

PASCAL, SPINOZA, AND DEFINING *CARTESIANISM*

Daniel COLLETTE*

Abstract. Like Wittgenstein's family resemblances, defining *Cartesianism* in the seventeenth century is challenging with no immediately clear necessary and sufficient conditions that draw this diverse school of philosophers together. Many recent commentators have already explored similar and related issues. I would like to expand this discussion by focusing on Blaise Pascal and Benedict de Spinoza. These two have such antithetical metaphysical commitments that it is unclear at first what common ground they might have. Furthermore, both explicitly criticize Descartes in their writings. In spite of these critiques and dissimilarities with one another, if Pascal and Spinoza are still Cartesian, it is telling as to how diverse the landscape of Cartesianism really was. I give a survey covering their criticisms of Descartes, their reception by contemporaries, and where it is in their philosophy that they embrace Cartesianism. My main concern of this paper is to bring these two 'canonical' philosophers into discussion with one another and subsequently push the boundaries on defining *Cartesianism*.

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In examining the seventeenth century reception of Descartes, there are two senses which the term *Cartesian* is understood. In the first sense, the Cartesians are those who faithfully follow Descartes' philosophy and methodological order. The second sense is a much more complex and nuanced account where Cartesians diverge from Descartes in fundamental ways.

The first is Descartes' own criteria. He was extremely critical of those who took up his cause with their own revisions or novelties. An example of this is Regius; this instructor of medicine in Utrecht began teaching Descartes' philosophy. Descartes first took him as an ally and came to his aid against Voetius, the Utrecht theologian who condemned Regius for teaching Cartesian philosophy.¹ However, Descartes' sympathies come to an abrupt end: Descartes takes multiple occasions to critique Regius, including *Comments on a Certain Broadsheet* and then in the French preface to the *Principles of Philosophy*.² His general attitude towards Regius is summarized in a letter to Princess Elizabeth.³ Descartes writes that, "...everything Regius writes is borrowed from me, and yet [he] manages to contradict my views."⁴ Descartes continues in this letter to contrast Regius with his friend Hogelande, whose philosophy is neither in disagreement with nor following Descartes. That is, the

* University of South Florida. Department of Philosophy, 4202 East Fowler Avenue, FAO 226, Tampa, Florida 33620-7926. Email: dpcollet@mail.usf.edu

author who follows Descartes' work closely is disavowed, while the one who says something different than Descartes gains his approval, though what is said is not Cartesian. If Cartesianism is limited to this strict criteria set by Descartes, then there would likely only be one Cartesian, Descartes himself.

The second is much more difficult to define but also a more accurate picture of Descartes' reception.⁵ In this second sense, the label deals more with how players in the intellectual landscape of the seventeenth century perceived themselves and others. This view is captured well by Dobre and Nyden: "By labelling a thinker 'Cartesian', we are not making any claims about the philosopher's metaphysical or epistemological positions on any *particular* issue."⁶ Cartesianism is understood here as more of a Wittgensteinian family resemblance than a clearly defined set of necessary and sufficient conditions: it does not adhere to any one central doctrine in particular.

Cartesianism was significantly more pliable in the opinion of other philosophers and theologians besides Descartes in the seventeenth century. The label covered many figures who both self-identified as Cartesians and were also considered so amongst their contemporaries, friends and critics alike. Although Régis deviates from Descartes, Huet felt threatened by his Cartesianism. The result was a dispute including a treatise by Huet attacking Régis on grounds of Cartesianism and Régis defending Descartes.⁷ Similarly, Dennis Des Chene recalls Bayle's *Nouvelles de la republique des lettres*, which shows Cartesianism as, "an arena of controversy, disputed titles, and fluid conceptions," not a "fixed point" or "permanent body of doctrine enshrined in a collected works."⁸ Difficulties arise in the existence of Cartesians who are critical of Descartes' 'central' doctrines such as plenism (Cordemoy) and the pure intellect (Régis and Desgabets). Still, like those such as Desgabets viewed themselves as refining, not replacing, Descartes' system.⁹

Sometimes those accepted as Cartesians even critiqued one another; for example in the case of the Eucharist, Arnauld comes down against Desgabets.¹⁰ There were well-known Cartesian Empiricists such as Jacques Rohault who also rejected hyperbolic doubt, Augustinian Cartesians such as Malebranche and Arnauld, and Cartesian Atomists such as Géraud de Cordemoy.¹¹ Synthesizing Descartes' philosophy with other systems and redacting or amending Descartes' writing was not an uncommon practice in the landscape of Cartesianism. Tad Schmaltz compares Cartesianism to the wide varieties of Aristotelianism in the Renaissance—"Given this variety in opinions among Descartes' followers in France, there is reason to speak not of a single movement, French Cartesianism, but rather a variety of French Cartesianisms."¹² Roger Ariew offers a concise summary of these views: in the seventeenth century, "there do not seem to be necessary and sufficient reasons for being a Cartesian. Whatever one thinks as essential to Cartesianism was, I think, denied by some Cartesian or another."¹³ Instead, he believes that being identified as Cartesian should be understood through the role one played in that particular intellectual climate: "an actor's category in the intellectual universe of the seventeenth century."¹⁴ Whether the subject examined is *games* or *Cartesianism*, Wittgenstein's discussion on family resemblances comfortably fits here:

What is common to them all? Don't say: "They must have something in common, or they would not be called 'games'" but look and see whether there is anything common to all. For if you look at them, you won't see something that is common to all, but similarities, affinities, and a whole series of them at that. To repeat: don't think, but look! ... And we can go through the many, many other groups of games in the same way, can see how similarities crop up and disappear. And the upshot of these considerations is: we see a complicated network of similarities overlapping and criss-crossing: similarities in the large and in the small.¹⁵

In spite of their divergences from Descartes and with each other, this idea that Cartesians were a diverse group of philosophers is exemplified throughout the seventeenth century intellectual landscape.¹⁶ It is their reception and self-identification as Cartesians that earned this title. It is with this open concept of Cartesianism that I am operating.

Due to the players making up early Cartesianism, much of the related secondary literature focuses on minor figures. For example, Tad Schmaltz discusses Regis and Desgabets in his study on the French reception of Descartes, *Radical Cartesianism*, and Mihnea Dobre has several articles on Jacques Rohault.¹⁷ In wider studies, Theo Verbeek's *Descartes and the Dutch* and Roger Ariew's *Descartes and the First Cartesians* focus on several early Cartesians including but not limited to Johannes Clauberg, Louis de la Forge, Frans Burman, and Antoine Le Grand.¹⁸ However insightful these studies are, I would like to focus on two more prominent philosophers in the paper, Blaise Pascal and Benedict de Spinoza. With such antithetical metaphysical commitments, it is unclear at first what common ground they might share.¹⁹ Furthermore, unlike other Cartesians who change, augment, or only implicitly disagree with Descartes, both Pascal and Spinoza explicitly critique his writings. In spite (and because) of these critiques and dissimilarities, if Pascal and Spinoza are still Cartesian, it is telling as to how expansive the diversity within Cartesianism extended. Johannes Clauberg and Frans Burman

My goal is not to treat the question of Pascal's and Spinoza's Cartesianism in entirety. It is true that both of these figures warrant a discussion – even many discussions – on their own. Thus, it might seem inadequate to treat them both together so briefly, especially since important work is already available both defending and critiquing the Cartesianism of Pascal and Spinoza individually.²⁰ My intention is to bring these two figures into the same discussion: if Pascal and Spinoza are both Cartesians, a view that I encourage, it will help push and demarcate the boundaries defining *Cartesianism* more than if they continue to be discussed separately.

To begin, I will briefly look at Pascal and Spinoza individually, treating first where they diverge from Descartes, and suggest why these diversions do not disqualify them as Cartesians. I then discuss their reception – in spite these divergences, their contemporaries received them as Cartesian. I also show how both explicitly draw from and build upon Descartes' philosophy to create new philosophies that are both entirely Cartesian while also uniquely their own. Finally, I visit an objection as to why

these two philosophers, who are both so different and critical of Descartes, are Cartesian and not merely modern or anti-Scholastic.

Pascal

It is hard to read Pascal's *Pensées* without noticing striking fragments such as, "Descartes. Useless and uncertain,"²¹ and, "Write against those who delve too deeply into the sciences. Descartes."²² Often times even when he does agree with Descartes, such as on the soundness of arguments proving the existence of God, he views Descartes' efforts as ineffective – even if it is true that a metaphysical proof for God's existence is sound, such arguments are so complex and hard to follow that they convince no one.²³ Pascal also opposes Descartes on the vacuum and they disagree on the infinite: though Descartes' view that matter is indefinitely divisible mirrors Pascal's belief of the '*infiniment grand*' and the '*infiniment petit*' in nature, Descartes was only willing to attribute actual infinity to God.²⁴ Furthermore, in his metaphysics, Pascal often lets his Augustinianism supplant his Cartesianism. He embraces an Augustinian view of happiness, divine illumination, and maintains Augustine's two cities distinction, the City of God and the City of Man.²⁵ The result is what appears to be an anti-Cartesianism, in rejecting the ability to have meaningful knowledge of God outside of revelation.

In spite of these seemingly anti-Cartesianism aspects of Pascal, his contemporaries viewed him as a trusted member of the Cartesian community. Of all of the unpublished works by Descartes, the most carefully guarded was his writings on the Eucharist. Clerselier was wise not to let an untrusted person see these documents. The controversy following Robert Desgabets' publishing of Descartes' account in his *Considérations sur l'état présent de la controverse touchant le T. S. Sacrement de l'autel* demonstrated this caution was warranted. However, in the *Pensées*, Pascal directly addresses and critiques Descartes' account.²⁶ While others such as Arnauld saw these guarded writings, it is very unlikely that he would have seen this document unless Clerselier or another within Descartes' trusted circle viewed him as a fellow Cartesian. Furthermore, if those trusted most by Descartes were comfortable to show him the guarded Eucharist fragment, it is reasonable to presume that Pascal could have seen other guarded writings by Descartes as well.²⁷ Whoever the Cartesians were in the seventeenth century, they seemed to consider Pascal as a trusted member of their philosophical community. This connection especially seems plausible due to Pascal's close relationship at Port-Royale with Antoine Arnauld, another Augustinian Cartesian. Arnauld co-authored the definitive Cartesian logic text, the *Port-Royal Logic*, his objection to Descartes' the *Meditations on First Philosophy* was received well by Descartes, and he is known for his arguments with Malebranche over Cartesian *ideas*.²⁸

Even if Pascal read Descartes, of course merely reading his writings does not qualify Pascal as a Cartesian (Leibniz, for instance, read Descartes and was not Cartesian); however, Pascal's granted access to controversial or guarded unpublished writings is revealing as to how the intellectual community viewed him. Pascal was received as a Cartesian and the Cartesian themes in his writings beyond the discussion of the Eucharist reinforce this thesis. While he sometimes criticizes Descartes, Pascal's

thought is highly indebted to him in many other ways. Pascal draws his method, for instance, from Descartes' *Regulae* and *Discourse on Method*.

Descartes opens his *Discourse on Method* with a slice of wit: "Good sense is the best distributed thing in the world, for everyone thinks himself to be so well endowed with it that even those who are the most difficult to please in everything else are not at all wont to desire more of it than they have."²⁹ He focuses on undermining this mistaken confidence in beliefs assented to without the careful assent of the intellect and lacks certainty in judgment. In order to rid himself of these false judgments, he draws upon sceptical arguments advocating a balanced, suspension of judgment *vis-a-vis* Montaigne, highlighting the futility of most disciplines to arrive at apodictic knowledge: while theology is helpful for getting to heaven, it is also the case that people ignorant of theology still find their way; likewise, languages and travel are edifying, but those who travel too much end up having no home. Reading books can be helpful but it is not really much different from traveling, only through time. Finally after establishing his *Cogito* and arriving at geometry as the only model able to provide epistemic certainty, he forwards the following rules as a criteria for truth:

- 1) Never accept anything as true that was not self-evidently so, basing all basic truths on indubitable, clear, and distinct ideas free of 'hasty judgment and prejudice';
- 2) Divide each problem being considered into 'as many parts as possible' to evaluate each idea as carefully as possible;
- 3) Always proceed 'in an orderly fashion', by embracing (1) as a foundation, then slowly building towards more complex knowledge composed of self-evident and derived principles; and,
- 4) Proceed systematically and in consistently reviewing that there is surety 'of having omitted nothing'.³⁰

Pascal, mirroring Descartes, lays out a method in his pamphlet *De L'esprit Géométrique* drawing extensively from the *Discourse on Method* in form and content. He begins his pamphlet by addressing why a method is needed: people hold beliefs that are formed without the assent or clear use of their respective intellects. Recounting similar Pyrrhonian arguments for balanced, suspended judgment, Pascal also emphasizes the difficulties of arriving at apodictic knowledge: for every type of pleasure a person may have, there is another who has a different pleasure – those pleasures of the rich differ from those of the poor, as do those from the state of one's wellness compared to another, and so forth. Even the same person's pleasures vary depending on factors such as her health, age, and mood. In order to find knowledge, ideas so certain that "once ... accepted remain firm and are never denied" and then demonstrating the "connection of truths to their principles," one must use the understanding in very particular ways.³¹ To this end, Pascal prescribes the following rules as absolutely necessary:

- 1) *Rules for definitions*: Define only clear, not ambiguous, terms and when offering a definition, only use ideas self-evident or that clearly follow

- from self-evident ideas;
- 2) *Rules for axioms*: Only accept clearly evident ideas as axioms; and,
 - 3) *Rules for demonstrations*: Prove all propositions that are slightly obscure, using only axioms as determined by (2) and always conceive of an actual object when considering a definition, with restrictions that come from (1), to avoid confusion arising from poorly defined terms can give through.³²

In addition to the similarities in style and form, the parallels between the rules in the *Discourse on Method* and *De L'esprit Géométrique* are striking.

Though more subtly, Pascal likewise draws from Descartes' *Regulae* in this same pamphlet. Concerning style, in the *Regulae*, Descartes refers to the careful reduction of complex principles into simple ones that can be more easily analysed as the 'art of method', analogous to a blacksmith who first must make or find tools such as an anvil and tongs before he takes on the task producing in his craft; one must acquire and learn to use these tools of reason before he or she is able to produce genuine knowledge.³³ Pascal similarly refers to his method of reducing then carefully analysing ideas as an art in *De L'esprit Géométrique*. The term 'art' in this sort of discourse is not terribly unique, going back to Aristotle's art of rhetoric. It is not even unique in the seventeenth century – Thomas Hobbes, for instance, authored several texts as 'arts' including *A Whole Art of Rhetoric* and *The Art of Sophistry*.³⁴ But Pascal does not argue for an art of rhetoric here, which would better suit the latter section of his pamphlet, *L'Art de persuader*.³⁵ Instead, like Descartes, Pascal is arguing for an art in this uniquely Cartesian sense of finding simple, intuitively true (that is, clear and distinct) ideas.³⁶

Furthermore, in Rule One of the *Regulae*, Descartes writes that, "It is the custom of people, whenever they notice any similarity between two things, to attribute to both of them, even in those respects in which they differ, whatever they have found to be true of either one."³⁷ This is one of the exact tasks that Pascal undertakes in *De L'esprit Géométrique*. He argues that in order to gain certain knowledge, one must be able to distinguish between similar ideas – it is not sufficient to identify two things as the same because there is similarity. Two objects are identical if and only if they are completely similar.³⁸ In offering an example, Pascal compares Descartes' *Cogito* with Augustine's, wondering if the two are distinct.³⁹ This, combined with the role of intuition to grasp first principles in the *Regulae*, which also shows up in *De L'esprit Géométrique*, illustrates that Pascal not only read but also embraced Descartes' philosophy in important ways and possibly had access to an unpublished *Regulae* manuscript.⁴⁰

The *Cogito* discussion is especially important concerning Pascal's self-identification with Descartes for further reason: though it is true that sometimes Pascal favours Augustine over Descartes, Pascal's treatment of the *Cogito* makes it clear that he also rejects Augustine in favour of Descartes at other times. As Vincent Carraud notes, Pascal's defense of Descartes' *Cogito* over Augustine's here is 'violent':⁴¹ he compares Augustine's *Cogito* to a thrown out seed that flourished in Descartes' fertile soul; the difference between the two *Cogitos* is that of "a dead man from a man

full of life and strength.”⁴² From this, Carraud concludes it is clear that Pascal not only read Descartes’ *Discourse*, but he understood it and, feeling the need to defend Descartes’ originality, favoured it over his understanding of Augustine’s.⁴³ This is especially telling because it shows that Pascal not only embraced Descartes’ method here, but preferred it over Augustine’s and he had access to an unpublished *Regulae* manuscript.

Pascal also frames his anti-Scholastic natural philosophy like Descartes, accusing the Scholastics of uncritically clinging to tradition in matters of reason. In his *Préface pour un Traité du vide*, Pascal makes clear the distinction between matters of reason and matters of tradition.⁴⁴ Tradition serves those things that have been written and are unchanging—history, geography, law, language, and theology. However, this is not the case for those fields of study that use reason or senses such as “geometry, arithmetic, music, physics, medicine, architecture, and all of the sciences which are subject to experience and reasoning.”⁴⁵ For these disciplines, authority is useless; they require reason to discover them. Matters of reason are not stagnant where books from the past are helpful. Instead, knowledge pertaining to them is augmented as new ways to reason and experiment are discovered.

However, the schoolmen treat matters of reason as matters of tradition and thus offer unsuccessful and obscure terms as definitions. For example, Pascal mocks the Scholastic definition of light – “luminary motion of luminous bodies ... as if the words ‘luminary’ and ‘luminous’ could be understood without that of light.”⁴⁶ These vacuous Scholastic definitions are contrasted with those found in geometry, whose method embraces simple self-evident truths that can establish an apodictic foundation for knowledge. Like other early Cartesians such as Régis’ teacher Jacques Rohault, Pascal believes that these axioms do not need to be defined because of their extreme clarity: axioms have the certitude of demonstrations even if lacking the conviction of them.⁴⁷

Still, what poses a greater challenge to Pascal’s Cartesianism is found in his later writing, the *Pensées*, where Pascal appears to explicitly critique Descartes.⁴⁸ One explanation for this is that early Pascal is a scientist and mathematician, perhaps even a Cartesian. Then, post-religious conversion he becomes anti-Cartesian and this is the Pascal of the *Pensées*. However, his debt to Descartes is equally as present in the pages of his later writings. An example of this is dualism. Few parts of Descartes’ philosophy are more central than his quest to prove the distinction between mind and body.⁴⁹ Rather than accepting an Aristotelian *hylomorphism* (or opting for a more Hobbesian materialism),⁵⁰ Pascal accepts Descartes’ view that mind (or soul) and body are distinct and that there is a unique self, a thinking thing, which is separate from the external qualities of the body: the mind and body are separate.⁵¹ He describes animals in a machine-like capacity, acting not out of reason but habit as if automata; he cites the parrot as an example, which will wipe its beak even when clean.⁵² Pascal asks in his *Pensées*:

What is the self? A man goes to the window to see the passersby; if I pass by, can I say he went there to see me? No, for he is not thinking of me in particular. But does someone who loves another because of

her beauty really love her? No, because the smallpox, which will destroy beauty without destroying the person, will cause him to love her no more. And if someone loves me for my judgment, for my memory, does he love me, myself? No, because I can lose these qualities without losing myself. Where, then, is this self, if it is neither in the body nor in the soul? And how to love the body or the soul, except for its qualities that do not constitute the self, since they are perishable? For would we love the substance of a person's soul in the abstract, whatever qualities might be in it?⁵³

Though this fragment raises its own questions, such as what Pascal means by the self if it is separate from the soul and body, here he is making a few moves that are indebted to Descartes. One, he is clearly distinguishing between the mind and body: in asking where the self is, he acknowledges that it is found in neither of two places, the soul or in the body. Two, this description of an immaterial self distinct from the body resonates with Descartes; consider what Descartes writes in his second meditation:

But then were I perchance to look out my window and observe men crossing the square, I would ordinarily say I see the men themselves just as I say I see the wax. But what do I see aside from hats and clothes, which could conceal automata? Yet I judge them to be men.⁵⁴

In another fragment Pascal explicitly acknowledges the Cartesian mind and body distinction, writing: "For we must not misunderstand ourselves: we are as much automata as minds," for, "Proofs only convince the mind; custom provides our strongest and most firmly believed proofs. It inclines the automaton, which drags the mind unconsciously with it."⁵⁵

In addition to his treatment of authority and a mind/body distinction, my final note on Pascal and Descartes will focus on two related topics: the intellect and will and then clear and distinct ideas. Descartes ascribes assent to belief through the intellect and will. Those accepted by means of the intellect are active judgments in accordance with his criteria of truth (clear and distinct ideas). Those assented to through the will are passive and formed through habit and custom when not guided by the intellect. In this second case, the intellect fails to discern which belief to accept; this occurs because either a person did not focus carefully enough to find a clear and distinct idea or because indifference towards which belief to prefer over another. When a person is not carefully using the intellect to guide the will by clear and distinct judgments, the will continues assenting to beliefs detached from the intellect.⁵⁶ This is important for Pascal: "Both parts of us must be made to believe: the mind by reasons that need only to be seen once in a lifetime; and the automaton by custom, and by not allowing it any inclination to the contrary."⁵⁷ This is ultimately the model for his *Discourse on the Machine*, the fragment containing the Wager: since the body is a machine, when the intellect fails, habit and custom move the will to assent to beliefs.

Concerning intellectual belief formation, Pascal also accepts Descartes' clear and distinct ideas. He sometimes refers to these self-evident first principles known

through intuition as the 'heart' in the *Pensées*.⁵⁸ However, they disagree as to what constitutes a clear and distinct idea. As a Jansenist, Pascal believes that human reason is corrupt and subsequently, theological and religious matters cannot be understood clearly and distinctly through the intellect:

The metaphysical proofs of God are so remote from men's reasoning and so complicated that they make little impression. And when they are of service to some, it is only for the instant during which they see this demonstration. But an hour later they fear that they have been mistaken.⁵⁹

He agrees with Descartes that the surest way to find rational certainty in matters of reason – such as physics and geometry – is to begin with clear and distinct ideas then use reason and experimentation to build on this epistemic foundation. Their discussions on the Torricelli experiments are never about methodological disagreements or what counts as evidence, but whether to interpret that evidence to support or reject plenism.⁶⁰ As mentioned earlier, these are matters of reason and are subject to scrutiny and augmentation of ideas. However, Pascal makes the further claim that religious belief cannot be known clearly and distinctly through the understanding. He accepts the concept of clear and distinct ideas but rejects that religion is something that can be known through the intellect unaided by divine illumination.

Descartes also believes that matters of revealed theology are assented to by the will, but for the truth of these matters he defers to the authority of the church, avoiding the subject nearly altogether.⁶¹ This is a concern for Pascal since he considers Descartes' almost exclusive focus on matters of reasoning to be misplaced; while religious beliefs are instilled through the will, religion is a matter of higher importance. This is why Pascal often talks about both the correctness and uselessness of science and mathematics. He writes in a letter to Fermat, "For to speak to you candidly of geometry, I find it to be the highest exercise of the mind, but at the same time I know it to be so useless, I make little difference between a man who is only a geometrician and a skilled artisan."⁶² He believes that though Descartes' approach to physics and mathematics may successfully lead to knowledge, they are comparatively useless until religious questions are first settled: one deals with eternity and the other does not. This is why Pascal is critical of Descartes' focus on science – it is not that he believes Descartes was wrong, but because he believes science is useless for religious conversion. His critique of Descartes is for neglecting the more important or urgent topics, not of soundness:

...that is why I will not undertake here to prove by natural reasons either the existence of God, or the Trinity, or the immortality of the soul, or anything of that kind; not only *because I would not feel myself sufficiently capable of finding in nature arguments to convince hardened atheists, but also because such knowledge without Jesus Christ is useless and barren*. If a man were convinced that proportions between numbers were immaterial

truths, eternal and dependent on a first truth to which they subsist, called God, I would not consider him as having made much progress towards his salvation.⁶³

Pascal believes that the human mind is unable to find compelling natural theological arguments since religious belief falls under matters of authority.⁶⁴ Like his critique of Descartes on the void, Pascal's broader critiques of Descartes as 'useless', *et cetera*, are operating within a Cartesian framework and methodology. The exact conditions that make him, or others, Cartesians are fuzzy; however, Pascal seems to both identify as and be identified by others as a Cartesian; whatever nebulous qualities attribute to being part of the Cartesian family resemblance, Pascal seems to meet them since he was received as a trust member amongst the Cartesians.

Spinoza

Spinoza's Cartesianism might not fare much better on a first read than Pascal's. In his *Ethics*, Descartes is the only specific philosopher to receive explicit criticism. Spinoza's Preface to Part V is a scathing critique of Descartes' dualism, freedom of the will, and his explanation of the pineal gland as unifying the mind and body: placing himself in contrast against Descartes, he claims all that happens is necessary and determined.⁶⁵ Like classical Stoics that Spinoza often resembles, he believes nature or God eternally necessitates all things.⁶⁶ Spinoza also rejects finite substance altogether:

...since [God] necessarily exists, if there were any other substance but God, it would have to be explicated through one attribute of God, and so there would exist two substances with the same attribute, which is absurd. So there can be no substance external to God, and consequently no such substance can be conceived. For if it could be conceived, it would have to be conceived necessarily as existing; but this is absurd.... Therefore, no substance can be or be conceived external to God.⁶⁷

If there can only be one substance, then the things that Descartes calls 'finite substances' are not really substances at all and the mind and body are not genuinely distinct. Unlike Descartes, Spinoza will not "compromise and say that there is a secondary degree of substantiality, whereby a finite thing can be caused by an infinite substance and still qualify as a substance just as long as it is not dependent for its being on some other finite thing."⁶⁸ Instead, he says that things such as physical objects and human minds are not things in themselves but have an entirely different ontological status. Finite things are modes of the substance, *i.e.*, God or nature – all things are states, properties, or qualities of God.⁶⁹

In another deviation, Spinoza's synthetic geometrical method is a step away from Descartes' preference for the analytical method. Though Descartes praises geometry for its ability to find certainty, he only resorts to *more geometrico* once, as a concession to Mersenne in the reply to the second set of Objections. He views the

synthetic method as constraining judgment when used for exposition, opting for the analytical geometric method that focuses on how something is methodologically discovered.⁷⁰

Spinoza furthermore rejects the method of doubt. Descartes argues that if God's existence cannot be proven, then nothing can be known with absolute certainty: God's existence is necessary to know something beyond an immediate clear and distinct perception. Descartes writes in the replies to the second set of Objections:

I do not deny that an atheist could know clearly that the three angles of a triangle are equal to two right angles; I am simply affirming that his knowledge is not true scientific knowledge, since no knowledge that can be rendered doubtful seems to deserve to be called scientific knowledge. And since we are supposing him to be an atheist, this person cannot be certain that he is not being deceived in those very things that seem most evident to him, as has been sufficiently shown.⁷¹

According to Spinoza, however, the proximate anterior cause of a particular thing is sufficient for knowledge of truth. If a belief's immediate cause is known, the idea is adequate and needs no further guarantee for its certainty; upon clearly and distinctly seeing an idea's cause, its truth becomes self-evident. For Spinoza, having a true idea means knowing it perfectly. Against Descartes, he believes adequate ideas are immediately perceivable. Since there is no method of doubt, there is no need for a divine guarantee against corrupted knowledge that otherwise appears clear and distinct.⁷² If something is misunderstood, inadequate ideas are directly the result of misunderstanding the true cause and effect relationship between the misunderstood idea and the cause of that belief.

However large these deviations might be from Descartes, Spinoza was received as a Cartesian by his contemporaries both earlier and later in his life. Earlier in his life, Spinoza's friends in Amsterdam considered him an expert on Descartes. To satisfy these inquisitive friends, Spinoza composed his first major work, the *Principles of Cartesian Philosophy*.⁷³ Here, he exposites Descartes' philosophy into *more geometrico* with his own commentary following later in an appendix, *Metaphysical Thoughts*.⁷⁴ This appendix gives a glimpse of the Spinozistic philosophy that will continue to emerge from Descartes, such as his definitions of substance and mode as well as his conception of God. By the time Spinoza's philosophy develops into its own mature form in the *Ethics*, though sometimes his Hobbesianism supplants his Cartesianism, he is continuing, though also refining, Descartes' project.

Looking back on Spinoza's life and later works, others in the seventeenth century such as Leibniz directly attribute Spinozism to Cartesianism. When he turns from mechanist philosophy, specifically from Descartes' mechanism, it is because he rejects Spinozism and sees Spinoza as a natural intellectual descendent of Cartesianism.⁷⁵ Though Leibniz often categorizes Spinoza and Descartes with Hobbes, he is also careful to distinguish between Hobbesianism, which he says is

materialist and denies the existence of God, and Spinoza who he calls a ‘new Stoic’ who denies final causes.⁷⁶

Beyond a Cartesian reception, Spinoza explicitly draws from Descartes in his writing, seeming to self-identify as Cartesian at times. For instance, although Descartes favoured the analytic geometrical method, it is clear from Spinoza’s *Principles of Cartesian Philosophy* that Descartes’ method was influential on his *more geometrico*, very likely drawing directly from the synthetic geometrical form that Descartes uses in the replies to the second set of objections to the *Meditations*.⁷⁷ Though Descartes offered the synthetic geometrical form as a concession, Spinoza favoured and embraced it; it is nearly certain that Descartes would not approve of the synthetic *more geometrico* used as Spinoza did as it changed the method in which philosophy was presented. Nonetheless, Spinoza’s method is no guiltier of this than Arnauld and Nicole in their *Port-Royal Logic*, the paradigm Cartesian text on method. The *Port-Royal Logic*’s selective rearrangement of ideas apart from the order Descartes wrote them in commits the same grievances that Descartes raises against Regius in the French preface to the *Principles of Philosophy*.⁷⁸ If the *Port-Royal Logic* can deviate in this way and be considered a paradigmatic Cartesian text, there is no reason why Spinoza’s method should be dismissed as anti-Cartesian on the same grounds. Of course, the geometrical method was popular during the seventeenth centuries and was appropriated in a number of different ways that were not Cartesian at all; however, Spinoza’s *Principles of Cartesian Philosophy* makes the connection between Descartes and geometric method explicit.

Another instance where Spinoza draws from Descartes is his definition of substance. Though as already discussed substance is a point of disagreement with Descartes, Spinoza’s account of infinite substance is taken directly from Descartes’ *Principles of Philosophy*:

[b]y substance, we can understand nothing else than a thing which so exists that it needs no other thing in order to exist. And in fact only one substance can be understood which clearly needs nothing else, namely, God.⁷⁹

Though Descartes says that there are also other, finite, substances that “...can only exist by the help of God’s concurrence,”⁸⁰ whether the finite and infinite substances are to be understood equivocally or analogically he does not say—his only qualification is that the terms are not univocal.⁸¹ Interpreting Descartes equivocally on this point, Spinoza argues that there is only one substance that exists, the infinite substance that is God.⁸² Although this definition subsequently causes Spinoza to reject finite substance, he is reading Descartes’ *Principles* and taking Cartesian definitions seriously and literally. Cartesian infinite substance becomes a central part of his *Ethics*. Though this is just one example in my brief survey, substance is such a central doctrine of Spinoza’s *Ethics* that it is a helpful example to focus on to discuss in his Cartesianism.

It is also worth noting some other Cartesians interpreted Descartes in ways that are later associated as Spinozistic, including Mersenne and Desgabets.⁸³ For instance, in the *Objections and Replies* to the *Meditations* Descartes speaks on the nature

of ideas. In the replies to the first set of Objections, he asks what causes an idea, such as the idea of a complex machine. He writes that:

... it will not be an adequate reply to say that the idea is not anything outside the intellect and hence that it cannot be caused but can merely be conceived. Nor will it suffice to say that the intellect itself is the cause of the idea, in so far as it is the cause of its own operations; for what is at issue is not this, but the cause of the objective intricacy which is in the idea. For in order for the idea of the machine to contain such and such objective intricacy, it must derive it from some cause; and what applies to the objective reality belonging to the idea of God.⁸⁴

He also hints at this in his reply to the Objections raised against the Sixth Meditation: "I answer that the mind does not receive any corporeal semblance; the pure understanding both of corporeal and incorporeal things occurs without any corporeal semblance."⁸⁵ Dennis Des Chene notes that, "Descartes took it to be unproblematic that there are two orders of being: in reality and in thought. The sun in my perception is the sun itself existing in the manner of a thing thought: an *objectum*... In Descartes' conception ... the order of thought is instantiated both in God and in human minds..."⁸⁶ It is no far stretch to read these claims in a way that Spinoza did and other Cartesians also read Descartes this way. In his *Search After Truth* and subsequent dispute with Arnauld on God and ideas, Malebranche argues that ideas of objects are in God, not in the objects themselves.⁸⁷ One interpretation of Malebranche is that ideas are infinite, and thus ideas participate in God himself.⁸⁸ Though Malebranche does not take the final step of denying finite substance, his explanation of ideas as participating in the divine, not human, mind resembles a Spinozistic metaphysics. This is interesting to note for Spinoza's self-perception and reception, since there is little controversy over Malebranche's Cartesianism. If Malebranche was received as a Cartesian in spite of placing ideas in the mind of God, perhaps Spinoza's Cartesianism should also be reconsidered. Spinoza was seen as Cartesian early in his life and posthumously by his contemporaries and in spite of his criticisms of Descartes, seems to be concerned with developing a philosophical system that is building upon, though willing to change, fix, and amend, Descartes—a project he began in his *Metaphysical Thoughts* and brings to completion in the *Ethics*.

Conclusion

It is clear that neither Pascal nor Spinoza followed Descartes unquestionably. They at points explicitly critique him and also often allow other influences (most importantly, Augustine and Hobbes respectively) to supplant their Cartesianism. Like the other Cartesians in the seventeenth century discussed at the beginning of this article (including but not limited to Regis, Desgabets, Rohault, Arnauld, and Mersenne) both Pascal and Spinoza were generally rebelling against Scholasticism and embracing some of Descartes' important doctrines while rejecting or critiquing others. Pascal and Spinoza, like other important early Cartesians such as Desgabets and Régis, embrace Descartes without treating his works as something authoritative or sacred

beyond amendment or critique. Their diversity of opinion is far from an anomaly with those who self-identify and are received as Cartesians by their contemporaries. In fact, deviation from Descartes is the norm for the Cartesians, perhaps one of the only consistent features of the *Cartesianism*. Nonetheless, it is not entirely clear how their doctrines are explicitly Cartesian. After all, Pascal could be an Augustinian and Spinoza a Hobbesian, both with aspects influenced by Descartes without being *Cartesians*. However, these competing influences are not compelling enough reason to disqualify either Pascal or Spinoza from being perceived by themselves and by others as Cartesian. Like any family resemblance, Wittgenstein's advice again resonates here: "Don't think, but look! ... we see a complicated network of similarities overlapping and criss-crossing: similarities in the large and in the small."⁸⁹ Any specific set of shared doctrines is less important in understanding the players than the seventeenth century use of the label – in this case, how they and others perceived them shows the use of *Cartesianism* as an appropriate identifying term. They were not seen as merely modern philosophers or merely anti-scholastics; they were seen as Cartesians and also seemed to see themselves in this capacity, even when they allowed other influences to supplant their Cartesian thought.

Although this is a brief survey, by bringing Pascal and Spinoza into the same dialogue, it expands the discussion of defining and understanding Cartesianism. Though the field of Cartesianism is already compellingly articulated in terms of more minor figures,⁹⁰ I hope by bringing Pascal and Spinoza into conversation together on this topic to have accomplished a few things. First, if these two figures with such drastically different metaphysical commitments are both Cartesian, it continues to push the boundaries on what is and should be considered a Cartesian in the seventeenth century. Second, since Spinoza and to a lesser extent Pascal are considered more 'canonical' than other established Cartesians such as Desgabets or Malebranche, I hope highlighting them continues to draw attention to the diversity within Cartesianism.

References

¹ See the May 1643 letter to Voetius (in *Œuvres de Descartes* (hereafter AT), ed. Ch. Adam and P. Tannery, [Paris, 1910], VIII B, 25-70. Descartes, R., *The philosophical writings of Descartes Volume III* (hereafter CSMK), eds. and trans. J. Cottingham, R. Stoothoff, D. Murdoch, and A. Kenny, [Cambridge: Cambridge University Press, 1985], 220-224). Also, the following letters to Regius: January 1642 (Descartes, R., AT III, 491-509; CSMK, 206-208), End of February 1642 (Descartes, R., AT III, 528-529; CSMK, 210), and June 1642 (Descartes, R., AT III, 565-567; CSMK, 213-214).

² Descartes, R., AT VIII B, 341; *The philosophical writings of Descartes: Volume II* (hereafter CSM II) eds. and trans. J. Cottingham, R. Stoothoff, and D. Murdoch (Cambridge: Cambridge University Press, 1997), 294. Descartes, R., AT IX B, 19-20; CSM II, 189.

³ Descartes writes to Regius in July 1645 telling him that he should quit his work on philosophy and stick to medicine. (Descartes, R., AT IV, 250; CSMK 255); He accuses Regius as one of those who reintroduces uncertainty and doubt into his philosophy (Descartes, R., AT IX B, 19). Also, "I must therefore warn all those who are convinced that he is a champion of my opinions that there is not one of them which he does not give a wrong and distorted

account; and I have in mind here not just my views on metaphysics, on which he openly contradicts me, but also on physics, which he deals with somewhere in his writings” (Descartes, R., AT VIII B, 365; Descartes, R., *The Philosophical Writings of Descartes, Volume I* (hereafter CSM), eds. and trans. J. Cottingham, R. Stoothoff, and D. Murdoch [Cambridge: Cambridge University Press, 1985]).

⁴ Descartes, R., AT IV, 627, CSMK, 315.

⁵ For a more detailed of the receptions of Descartes, see Dobre, M., “Rohault’s Cartesian Physics”, in *Cartesian Empiricisms*, eds. M. Dobre and T. Nyden, (New York: Springer, 2013), 203-226; Schmaltz, T. M., *Radical Cartesianism: The French Reception of Descartes* (Cambridge: Cambridge University Press, 2002); and Verbeek, Th., *Descartes and the Dutch: Early Reactions to Cartesian Philosophy, 1637-1650* (Carbondale/Edwardsville: Southern Illinois University Press, 1992).

⁶ Dobre, M. and Nyden, T., (2013), 12.

⁷ See Huet, P.-D., *Censura Philosophiae Cartesianae* (Paris, 1694).

⁸ Des Chene, D., “Cartesian Science: Régis and Rohault”, in *A Companion to Early Modern Philosophy*, ed. S. Nadler (Malden, Mass: Blackwell Publisher, 2002), 186-187.

⁹ Des Chene, D., (2002), 186-187.

¹⁰ Schmaltz, T. M., (2002), 4.

¹¹ Ariew, R. “Cartesian empiricism”, in *Revue Roumaine de Philosophie* 50/1–2 (2006):71–84. For details concerning Rohault’s physics, a helpful resource is Dobre, M., (2013), 203-226.

¹² Schmaltz, T. M., (2002), 11.

¹³ Ariew, R., *Descartes and the First Cartesians* (Oxford: Oxford University Press, *forthcoming* 2014), xvi.

¹⁴ Ariew, R., (2014), xvi.

¹⁵ Wittgenstein, L. *Philosophical Investigations*, 4th ed. (Oxford: Blackwell Publishing Ltd, 2009), 36e. §66. See also §66-§77. I am grateful for and indebted to Aaron Spink for our discussions on this topic.

¹⁶ Régis, who Huet even claimed he could not distinguish from Descartes himself, feels compelled to defend Descartes from these attacks. Whatever Cartesianism is, it encompasses Jacques Rohault, Régis’ teacher and Clerselier’s son-in-law who nearly altogether ignores metaphysics, Claude Gadroys who constructed a Cartesian astrology, Arnauld’s Cartesian Augustinianism, Malebranche’s Augustinian Cartesianism, and Cartesian Empiricists such as Régis and Desgabets, the latter two who also reject the indestructibility of matter and the union of mind and body. For more on these, see Ariew, R., *Descartes among the Scholastics* (Leiden: Brill, 2011), 401; also, Schmaltz, T. M., (2002), Dobre, M. and Nyden, T., (2013), Verbeek, Th. (1992), etc.

¹⁷ Schmaltz, T. M., (2002); Dobre, M., (2013).

¹⁸ Verbeek, Th., (1992); Ariew, R. (2014). See also Ariew, R., (2006) as well as Dobre, M. and Nyden, T., (2013).

¹⁹ Though their differences are numerous, for example, Pascal was devoutly religious and believed natural theology was a futile means to learn about God, while Spinoza was either a pantheist or an atheist who believed knowledge of God, or nature, was possible through reason.

²⁰ Arguments for Pascal’s Cartesianism are found in Alexandrescu, V., “Descartes and Pascal on the Eucharist”, *Perspectives on Science* 15/4 (Winter 2007): 434-449. Ariew, R., “Pascal and Descartes”, *Perspectives on Science* 15/4 (Winter 2007):397-409, and Carraud, V., “Pascal’s Anti-Augustinianism”, *Perspectives on Science* 15/4 (Winter 2007):450-492. Pascal’s anti-Cartesianism is usually framed in his Augustinianism and can be found in Hunter, G., *Pascal the Philosopher: An Introduction* (Toronto: University of Toronto Press, 2013); Popkin, R., *The History of Scepticism*

from *Savonarola to Bayle* (Oxford: Oxford University Press, 2003); James, S., “Reason, the Passions, and the Good Life” in *The Cambridge History of Seventeenth-Century Philosophy Volume II*, ed. D. Garber and M. Ayers (New York: Cambridge University Press, 1998), 1358-1397; and MacKenzie, C. S. *Pascal's Anguish and Joy* (New York: Philosophical Library, 1973). For a fairly comprehensive though brief account of Spinoza's Cartesianism, see *The Continuum Companion to Spinoza*, ed. W. van Bunge, H. Krop, P. Steenbakkers, J. van de Ven (New York: Continuum International Publishing Group, 2011), 63-67. S. James assumes a more Cartesian reading of Spinoza in *Spinoza on Philosophy, Religion, and Politics: The Theologico-Political Treatise* (Oxford: Oxford University Press, 2012). S. Nadler seems to also prefer Descartes' Cartesianism in *Spinoza's Ethics: an introduction* (Cambridge: Cambridge University Press, 2006). Y. Melamed takes an anti-Cartesian reading of Spinoza in *Spinoza's Metaphysics: Substance and Thought* (Oxford: Oxford University Press, 2013).

²¹ Pascal, B., *Pensées: édition établie d'après la copie de référence de Gilberte Pascal*, trans. P. Sellier (Paris: Classiques Garnier, 1999), S445. All translations from the *Pensées* are from Pascal, B., *Pensées*, trans. R. Ariew (Indianapolis: Hackett Pub. Co, 2005).

²² Pascal, B., *Pensées*, S462; Roger Ariew discusses these fragments in detail; See Ariew, R. (2007).

²³ Pascal, B., *Pensées*, S222.

²⁴ For more on this, see Garber, D., *Descartes' Metaphysical Physics* (Chicago: University of Chicago Press, 1992), 136-44.

²⁵ In Augustine's *De Civitate Dei*, he classifies humankind into two 'cities' that surpass geographical and socio-economic lines: those united by love of God and those united by self-love. This two cities distinction is found in Pascal. Carraud disagrees with this point, but Pascal seems to state otherwise in *Les Lettres provinciales*, Lettre XIV (Pascal, B., *Œuvres complètes: I.* ed. M. Le Guern [Paris: Gallimard, 1998], 746). See also the *Pensées* for cases of *Eudaimonism* and divine illumination (S644/L781).

²⁶ Pascal, B., *Pensées*, S794/L957. This places Pascal most likely seeing the Eucharist writing before Desgabets: Pascal died in 1662 and Desgabets published his work guardedly in 1671. For a more detailed treatment of this, see Alexandrescu, V., (2007). For a more detailed account of Descartes, Desgabets, and the Eucharist, see also Schmaltz, T.M., (2002), 34-47 and Armogathe, J.-R., *Theologia Cartesiana: L'explication physique de l'Eucharistie chez Descartes et Dom Desgabets* (Lille: A.N.R.T, Université de Lille III, 1998).

²⁷ In a more extended project, I will treat the influence of the *Regulae* on Pascal more thoroughly. Later in this paper, however, I briefly highlight some of the most evident ways.

²⁸ Descartes, R., AT VII, 196; also, Schmaltz, T.M., “Malebranche on Ideas and the Vision of God”, in *The Cambridge Companion to Malebranche*, ed. S. Nadler (Cambridge: Cambridge University Press, 2000).

²⁹ Descartes, R., AT VI, 1-2; PEC, 46. ‘PEC’ refers to Descartes, R., *Philosophical Essays and Correspondence*, trans. R. Ariew (Indianapolis: Hackett Publishing Co, 2000).

³⁰ Descartes, R., AT VI, 18; PEC, 54.

³¹ Pascal, B., *Œuvres-II*, 174; Pascal, B., (1989), 188; Pascal, B., *Œuvres complètes: II.* ed. M. Le Guern (Paris: Gallimard, 2000). 155-200. Except where indicated otherwise, all translations of Pascal except the *Pensées* are from *Pascal Selections*, trans R. Popkin (New York, NY: Macmillan Publishing Company, 1989), 189-190.

³² Pascal, B., *Œuvres-I*, 175-178. Pascal, B., (1989), 189-190.

³³ Descartes, R., AT X, 397; PEC, 19.

³⁴ See Hobbes, T., *The English Works of Thomas Hobbes Vol. VI* (London: Bohn, 1839-45), 419ff.

³⁵ Pascal, B., *Œuvres-II*, 171.

³⁶ Based on a paper given by Daniel Garber, at the American Philosophical Association 2013 Eastern Division Meeting, these references to the art of method may be missing from the Cambridge manuscript. If this is indeed the case, it has some potentially interesting implications for when Pascal saw the manuscripts. (Garber, D., “Descartes’ *Regulae*: A New Manuscript”, Colloquium, Descartes Society meeting at the American Philosophical Association 2013 Eastern Division Meeting, Baltimore, MD, December 28, 2013.)

³⁷ Descartes, R., AT X, 359; PEC, 2.

³⁸ Pascal, B., *Œuvres-II*, 179-180; Pascal, B., (1989), 191-2.

³⁹ Pascal, B., (1989), 192.

⁴⁰ Descartes, R., AT X, 368.

⁴¹ Carraud, V., (2007), 5, 33.

⁴² Pascal, B., *Œuvres-II*, 180; Pascal, B., (1989), 192.

⁴³ Carraud, V., 461-485.

⁴⁴ Descartes makes a very similar distinction in his letter to Hogelande on the 8th of February 1640. He writes: “...I generally distinguish two aspects of mathematics, the historical and the scientific. By ‘history’ I understand everything which has been discovered already and is contained in books. By ‘science’ I mean the skill to solve every problem, and thus to discover by one’s own efforts everything capable of being discovered in that science by means of our native human intelligence” (Descartes, R., AT III, 722; CSMK, 144).

⁴⁵ Pascal, B., *Œuvres complètes: I*. ed. M. Le Guern (Paris: Gallimard, 1998), 452; Pascal, B., (1989), 63.

⁴⁶ Pascal, B., *Œuvres-II*, 158; Pascal (1989), 176-777.

⁴⁷ Pascal, B., *Œuvres-I*, 161-163; Pascal, B., (1989), 179-180. Also, Rohault, J., *System of Natural Philosophy*, trans. S. Clarke (London: Knapton, 1728), 18.

⁴⁸ Pascal, B., *Pensées*, S445/L887.

⁴⁹ He believed that if he was able to show that the soul and body are distinct that it would prove the immortality of the soul. Though the Fifth Lateran Council said that the immortality of the soul was possible, this remained a controversial topic with figures such as Pietro Pomponazzi who continued to argue that the soul requires matter for existence. (Garber, D., “Soul and Mind: Life and Thought in the Seventeenth Century”, in *The Cambridge History of Seventeenth-Century Philosophy Volume I*, ed. D. Garber and M. Ayers [New York: Cambridge University Press, 1998], 761).

⁵⁰ For further reading, see Ariew, R., (2011), 19; 128ff and Garber, D., (1998), 764-773.

⁵¹ “All bodies, the firmament, the stars, the earth and its kingdoms, are not worth the least of minds. For minds knows all of these, and itself, and bodies know nothing” (Pascal, B., *Pensées*, S339).

⁵² Pascal, B., *Pensées*, S139/L107. See also S140/L108. Compare Pascal’s parrot example with the following from the *Discourse on Method*, “I paused here in particular in order to show that, if there were such machines having the organs and the shape of a monkey or of some other animal that lacked reason, we would have no way of recognizing that they were not entirely of the same nature as these animals” (Descartes, R., AT VI, 56; PEC, 72). Descartes continues here to list parrots as an example for uttering words without comprehending them (Descartes, R., AT VI, 57; PEC, 72).

⁵³ Pascal, B., *Pensées*, S567.

⁵⁴ Descartes, R., AT VII, 32.

⁵⁵ Pascal, B., *Pensées*, S661/L821.

⁵⁶ See the Fourth Meditation (Descartes, R., AT VII, 53-62).

⁵⁷ Pascal, B., *Pensées*, S661/L821

- ⁵⁸ In *L'esprit Géométrique*, Pascal explicitly draws from the *Discours* and *Regulae* on intuition as well.
- ⁵⁹ Pascal, B., *Pensées*, S222.
- ⁶⁰ Descartes, R., AT VI, 98; CSMK, 327 (Letter to Mersenne, 13 December 1647); See also Descartes, R., AT V, 365; CSMK 329 (Letter to Carcavi, 11 June 1649) and Garber, D., (1992).
- ⁶¹ See *Rule Three* in Descartes' *Regulae* (Descartes, R., AT X, 366) and Pascal's in *De L'esprit Géométrique* (Pascal, B., *Œuvres-II*, 171-172; Pascal, B., (1989), 186.); It is specifically worth considering the similarity in the discussion of the intellect and will concerning theological knowledge here.
- ⁶² Pascal, B., *Œuvres II*, 43-44: From the "Lettre à Fermat, le 10 août 1660": "**Car pour vous parler franchement de la géométrie, je la trouve** le plus haut exercice de l'esprit; mais en même temps je la connais pour si inutile, que je fais peu de difference entre un homme qui n'est que géomètre et un habile artisan" (Translation and emphasis mine). He also writes: "Mathematics keeps [the correct method or order that leads to certainty], but it is useless in its depths" (Pascal, B., *Pensées*, S573).
- ⁶³ Pascal, B., *Pensées*, S690 (Italics mine).
- ⁶⁴ For a more detailed treatment of Pascal's section "Descartes. Useless and uncertain," from the *Pensées*, S445/L887 see Ariew, R., (2007). Pascal, B., *Pensées*, S462.
- ⁶⁵ Spinoza, B., "Preface" to *Ethics* Part V in *Complete Works*, ed. S. Shirley (Indianapolis: Hackett Pub. Co., 2002), 213-382.
- ⁶⁶ It is also worth noting that in the *Meditations* and his correspondence Descartes takes the view that all that happens is according to God's will, but that we also have free will. Some Calvinist theologians who are accused of determinism take similar views. Clearly Spinoza thinks Descartes has a free will account of volition, but it is interesting that perhaps Descartes was not as clearly a libertarian.
- ⁶⁷ Spinoza, B., IP14Pr.
- ⁶⁸ Nadler, S., (2006), 74.
- ⁶⁹ Nadler, S., (2006)74-77,
- ⁷⁰ Descartes, R., AT IXa, 155-159.
- ⁷¹ Descartes, R., AT VII, 141.
- ⁷² Spinoza, B., IIP43s; Nadler, S., (2006) 162-7.
- ⁷³ Nadler, S., (2006) 14-15.
- ⁷⁴ Nadler, S., (2006) 14-14.
- ⁷⁵ Daniel Garber discusses Leibniz's correspondence with De Volder in his book *Leibniz: body, substance, monad* (New York: Oxford University Press, 2009), 303-314.
- ⁷⁶ From Leibniz's *Conversation du Marquis de Pianese . . . , et du Pere Emery Eremite . . .*; See Garber, D., (2009), 233-234.
- ⁷⁷ Descartes, R., AT VII, 160.
- ⁷⁸ Descartes, R., AT IXb, 19-20.
- ⁷⁹ Descartes, R., AT VIIIa, 24.
- ⁸⁰ Descartes, R., AT VIIIa, 24.
- ⁸¹ Descartes, R., AT VIIIa, 25.
- ⁸² Spinoza, B., IP14, IP11.
- ⁸³ Schmaltz gives several points held by Desgabets that exhibit 'quasi-Spinozistic tendencies' (Schmaltz, T.M., (2002), 102-127).
- ⁸⁴ Descartes, R., AT VII, 103; CSM-I, 76-77.
- ⁸⁵ Descartes, R., AT VII, 387.
- ⁸⁶ Des Chene, D., (2002), 189.

⁸⁷ Malebranche, N., *Dialogues on Metaphysics and on Religion*, trans. N. Jolley and D. Scott (Cambridge: Cambridge University Press, 1997).

⁸⁸ For example, see Schmaltz, T.M., (2000).

⁸⁹ Wittgenstein, L., (2009), 36e. §66.

⁹⁰ Ariew, R. (2014), Dobre, M. and Nyden, T., (2013), Schmaltz, T.M., (2002), and Verbeek, Th., (1992).