But does he think that the efficient cause best expresses the generic meaning of cause? In the next question, he declares all four Aristotelian causes to equally satisfy the definition (1.2.1.2). In their separate treatments, however, form and matter appear to have an ambiguous status. While granting that form has a certain *ratio causandi*, Eustache notes that it can also be called ‘principle,’ ‘element,’ and ‘nature,’ in addition to ‘cause.’ It could be called ‘principle’ with respect to generation, ‘element’ insofar as it composes a natural substance, and ‘nature’ insofar as it is an innate principle of change. Yet, he includes form among the causes because the hylomorphic compound is

essentially distinct from its constituents and depends existentially on their union. That is, form qualifies as a cause on account of its constitutive role (1.2.2.1-2).

No tentativeness is present in his treatment of the two external causes. The account of the final cause opens with Aristotle's definition of the end as "that for the sake of which something exists." Eustache finds this definition sufficient for treating end as a "true and proper" cause, for no efficient cause would otherwise act. The effect of the final cause is the efficient causality of the agent (1.2.2.6). Eustache is clear about the ontological status of the final cause: in moving the agent to act, the end is what is intended as the determinate aim of an efficient causal power. The end thus causes with respect to "true and real being" (*secundum esse verum et reale*), not merely objective and intelligible being, even though, for Eustache as for Suárez, the latter is a necessary condition for final causation. The structure of all actions requires the *per se* dependence of the efficient cause on the end, and in virtue of it the end is called the "cause of [the other] causes" (1.2.2.7-8). Eustache's summary presentation of the external causes does not accord any priority to the efficient but rather affirms their correlative character.

This account is confirmed in another popular *cursus*, Abra de Raconis's (1580-1646) *Summa totius philosophiae* (1617). In the question on cause, after cataloguing several candidate definitions, Raconis focuses on the two accepted by Suárez. While expressing his preference for the second, "*causa est principium per se influens esse in aliud*," he notes that it does not differ from the Coimbran definition. His reasons for preferring the former are Suárez's, that it clearly places cause in the genus of principle, that the phrase '*per se influens*' distinguishes the dependence of the effect on the cause from its dependence on *per accidens* factors, and that the phrase '*esse in aliud*' specifies cause as a principle of being (1633, 133-4). The remainder of his discussion makes clear that '*influens esse*' simply unpacks *per se* dependence. There is no

suggestion that influx most properly denotes efficient causal action. Comparing the two external causes, he echoes Suárez in maintaining that, with respect to their formal characters, efficient and final causes excel each other in different respects. While the efficient cause is proximately responsible for producing an effect, the causality of the final cause surpasses that of the efficient, inasmuch as the latter would not act except on its account (1633, 143-4).

We find in the physics part of the Jesuit Rodrigo de Arriaga's (1592-1667) *Cursus philosophicus* (1632) an emendation of both the Coimbran and Suárezian definitions. Arriaga is dissatisfied with the former for not excluding clearly enough non-causal dependence relations: "An effect *per se* depends on other conditions as well, e.g. on proximity and approximation to the cause, and other such conditions that are not causes." The Coimbran definition, in other words, is too broad. The rest of Arriaga's discussion of the definitional question is devoted to refining Suárez's version. He begins with some unnamed objectors to Suárez's formulation of 'causa' as "*principium per se influens esse in aliud*," who charge that it contradicts the right understanding of the Trinity. The objection is that it entails that God the Father is an intrinsic cause of the hypostatic union of the divine and human natures in Christ, and thus is distinct in essence from Christ. But, "The Word cannot be said to be something absolutely other than Christ, because it includes Christ in itself, but [it can be said to be] other with respect to humanity, which it does not compose." The details of the objection are less important for our purposes than Arriaga's diagnosis of the underlying confusion. As he sees it, Suárez's formulation would entail that the Father produces Christ as a distinct nature only if, a) '*principium*' included God in its extension, b) '*influens esse*' meant 'producing being,' and c) '*in aliud*' were understood in an unrestricted sense to include all beings, created and uncreated (2.7.1, 321). In response, Arriaga offers a revision to Suárez's definition: cause "is that which

per se inflows by producing essence” (*est illa quae per se influit producendo essentiam*) (2.7.1, 322). To deal with the aforementioned objections, he proposes to eschew the use of the word ‘cause’ *in divinis*. He sharply distinguishes the case of creatures, in whom essence is produced, from the unproduced divine nature, restricting ‘*causa*’ to the former but allowing ‘*principium*’ to extend over both. Put differently, Arriaga restricts the definition of cause to creaturely causes and to the uncreated cause of creatures. Only produced beings can be properly said to have causes.

One might suspect that, by making explicit in the definition the notion of production, which typically suggests drawing out by an external operation, Arriaga prioritizes the efficient cause. Certain features of his subsequent account hint at such a position. For instance, he treats form, matter, and end all in one disputation, but devotes a separate, and the longest, discussion to the efficient cause. Yet, the impression is misleading. He defends his definition of the formal cause, as that which “through union bestows upon a subject its denomination,” as satisfying his revised general definition of cause (2.8.4, 350). He also resists the implication that final causation is restricted to the productive actions of rational agents, suggested in his acceptance of a cognitive condition. Drawing on Aquinas and Suárez, he argues that, although final causation is clearest in rational agents, it is nonetheless also real in non-human animals in virtue of God’s concurrence in their efficient causal actions (2.8.6, 355-7). As for his decision to treat efficient cause separately, Arriaga explains that it is not because efficient causes are ontologically prior. Rather, it is “inasmuch as it [the efficient cause] is the more principal and to which knowledge of the other causes is ordered” (2.9.1, 361). That is, efficient causation is prior only in the order of inquiry. It is how the nature of an agent *qua* cause is outwardly expressed, and consequently how its inner nature becomes accessible. Inquiry into the natural ends of an agent’s actions, into the subordination of its properties, and the principles of its unity and persistence over time, only

begins with observation of its efficient causal action. But Arriaga does not take this sense of priority to entail that the efficient cause is uniquely deserving of the title of ‘cause,’ nor does he think the label applies in an attenuated sense to the other causes.

As noted earlier, Jesuit accounts of causation reached beyond the Catholic milieu. Soon after its first publication in Germany (Mainz, 1600), references to Suárez’s *Disputations* begin to appear alongside Fonseca, Pereira, and the Coimbrans in textbooks of both Calvinist and Lutheran professors. Among the first is the Reformed professor Clemens Timpler’s (1563-1624) *Metaphysicae systema methodicum* (1604). Timpler’s treatment of the question, “*Quid sit causa in genere*,” expresses wariness toward the project of defining cause in general. He is dissatisfied with a host of candidate definitions from Boethius to Suárez—that which satisfies inquiry; that from which another thing follows; that on which something *per se* depends; that on which something is contingent; that which bestows being on another; that by whose force something exists; a principle *per se* flowing being into another—for being either too broad or too narrow. Nevertheless, he finds agreement among philosophers on the following matters: a) cause is not an absolute but a respective being; b) a causal relation exists in virtue of causality, which grounds a connection between the cause, or the subject of the relation, and the effect, or the term of the relation; and c) that in the definition the genus is to be taken from “the order of the entity of the relata”—hence, it is to be a principle—and the specific difference from the order of their correlation—that the cause contains the ground of the effect. Taken together, these conditions yield a consensus definition, which turns out to be a looser version of the Coimbra formulation: cause is “a principle whence the effect depends” (*principium unde causatum dependet*) (3.2.3). For Timpler, Suárez’s gloss on ‘*pendere*’ as ‘*influens esse*’ does not add anything to the definition, and for the sake of clarity, is better discarded. His definition emphasizes ontological

dependence, but does not betray a preference for any specific manner such dependence must take, whether through action, composition, or a natural tending-toward.

More sanguine about the project of defining cause is the Lutheran Jakob Martini (1570-1649), professor at Wittenberg. In his *Exercitationum metaphysicarum* (1608), Martini offers a reformulation of Suárez's definition of cause: "a principle that *per se* conveys influx to the being of the effect" (*principium quod per se importat influxum ad esse causati*) (1.4.1, 139). Like other authors, he notes wider and stricter meanings of cause, from being synonymous with principle to being restricted to the efficient. After considering a variety of positions, he defends the four-cause model, and elaborates his definition by turning to Suárez. On the one hand, cause should be narrower than principle, by expressing ontological dependence and excluding privations and mere necessary conditions. On the other, causality should be broad enough not to denote strictly the action of the efficient cause. Rather, it should be equivalent to Suárez's phrase "*dandi vel communicandi*." Martini glosses '*importat influxum*,' by quoting Suárez's formulation of causality as "nothing other than that influx or concourse by which each cause in its genus flows being into the effect" (1.4.1, 143-4; DM 12.2.13). Martini's definition is picked up by other Protestant authors, who interpret it as equally capturing the four Aristotelian causes while excluding non-causal necessary conditions. In his *Metaphysica* (1613) the Herborn Reformed professor Johann Heinrich Alsted (1588-1638) affirms that '*importat influxum*' extends over the causalities of matter and form as composition through union, of the efficient cause as action, and of the end as enticing the agent to act (1.27). The Wittenberg Lutheran Johannes Scharff's (1595-1660) popular handbook, *Metaphysica exemplaris* (1623), closely follows Martini's reformulation of Suárez in its summary description of causation, affirming the view that agents are constituted through four kinds of causality (2.6).

A more detailed treatment occurs in the *Metaphysica* (1617) of Christoph Scheibler (1589-1653), Lutheran professor at Giessen. Scheibler's commentary was widely used in Protestant universities, including at Oxford and Cambridge, through the mid-seventeenth century. In the question on cause, Scheibler identifies two desiderata for a definition. First, it should mention dependence that restricts the genus 'principle' to an ontological respect. Scheibler's second desideratum, meanwhile, calls for sufficient latitude within the genus to accommodate different sorts of causalities: "in definitions of cause determinate manners of causing ought not to be assumed." In particular, the general definition should not assume that action is the only kind of causality. Notably, for our purposes, he highlights Suárez's definition as among those which clearly satisfy the second criterion. With these observations and qualifications, he offers his own definition which explicitly treats influx as a mode of dependence: "cause is a principle whence (or on whose influx) something depends" (*causa est principium, unde (vel ex cuius influxu) pendet aliud*)" (1.22.2.2).

The very first question Scheibler considers under the next heading, "On the divisions of the causes," shows the centrality of the second desideratum in his mind. He begins his defense of Aristotle's four-cause model by responding to the view that the efficient cause should uniquely count as cause. Like Suárez, he associates this position with Seneca, who contends that Aristotle's notion of cause either embraces too much or too little.¹⁷ Too much, if what is sought is the proximate ground of any effect, for only the efficient cause fills that role; too little, if by 'cause' is meant any requisite of an effect, in which case not only matter, form, and end, but also time, place, and motion should be included. Scheibler's response echoes Suárez's. He counters

¹⁷ In modern editions of Seneca's *Epistles*, the argument is in Epistle 66. Both Suárez and Scheibler are referring to an edition that places it in Epistle 65.

that the reason why matter, form, and end are reckoned among the causes is that they constitute the agent in a way that makes it the ontological ground of the effect. Time, place, and motion, by contrast, are akin to privations and accidental correlates of actualized causality, that is, as necessary consequences of a causal situation but not sources of the being of the effect. For Scheibler, Seneca's argument is an *ignoratio elenchi* that merely appeals to a general respect in which all Aristotelian causes resemble *sine qua non* conditions, namely as ingredients of causal situations, but does not give specific reasons either to exclude matter, form, and end from the Suárezian definition of cause or to include time, place, and motion under it (1.22.3.1.1).

Like Arriaga, Scheibler grants priority in the order of inquiry to the efficient cause. The efficient cause is "rightly placed" before the other causes insofar as the contributions of the other causes cannot be known except by means of an agent's action. Inquiry into the proper ends of an agent or of the substantial form that integrates those ends commences by inspecting its behaviors (1.22.4.1). Yet, this weak sense of priority does not require overturning standard doctrines, that the end is primary in virtue of being the reason why an agent acts, or that the two external causes express natures that result from substantial forms inhering in matter, doctrines to which Scheibler holds fast. He affirms unequivocally that the end exercises "true influx" in the efficient cause by being the cause of its action (1.22.25.1) and, indeed, not just in rational agents but also in non-rational nature (1.22.25.2). He also affirms that form exercises "true and real influx" in virtue of being a distinct principle that produces the compound through union with matter (1.22.21.1).

Examples of scholastic manuals in the first half of the seventeenth century espousing views of cause and causality along these lines can be multiplied. The following themes are worth highlighting. First, in scholastic discussions of cause in this period, Suárez and the Coimbra Commentators set the tone. Virtually every notable university and gymnasium professor takes

their definitions as a point of departure. To my knowledge, none of them interprets either definition to entail either ontological or conceptual priority of the efficient cause. Nor does anyone conclude that efficient causal action is paradigmatic causality, or that influx amounts to the transfer of qualities from agent to patient. At best, we find some authors recognizing the priority of efficient causation in experience, insofar as causal inquiry begins with the observation of one thing acting on another. Consequently, it is difficult to maintain that Jesuit accounts of cause anticipate later, post-Cartesian positions. If Suárez did anticipate the Cartesians' insistence on the sufficiency of efficient causes, or if he held what Leibniz called the system of physical influx, that seems to have been entirely lost on his primary audience.

Furthermore, the thesis that the efficient cause is the only kind of cause is certainly in the air, as evident from the fact that several authors acknowledge and address it. But that thesis is due to the revival of ancient Stoicism, not to any internal shift within the later Aristotelian tradition. The expanded intellectual context of this period means that scholastic authors have to contend with a wider range of opposed doctrines. There is no indication, though, that any of them makes the least concession to the Stoic opinion. Moreover, Seneca's is not the only alternative that has been made available and which finds its way in Aristotelian commentaries. Several authors also consider and reject the Socratic position, associated with the *Phaedo*, that the final cause alone deserves the title of cause, and typically do so alongside their criticism of the Stoic view. Under pressure to respond to new currents, a consistent theme among early modern scholastics is that wider and narrower meanings of cause are now available. But the correct view, from their Aristotelian standpoint, remains the middle one that recognizes four coequal principles on which effects ontologically depend.

Yet, the Aristotelian model undeniably breaks down in the second half of the seventeenth century, including in the scholastic context. Efficient causes assume primacy in certain authors seeking to renovate Aristotelian metaphysics in Descartes's wake. Among these is Johann Clauberg, who attempts to graft the scholastic theory of cause onto a Cartesian doctrine of substance. What Clauberg's case brings out is that the demise of Aristotelian causation has more to do with its unsuitability for a new theory of substance rather than with its own internal tensions.

5. Johann Clauberg: Scholastic Causes, Cartesian Substances

Descartes envisioned his *Principles of Philosophy* as an alternative to the Aristotelian curriculum. Although it rarely supplanted the scholastic manuals, Cartesianism made steady inroads in some academies in the mid-seventeenth century. One surprising milieu in which it was favorably received was the German Reformed, in large part due to the activities of Johann Clauberg (1622-65). After studying in Groningen and Leiden amid controversy surrounding the teaching of Descartes, Clauberg moved back to the Rhineland in 1651, first to Herborn and then to the newly founded university in Duisburg (est. 1654). There he set about promoting Cartesianism in works including *Defensio cartesiana* (1652), *Initiatio philosophi sive dubitatio cartesiana* (1655), and *Paraphrasis in meditationes cartesianae* (1658). These would introduce subsequent generations of German academics to Descartes. In the last years of his life, Clauberg wrote systematic treatises on metaphysics and natural philosophy, scholastic in form but with important innovations in content. These include the third version of his ontology, *Metaphysica de ente quae rectius Ontosophia* (1664), and the multi-part *Physica* (1664). What resulted from

his ambitious synthesis is instructive for understanding the transformation of the notion of cause.¹⁸

Clauberg develops his ontology in three editions: *Elementa philosophiae* (1647), *Ontosophia nova* (1660), and finally *Metaphysica de ente* (1664).¹⁹ In certain respects, these texts display a progressive shift toward Descartes.²⁰ Crucially, by 1664 Clauberg has embraced Descartes's substance-mode ontology and rejected hylomorphism. His treatment of causation remains outwardly continuous with the scholastic framework, but instabilities lurk beneath the surface. In what follows, I first examine Clauberg's account of cause, and then show how his divergences from the Suárezian model are forced by his new metaphysics of substance.

In the last version of his ontology (the one printed in his *Opera omnia*), Clauberg defines cause as, “a principle that gives being to another thing different from itself” (*principium, quod alteri rei essentiam largitur a sua diversam*) (ME 13.225). Cause is a principle that is responsible for the production or origin (*Productionis seu Originis*) of being (13.218). Like Suárez, Clauberg makes explicit that ‘cause’ is “contained under principle, as a species under a genus.” In

¹⁸ Clauberg is a key figure in the so-called ‘*cartesianische Scholastik*’ (to use Bohatec’s (1912) label) movement. His teacher Johannes de Raey’s *Clavis philosophiae naturalis* (1654) is an important influence on Clauberg in this regard, as is his colleague Christoph Wittich’s effort to reconcile Descartes with Calvinist theology. Clauberg continued to shape German understandings of Descartes into the eighteenth century, as is evident from the extensive references to Clauberg as a representative of Cartesianism in Wolff’s *Ontologia* (1730). For the Duisburg background and Clauberg’s motivations in reconciling Descartes with Aristotelianism, see Hamid (2020).

¹⁹ I cite Clauberg’s texts as follows: [ME]: *Metaphysica de ente*, by chapter and paragraph; [Elem.]: *Elementa philosophiae*, by page; [DP]: *Disputationes physicae*, by chapter and paragraph.

²⁰ On the question of the ‘scholastic’ and ‘Cartesian’ dimensions of Clauberg’s ontology, and their development over the course of his career, see Carraud (1999) and Savini (2011, 23-70). Rather than dwell on the question of whether Clauberg belonged more to one or the other camp, I endorse Savini’s recommendation to approach him as an original author in his own right, who borrows from both sources for his own systematic purposes.

particular, it involves dependence and priority with respect to being, and excludes logical and mathematical dependence relations as well as relations of temporal order or of knowledge. “A point,” as Clauberg writes, “is a principle of a line, not a cause” (13.220-1).²¹ As a principle of being, cause may be said either *secundum esse*, as the Sun is the principle of illumination in another thing, and as God is the principle of the origin and continued existence of things; or it may be said *secundum fieri*, as an architect is the cause of the coming into existence of a house but not of its enduring. In either case, cause is that which grounds some reality in another thing by producing it, or giving it being, in virtue of its own essence (13.223).

Like others before him, Clauberg thinks all causality involves the bringing forth of a new reality. More sharply than his predecessors, however, he distinguishes production in which the causal agent remains external to effect, as when fire produces heat in water, from production that involves the principle becoming part of a new compound. For him, only the former is properly causal. Thus, Clauberg excludes form and matter from counting as causes, for the reason that these are better considered “as *parts of the thing* from which its essence is composed than as causes of the thing” (*ut partes rei, ex quibus essentia ejus componitur, quam ut causas rei*) (ME 13.225). Indeed, there is no further treatment of form and matter under cause. A cause is strictly a principle of acting (*principium agendi*), whether as the principal agent of an action or as its instrument. With respect to his definition of cause, union fits the condition of ‘giving being,’ but

²¹ Clauberg does not equate ‘cause’ with ‘principle,’ as Platt (2020, 162-5) argues. Platt’s reading is motivated by a concern to defend an interactionist account of Clauberg’s response to the mind-body problem. According to him, Clauberg resolves that problem by treating mere dependence as a type of efficient causal relation, which would permit him to conceive non-productive dependence relations between heterogeneous substance as causal. Mind and body could then be said to mutually interact in virtue of the regular covariations between their states. Clauberg’s discussion of ‘*principium*’ and ‘*causa*’ in the texts cited above are clear in restricting the latter to dependence relations that are also production relations.

fails that of ‘to another thing different from itself.’ He acknowledges that the notion of cause is used with wider latitude. Causal locutions are employed to speak of ends moving the will, or form and matter making up a thing (13.226). Yet, strictly speaking, the efficient cause alone produces its effect by an action belonging to a *suppositum*, and more precisely, through a force of acting grounded in the essence of a substance. For Clauberg, action is paradigmatic causality, and “*to act* is applicable only to the efficient cause” (13.227). Unlike his predecessors, he is not interested in distinguishing efficient causality from other types of genuine causality. Rather, his point is that, whereas causal language is used loosely in other cases, the power of acting alone is what makes substances be causes. Since action is the causality of the efficient cause, this entails that the efficient cause alone is a true cause. Clauberg’s narrowing of causality to action is reflected in the chapter heading: “*Principium. Causa. Actio.*”

To express causal dependence through action, however, Clauberg rejects the Suárezian language of influx in favor of ‘to give’ and ‘to receive’ (*largire, accipere*). He confesses being unable to understand what “those who define action as the *fluxus of effect from cause*” conceive as passing from agent to patient (ME 13.231). His criticism of Suárez’s terminology reveals that he associates with it the sort of meaning that La Forge and Leibniz attach to it, as involving a transfer of qualities. Whatever else ‘giving being’ expresses for him, we may infer that it is supposed to exclude a conception of causality as the migration of properties, which we may further surmise has become associated by the 1660s with ‘*influxus.*’ Clauberg’s criticism also betrays a shift in his own views. In the 1647 version of his ontology, he had defined efficient causality using just that locution, as “*fluxus effectus a causa*” (Elem., 68). The rejection of Suárez’s language and what he takes it to connote, though, is only a consequence of a deeper shift in Clauberg’s metaphysics of substance under the growing influence of Descartes.

In all versions of his ontology, Clauberg commences with a threefold signification of ‘being.’ In the widest sense, ‘*ens*’ refers to the merely thinkable, as “whatever can be thought or said,” which includes thought about non-being (*nihil*). In the second, as ‘*aliquid*,’ *ens* picks out what is positively knowable in things in virtue of their possible existence outside thought. ‘*Aliquid*’ is opposed to ‘*nihil*’ and denotes those beings to which existence is not repugnant (Elem., 37-42; ME 2-3.6-41).²² In earlier and later versions, Clauberg retains these meanings of ‘*ens*’ and ‘*aliquid*.’ What shifts is his account of the third and strictest sense of being, ‘*ens reale*.’ In *Elementa*, Clauberg writes that, “real being is something to which real attributes belong, or, that real being obtains not only outside the intellect but also in itself” (Elem., 43). That is, *ens reale* refers not only to the eternal objects of thought but also to beings that instantiate those attributes. He then proceeds to elaborate the transcendental attributes of beings, beginning with essence and existence, followed by unity, truth, goodness, and a host of disjunctive attributes, including *principium/principiatum* and *causa/causatum*. Only after treating being and its general properties does Clauberg turn to the things that have those properties in common, namely the species of substance (finite and infinite) and the categories of accident. In 1647, Clauberg’s ontology follows Suárez’s division of metaphysics, and more specifically, the order of topics laid out in textbooks of Reformed scholastics such as Timpler.

By contrast, in 1664 Clauberg departs both in the order and the content of his ontology in crucial respects. For one thing, he inserts the topic of substance into the general doctrine of *ens reale*. More consequentially, his treatment of real being embraces the Cartesian substance-mode

²² For Clauberg’s threefold notion of ‘*ens*,’ see Carraud (1999, 19-20), and Bardout (1999, 136-7), The wide conception of being, and thus of the subject matter of metaphysics, is shared by Clauberg’s Reformed predecessors, beginning with Timpler. Suárez’s role in the development of metaphysics as ontology in this sense has been a topic of debate; see Courtine (1990, 436-57).

ontology while rejecting the Aristotelian substance-accident framework. *Ens reale* picks out substance, or “that which exists in such a way that it does not need a subject in which to exist,” a meaning he takes to be common to Aristotle and Descartes (ME 4.44). He rejects, however, the opposed notion of accident, or “that which exists in another, as in a subject.” Specifically, he rejects accidents insofar as they are conceived as forms that are really distinct from substances in which they inhere. Instead, Clauberg prefers Descartes’s division of beings into substances and modes. He divides modes into “modes of things” (*modi rerum*), or the variable, non-essential properties of a substance; and, borrowing a phrase from Descartes, “modes of thinking” (*modi cogitandi*), or the “essential and inseparable” attributes that permanently describe a substance (4.44; cf. *Principles* 1.62, AT 8A.30, CSM 1.214). Both modes and attributes depend on substances, and neither is really distinct or separable from substance. *Modi rerum* are modally distinct from the substances to which they belong, as concrete properties that have no reality other than as states of a substance (4.46). The distinction between a substance and its attributes, meanwhile, is conceptual. Attributes are aspects under which a substance is cognized, rather than general properties of substances of which modes would be instances. In Clauberg’s list, the common attributes of substance include ones that Descartes recognizes in the *Principles*—such as duration, order, and number—as well as the absolute and respective *transcendentalia* of the Scotistic tradition—one, true, good, principle, cause, whole/part, sign/signified, and so on.

Clauberg now further follows Descartes in maintaining that every substance has one principal attribute through which its modes are most distinctly cognized (ME 4.47). To identify these, he considers those features of substances which are “maximally opposed and contrary,” while also being positively intelligible. He finds these to be extension in bodies and intellect and

will in minds, for the reason that modes conceivable through one cannot be conceived through the other (4.48). Consequently, real being

is divided first of all in *corporeal* or material, that is, extended in length, breadth, and depth, of which sort are air, fire, water, etc [...] and *intellectual*, that is, to which belong thinking or intellecting and willing, as God, angels, and rational souls.²³ (4.49)

For Clauberg, prior to the enumeration of the transcendental attributes of being is its division into two species of substance. The character of *ens reale* as either body or mind now constrains the sense of its further predicates.

Principal attributes define substances as endowed with a certain essence, or “that whole through which a thing both is, and is what it is” (*totum illud, per quod res & est, & est id quod est*) (ME 5.60). In virtue of its essence, a body is both suited to existence as such and to exist as a particular kind of thing, namely a corporeal rather than mental substance. Clauberg retains standard theses concerning essence: that it does not permit of greater or lesser, that it is indivisible and immutable, and that it belongs to a substance necessarily (5.65-70). His crucial break from his scholastic predecessors consists in the denial that corporeal and mental essences constitute substances as parts of hylomorphic compounds. The relation of Cartesian essences to substances is radically unlike that of substantial forms to hylomorphic individuals. Clauberg is happy to admit form as naming that set of features by which one thing is distinguished from another and, to that extent, to regard the essence of a substance “*sub ratione formae*.” What he rejects, however, is that form in this sense should be counted as a part from which a substance is composed (5.61-2). Following Descartes, Clauberg conceives substances as complete beings that

²³ “Hinc res primo dividuntur in *Corporeas* seu materiales, hoc est extensas in longum, latum & profundum, cujusmodi sunt aer, ignis, aqua, &c. & *intellectuales*, hoc est, cogitatione sive intellectu & voluntate praeditas, uti Deus, Angelus, Anima rationalis.”

depend exclusively on God for their existence. Corporeal and mental essences express, respectively, the whole nature of a mind or a body, as real beings to which existence apart from all other finite substances is not repugnant. Mind and body, unlike scholastic form and matter, do not essentially stand in need of mutual union in order to exist. In this regard, Clauberg decisively breaks from reigning scholastic orthodoxy. Suárez, for one, defines form as, “a certain simple and incomplete substance which, as the act of matter, constitutes with it the essence of a composite substance” (DM 15.5.1). As an incomplete being, form necessarily requires union with matter in order to exist. For Suárez, the soul, or the form of a living body, for instance, “is not a part in the sense of something whole in itself, but is essentially a part, and has an incomplete essence, which is by its own nature ordained to make another essence complete; hence it is always an incomplete substance” (33.1.11). The soul cannot naturally exist unless united with matter. It is certainly thinkable in abstraction from matter. But it is not thinkable as an existing thing apart from its union, and is hence not an *ens reale* capable of existing simply in virtue of its relation to God. For Clauberg, by contrast, to souls and bodies belong simple and complete essences, in virtue of which they are able to exist separately.

We can now appreciate the consequences of Clauberg’s rejection of hylomorphism in favor of the Cartesian theory of substance for his doctrine of cause. Briefly, the attempt to fit the scholastic causal model onto Descartes’s doctrine of substance results in its breakdown. For one thing, as already noted, Aristotelian matter and form drop out as causes altogether. Clauberg rehabilitates both notions in his *Disputationes physicae* (1664), but in senses that are equally foreign to both Descartes and Suárez. There, he redeploys a scholastic distinction between prime matter (*materia prima*) and secondary matter (*materia secunda*) to refer, respectively, to corporeal extension as such, and to individual bodies occupying a definite volume (DP 4.15).

The former is the total quantity of extension making up the material universe, whereas the latter refers to individual bodies, understood as packets of extension individuated by their characteristic motions—geometrical features that determine the manner in which one volume is modified upon collision with another. What Claubergian matter is not, is potentiality seeking union with form. Rather, it is a complete substance created separately by God and governed by its own, divinely instituted laws.

Claubergian form, meanwhile, has little to do with the notion of substantial form as an internal principle of the unity and composition of a substance, a doctrine to which Suárez and his generation are deeply committed. Clauberg vigorously rejects substantial forms as explanatorily idle (DP 12.4-38). Instead, he introduces a deflated notion of form as nothing more than the structural dispositions of a body to be modified in characteristic ways. Forms, in Clauberg's physics, are passive structures of modes of extension, nominally individuated by characteristic motions resulting from external impact. His examples illustrate the vast gulf between these corporeal forms and the metaphysically weighty entities of earlier tradition. For Clauberg, by form can be meant nothing more than, for example, the shape, size, and bulk of a key that makes it suited to turn certain locks, or the same kinds of properties of a pen that make it suitable for writing. "Besides this, in what way substantial forms are needed or in what way, if they existed, they would contribute, cannot even be understood" (12.38). Clearly, such examples greatly underestimate the explanatory challenge of the facts that lead Suárez or Fonseca to adopt substantial forms. Suárez would appeal to facts about the subordination of properties, or the maintenance of systemic equilibrium in plants and animals, to motivate the doctrine. Clauberg thinks that such facts do not require positing in bodies anything over and above geometrical

properties and divine laws of motion. For him, in a Cartesian universe, the notion of form can only retain a very attenuated meaning, as a bare structure described in mathematical terms.²⁴

Finally, Clauberg unambiguously restricts ends to mental substance. “*End properly belongs to intelligent things*. Things lacking intelligence do not properly act for the sake of an end, but are moved here and there by God or another intelligent cause according to will, as an archer directs the arrow to a certain target” (ME 15.261). Clauberg follows earlier authors in endorsing a cognitive condition on final causation. But with his new theory of substance, that condition takes on wholly different significance. Applied to corporeal substance conceived as extension, a cognitivist view of ends straightforwardly entails that bodies are mere instruments of mental substances. Clauberg need not confront the question, consistently asked by his predecessors, of how non-rational appetites could produce goal-directed action. As passive extension, bodies do not possess end-directed efficient causal powers grounded in formal natures, which are realized with the assistance of God’s concurring cognition. Indeed, missing from Clauberg is any acknowledgement of the thesis, ‘*omne agens agit propter finem*,’ or a concern for saving final causation in natural agents that is present in Suárez, Scheibler, or Arriaga. In the material world, it is sufficient to discover the laws of motion God has decreed.

In sum, Clauberg’s treatment of causation evinces a far-reaching revision of the Aristotelian framework and a rise to salience of the efficient cause as the central causal notion. What Clauberg’s case reveals, moreover, is that this development is not due so much to any internal tensions, real or apparent, in the Aristotelian four-cause model, as to his embrace of a radically anti-Aristotelian theory of substance. His innovations bring to the surface the

²⁴ See Buzon (2017, 101-6) for further discussion of Clauberg’s notions of matter and form in physics.

inseparability of the scholastic causal model from substance hylomorphism. Once Clauberg has jumped the latter ship, the former inevitably disintegrates.

6. Conclusion

I have argued that, contrary to a recent narrative, Suárez does not pave the way for the modern privileging of efficient causation. The claim that, for Suárez, efficient cause is the paradigmatic cause rests on two contentions. First, that his definition of cause, as a principle “*per se* flowing being into” its effect, is modeled on the efficient cause; and second, that he accords diminished standing to the other Aristotelian species of cause in one respect or another. I have argued against both of these positions. Suárez’s definition amounts to ontological dependence of effect on cause in a broad sense, ranging over four distinct kinds of causal grounds. Suárez would specifically deny that his notion of influx signifies what La Forge, Leibniz and others since have associated with it, namely as involving the migration of properties from one substance to another. Further, building on Penner (2015) and Richardson (2015), I have argued that textual evidence in Suárez for the comparative priority of the efficient cause vis-à-vis the other three causes is at best ambivalent. Attention to Suárez’s scholastic readers in the first half of the seventeenth century provides additional evidence against the view that he or his fellow Jesuits privilege the efficient cause. Finally, I have used the case of Clauberg to argue that, within the scholastic tradition, the decisive blow to the Aristotelian causal framework comes, not from any fatal instabilities in its doctrine of cause, but only with the displacement of substance hylomorphism by a Cartesian theory of substance.²⁵

²⁵ While I have focused on the consequences for causation arising from the rejection of hylomorphism, it must be borne in mind that other developments in natural philosophy are a crucial part of the story of the decline of Aristotelian causation. In particular, the rise of

The decline of the scholastic theory of cause mirrors that of another favorite target of the *novatores*, the substantial form. The latter's most fervent critics, from Descartes to Locke, never refuted the doctrine of substantial form on its own terms. As Pasnau (2004, 46) notes, the mechanists just "never took the theory seriously enough to mount a vigorous challenge," preferring instead to build a rival view that could explain the data for which the scholastics had posited substantial forms. Much the same can be said for their dismissal of the Aristotelian causal framework. Descartes never directly criticizes the four-cause model, nor does he show any interest in scholastic debates around the general definition of cause. In his physics, at least, he simply has no need for notions of causality as constitution or as the attraction of ends. For their part, Suárez and his fellow Jesuits need not be moved by Descartes's polemics against final causation any more than they should worry that he has advanced compelling arguments against substantial forms. Suárez himself formulates objections to both doctrines that are far more precise than anything the mechanists have to offer. In this circumstance of ships passing in the night, Clauberg's valiant effort to reconcile Aristotelian causes with Cartesian substances is instructive inasmuch as it highlights key incompatibilities between the two frameworks. With respect to causation, he succeeds only in retaining the language of the scholastic tradition, but has to drastically modify the explanatory roles of the 'causes' picked out by that language.²⁶

mathematical models of explanation in the sixteenth century, sufficiently orthogonal to the scholastic context, has much to do with the emergence of new understandings of causation. I thank an anonymous referee for this reminder.

²⁶ I would like to thank Devin Curry for detailed comments on an earlier draft, and two anonymous referees for valuable suggestions.

Bibliography

- Abra de Raconis, Charles-François. *Tertia pars philosophiae seu Physica*. 5th ed. Paris: Mathurin Henault, 1633.
- Aertsen, Jan. *Medieval Philosophy as Transcendental Thought*. Leiden: Brill, 2012.
- Åkerlund, Erik. “*Nisi temere agat*: Francisco Suárez on Final Causes and Final Causation.” Uppsala Universitet, 2011.
- Alsted, Johann Heinrich. *Metaphysica*. Herborn, 1613.
- Anscombe, G.E.M. “Causality and Determination.” In *Causation*, edited by Ernest Sosa and Michael Tooley, 88–104. Oxford: Oxford University Press, 1993.
- Arriaga, Rodrigo de. *Cursus philosophicus*. Antwerp: Balthasar Moretus, 1632.
- Bardout, Jean-Christophe. “Clauberg et Malebranche, de l’Ontosophia à la ‘vision en Dieu.’” In *Johannes Clauberg (1622-1665) and Cartesian Philosophy in the Seventeenth Century*, edited by Theo Verbeek, 135–45. Dordrecht: Kluwer, 1999.
- Blair, Ann. “Mosaic Physics and the Search for a Pious Natural Philosophy in the Late Renaissance.” *Isis* 91 (2000): 32–58.
- Bohatec, Josef. *Die cartesianische Scholastik in der Philosophie und reformierten Dogmatik des 17. Jahrhunderts*. Leipzig: A. Deichert, 1912.
- Buzon, Frédéric de. “La nature des corps chez Descartes et Clauberg. Physique, Mathématique et Ontologie.” In *Chemins du cartésianisme*, edited by Antonella Del Prete and Raffaele Carbone, 85–108. Paris: Classiques Garnier, 2017.
- Capriati, Giuseppe. “*Quid est causa?* The Debate on the Definition of ‘Cause’ in Early Jesuit Scholasticism.” *Vivarium* 58 (2020): 111–39.
- Carraud, Vincent. *Causa sive ratio: La raison de la cause de Suarez à Leibniz*. Paris: Presses Universitaires de France, 2002.
- Carraud, Vincent. “L’ontologie peut-elle être cartésienne? L’exemple de l’ontosopha de Clauberg, de 1647 à 1664: De l’ens à la mens.” In *Johannes Clauberg (1622-1665) and Cartesian Philosophy in the Seventeenth Century*, edited by Theo Verbeek, 13–38. Dordrecht: Springer, 1999.
- Clauberg, Johann. *Elementa philosophiae sive Ontosophia*. Groningen: Johann Nicolai, 1647.

- Clauberg, Johann. *Johannis Claubergii Opera Omnia Philosophica*, 2 vols. Edited by Johann Schalbruch. Amsterdam: J. Blaeu, 1691.
- Courtine, Jean-François. *Suarez et le système de la métaphysique*. Paris: Presses Universitaires de France, 1990.
- Des Chene, Dennis. *Physiologia*. Ithaca, NY: Cornell University Press, 1996.
- Descartes, René. *Oeuvres de Descartes*. 2nd ed. 11 vols. Edited by Charles Adam and Paul Tannery. Paris: Vrin, 1964–74.
- Descartes, René. *The Philosophical Writings of Descartes*, 3 vols. Edited and translated by John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny. Cambridge: Cambridge University Press, 1984-1991.
- Eschweiler, Karl. “Die Philosophie der spanischen Spätscholastik auf den deutschen Universitäten des siebzehnten Jahrhunderts.” In *Spanische Forschungen der Görres-Gesellschaft I*, 251–325. Münster: Aschendorff, 1928.
- Eustache de Saint-Paul. *Tertia pars summae philosophiae: De rebus naturalibus*. In *Summa philosophiae quadripartita*. Paris: Carolum Chastellain, 1614.
- Fink, Jakob L. “Suárez on Aristotelian Causality.” In *Suárez on Aristotelian Causality*, edited by Jakob Leth Fink, 23–42. Leiden: Brill, 2015.
- Freddoso, Alfred. J. “Introduction.” In *On Creation, Conservation, and Concurrence: Metaphysical Disputations 20-22*. Translated by Alfred Freddoso. South Bend: St. Augustine Press, 2002.
- Grant, Edward. “Ways to Interpret the Terms ‘Aristotelian’ and ‘Aristotelianism’ in Medieval and Renaissance Natural Philosophy.” *History of Science* 25 (1987): 335–58.
- Hamid, Nabeel. “Domesticating Descartes, Renovating Scholasticism: Johann Clauberg and the German Reception of Cartesianism.” *History of Universities* 30/2 (2020): 57–84.
- Hattab, Helen. “Suárez’s Last Stand for the Substantial Form.” In *The Philosophy of Francisco Suarez*, edited by Benjamin Hill and Henrik Lagerlund, 101–20. New York: Oxford University Press, 2012.
- La Forge, Louis de. *Treatise on the Human Mind*. Translated by Desmond Clarke. Dordrecht: Kluwer, 1997.
- Hill, Benjamin. “Introduction.” *The Philosophy of Francisco Suarez*, edited by Benjamin Hill and Henrik Lagerlund, 1–21. Oxford: Oxford University Press, 2012.

- Leibniz, Gottfried Wilhelm. *Philosophical Papers and Letters*. Edited and translated by Leroy E. Loemker. Dordrecht: Kluwer, 1969.
- Leinsle, Ulrich. *Das Ding und die Methode*. Augsburg: MaroVerlag, 1985.
- Lewalter, Ernst. *Spanisch-Jesuitische und deutsch-lutherische Metaphysik des 17. Jahrhunderts*. Hamburg: Ibero-Amerikanisches Institut, 1935.
- Lohr, Charles H. *Latin Aristotle Commentaries II*. Florence: Leo S. Olschki, 1988.
- Maier, Anneliese. *Metaphysische Hintergründe der spätscholastischen Naturphilosophie*. Rome: Edizioni di storia e letteratura, 1955.
- Martini, Jakob. *Exercitationum metaphysicarum*. 2 vols. Wittenberg: Schurer, 1611.
- McDonough, Jeffrey. “Leibniz sur l’harmonie préétablie et la causalité.” In *Lire Leibniz*, edited by Mogens Laerke, Christian Leduc, and David Rabouin, 105–22. Paris: Vrin, 2017.
- Menn, Stephen. “The Intellectual Setting.” In *The Cambridge History of Seventeenth Century Philosophy*, edited by Daniel Garber and Michael Ayers, 33–86. Cambridge: Cambridge University Press, 1998.
- O’Neill, Eileen. “Influxus Physicus.” In *Causation in Early Modern Philosophy*, edited by Steven Nadler, 27–56. State College, PA: Penn State, 1993.
- Olivo, Gilles. “L’efficience en cause: Suárez, Descartes et la question de la causalité.” In *Descartes et le Moyen Âge*, edited by Joël Biard and Roshdi Rashed, 91–105. Paris: Vrin, 1997.
- Pasnau, Robert. “Form, Substance, and Mechanism.” *Philosophical Review* 113, no. 1 (2004): 31–88.
- Pasnau, Robert. *Metaphysical Themes: 1274-1671*. Oxford: Clarendon, 2011.
- Pasnau, Robert. “Teleology in the Later Middle Ages.” In *Teleology: A History*, edited by Jeffrey McDonough, 90–115. New York: Oxford University Press, 2020.
- Penner, Sydney. “Final Causality: Suárez on the Priority of Final Causation.” In *Suárez on Aristotelian Causality*, edited by Jakob Leth Fink, 122–49. Leiden: Brill, 2015.
- Petersen, Peter. *Geschichte der aristotelischen Philosophie im protestantischen Deutschland*. Leipzig: F. Meiner, 1921.
- Platt, Andrew. *One True Cause*. New York: Oxford University Press, 2020.

- Richardson, Kara. "Formal Causality: Giving Being by Constituting and Completing." In *Suárez on Aristotelian Causality*, edited by Jakob Leth Fink, 65–84. Leiden: Brill, 2015.
- Rozemond, Marleen. "Leibniz on Final Causation." In *Metaphysics and the Good*, edited by Samuel Newlands and Larry Jorgensen, 272–94. Oxford: Oxford University Press, 2009.
- Sangiaco, Andrea. "Sine qua non Causation: The Legacy of Malebranche's Occasionalism in Kant's New Elucidations." *Oxford Studies in Early Modern Philosophy*, Vol. 9, 2020.
- Savini, Massimiliano. *Johannes Clauberg: Methodus cartesiana et ontologie*. Paris: Vrin, 2011.
- Scharff, Johannes. *Metaphysica exemplaris*. 6th ed. Wittenberg: Tobias Mevius and Elerdus Schumacher, 1655.
- Scheibler, Christoph. *Metaphysica*. Geneva: Jacob Stoër, 1636.
- Schmaltz, Tad. *Descartes on Causation*. Oxford: Oxford University Press, 2007.
- Schmaltz, Tad. "Efficient Causation: From Suárez to Descartes." In *Efficient Causation: A History*, edited by Tad Schmaltz, 139–64. New York: Oxford University Press, 2014.
- Schmid, Stephan. *Finalursachen in der Frühen Neuzeit*. Berlin: De Gruyter, 2010.
- Schmid, Stephan. "Finality without Final Causes?" *Ergo* 2, no. 16 (2015): 393–425.
- Shields, Christopher. "The Reality of Substantial Form: Suárez, *Metaphysical Disputations Xv*." In *Interpreting Suárez*, edited by Daniel Schwartz, 39–61. Cambridge: Cambridge University Press, 2011.
- Suárez, Francisco. *Disputationes Metaphysicae*. In vols. 25-26, *R.P. Francisci Suarez e Societate Jesu: Opera Omnia*. Edited by Charles Berton et al. Paris: Vivés, 1856-78.
- Suárez, Francisco. *On Efficient Causality: Metaphysical Disputations 17, 18, and 19*. Translated by Alfred Freddoso. New Haven, CT: Yale University Press, 1994.
- Suárez, Francisco. *On The Formal Cause of Substance: Metaphysical Disputation XV*. Translated by John Kronen and Jeremiah Reedy. Milwaukee, WI: Marquette University Press, 2000.
- Suárez, Francisco. *On Creation, Conservation, and Concurrence: Metaphysical Disputations 20-22*. Translated by Alfred Freddoso. South Bend: St. Augustine Press, 2002.
- Timpler, Clemens. *Metaphysicae systema methodicum*. Steinfurt: Theophilus Caesar, 1604.
(book, chapter, question, page)

Tuttle, Jacob. "Suárez's Non-Reductive Theory of Efficient Causation." *Oxford Studies in Medieval Philosophy* 4, no. 1 (2016): 125–58.