The Sensory Act:
Descartes and the Jesuits on the Efficient Cause of Sensation

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What is the efficient cause of sensation? It is by now a familiar story that Descartes vehemently rejected the scholastic Aristotelian answer to this question. According to the Aristotelian tradition, similitudes or species of sensible objects propagated throughout the medium produce sensations when they are properly received into the sensitive faculties of animals and human beings. Having rejected the species theory as unnecessary at best, and incoherent at worst, Descartes replaced it with a mechanistic theory according to which it is not the propagation of species but the local motions of insensibly small corpuscles that are responsible for producing sensations. For all their differences, Descartes and the Schoolmen would appear to agree on at least one thing: the senses are passive.\(^1\) Whether by species or by the local motions of corpuscles, the senses suffer changes caused (mediately) by external objects. That Descartes and his predecessors agree about this I do not dispute. What I do dispute is the claim that they agree to the passivity of the senses, at least in any simple form.

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\(^1\) Pinpointing the referent of the term sense (sensus) is difficult in both the scholastic Aristotelian and Cartesian literature. For the Aristotelians, the senses are most properly thought of hylomorphically as organs (for example, the eyes) informed by a sensitive faculty (for example, sight); the two are not really distinct. Occasionally, however, the term sense is used in a derivative way to refer to either the organ or faculty considered alone (in abstraction). Adding to the confusion, the term faculty (facultas or potentia) is sometimes used to refer not simply to the sensitive power considered in abstraction from its organ (sight, audition, olfaction), but to the hylomorphic composite of the two. For Descartes, the senses are most properly thought of as faculties of the immaterial mind alone. But since they are faculties that the mind would not have if it were not united to a body, the term is sometimes used to refer to a faculty of the human composite of mind and body. My own use of the terms sense and senses will follow the stricter senses for both the Aristotelians and Descartes.
Both Descartes and his predecessors suggest that the senses are not purely passive, but are in some sense active in the production of sensation.

The suggestion that the senses are active raises both interpretative and philosophical questions: (a) what do Descartes and his scholastic predecessors mean when they claim that the senses are active? and (b) what philosophical pressures motivate the claim that the senses are active? In this paper, I shall address these two questions for the Schoolmen and Descartes in turn. Their answers to these questions are, as one might expect, quite different in detail. Striking similarities emerge from their answers, however, concerning the proper philosophical analysis of sensation, and the division of causal or explanatory labor between object and perceiver that is required to underwrite that analysis. In the end, these similarities tell us something not only about the relation between Descartes and his predecessors, but also about the nature of the problem we still wrestle with today when we inquire into the cause of sensation.

I. The Jesuits

The scholastic Aristotelian figures I shall draw on are Jesuit scholars writing at the turn of the seventeenth century: Franciscus Toletus, the Coimbra commentator Emmanuel de Goes, Antonius Rubius, and Francisco Suárez. Although I shall be presenting points of general agreement among them, it should not be thought that these writers agree in all the details. Descartes was familiar with the work of all of these men, either from his school days at La Flèche or from his reading later in life, and it is chiefly their relation to Descartes that motivates my collective treatment of them here.2

2 The Cistercian Eustachius à Sancto Paulo, whose compendium of philosophy Descartes bought and read in 1640, could be included in this study, since he agrees in broad outline
A. The Disputed Question: Are the Senses Active or Passive?

The Coimbra commentator (de Goes), Toletus, and Rubius all begin their treatments of the senses with the disputed question of whether the senses are passive or active.3 (In Suárez, the question is not missing, but is effectively stretched over a series of more narrowly defined questions.4) Following Aristotle, who describes the senses as passive powers of the soul in *De Anima* II.5,5 the Jesuits agree that the senses are passive insofar as they receive species from objects. The point of the question, however, is whether this passive reception of species alone is sufficient to produce sensation, or whether the sense must also do something, that is, must act. Toletus explains the question as follows:

The Peripatetics agree that in any external sensation, the faculty receives a certain quality from the object, which is called a species, and which is a sort of similitude of the object...The question before us is whether sensation is only the reception of a species in the organ, or whether beyond the reception some other operation occurs with what the Jesuits say (and even replicates some of their arguments). Eustachius does not, however, offer many details or consider contrary positions. Because I do not want to risk misrepresenting him, I focus exclusively on the Jesuits. For his discussion of the senses, see EUSTACHIUS À SANCTO PAULO, *Summa Philosophiae Quadripartita*, De rebus Dialecticis, Moralibus, Physicis, & Metaphysicis, Tertia Pars. Colonia Allobrogum, Typis Philippi Alberti, 1638, 228-263.

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4 FRANCISCO SUÁREZ, *De Anima*, in *Opera Omnia*, vol. 3, ed. by D.M. ANDRÉ. Parisiis, Apud Ludovicum Vivès, 1856-78, pp. 616-43. All translations are mine.

5 ARISTOTLE, *De Anima*, 417a2 ff.
which is called sensation. For if we say the former, then sensation will be a passion and sense a purely passive faculty; if we say the latter, sensation will be an action and the sense an active faculty.\textsuperscript{6}

All of these Jesuits maintain that the reception of species alone is not sufficient to account for sensation: the sense must indeed do something in order to for sensation to occur. Rubius’ response is representative: “besides the reception of species in the faculty, sensation is an action [\textit{actio}] of the same faculty that has the species”\textsuperscript{7} and so “the sense is indeed a passive faculty, but not a purely passive one (like prime matter); it is rather partly passive and partly active.”\textsuperscript{8}

Prima facie, this claim doesn’t look all that remarkable for an Aristotelian. Of course there’s more to sensation than the mere reception of species, the thought goes, for the received species also \textit{reduces the sense to act}; that is, the species actualizes the sense, or activates it, or enables it to start sensing. Insofar as sensing is a kind of activity, the sense is thereby \textit{doing} something. But this isn’t what our Jesuits seem to have in mind. According to them, the received species reduces the sense only to first act, and this is not yet the exercise of the sensitive faculty.\textsuperscript{9} The transition from first act to second act, from being properly disposed for sensing to actually sensing, involves something more. This something else, the Jesuits claim, is the active participation of the sense. Once properly disposed in first act by the

\textsuperscript{6} \textsc{Toletus}, f. 75va-b, italics mine.
\textsuperscript{7} \textsc{Rubius}, p. 316.
\textsuperscript{8} \textsc{Rubius}, p. 318. Toletus similarly writes: “to sense is to act and not only to receive” (\textsc{Toletus}, f. 77ra). Suárez writes that sensation requires a “proper and immediate activity” on the part of the sensitive faculty (\textsc{Suárez}, p. 628b).
\textsuperscript{9} \textsc{Rubius}, pp. 314 and 320; \textsc{Toletus}, ff. 76vb, 77va, and 110ra; \textsc{Collegium Conimbricensis}, p. 225; \textsc{Suárez}, p. 629b.
species, the sense then elicits (elicere), produces (edere, proferre), effects (fficere), or is the active cause of (est causa activa) the sensation. Consider Rubius:

Three things are found in sensation: first the object is united to the faculty through its species...through which the faculty is sufficiently constituted in actu primo ad operandum...; second, the faculty itself, so actuated by the received species...elicits [elicere] sensation as its effective principle [principium effectivum]; third, the same faculty receives the act it elicits.10

And Toletus:

In different ways the same faculty can act and suffer: it indeed receives a species, but it is the active cause of its action and of sensation [actionis & sensationis est causa activa].11

The sense’s active elicitation of a sensation is meant to be a form of efficient causation: the sense, we are told, “contributes effectively” to and stands as the “effective cause” of the sensation.12 Toletus adds that the sense is the immediate efficient cause of sensation. Indeed, Toletus asserts that the sense is the only efficient cause of sensation; the species, he claims, is only an instrumental cause employed by the sense.13 In the production of a sensation, then,

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10 RUBIUS, p. 318; see also p. 314.
11 TOLETUS, f. 77va. See also COLLEGIUM CONIMBRICENSES, p. 215; SUÁREZ, p. 637a.
12 RUBIUS, p. 319; TOLETUS, f. 77rb.
13 TOLETUS, ff. 76ra, 77ra-b, and 110ra. On this point, Toletus is taking issue with Aquinas, whom he interprets as teaching that the sense is only a mediate cause of sensation through
the sense itself is at least as causally active as the species (and by Toletus’ lights, it is more active).

It should be said that these thinkers were not the only ones to think that sensation requires more than the passive reception of species. Many earlier thinkers would agree with this claim, but deny that the something else needed is an *act of the sense*, or at least an act of the very same sense that receives the species: John of Jandun assigns to a special “agent sense” the act of “spiritualizing” the sensibles, making them fit for reception into the “patient sense”; Jandun’s critics, Gaetano da Thiene, Agostino Nifo, and Aegidio Romano assign a similar act to an extrinsic agent, viz., God or an Intelligence; Alexander had long before spoken of a certain judgemental act of the soul involved in sense perception. What these otherwise diverse thinkers have in common is that in assigning the additional act to something other than the species-receiving sense, they all remain committed to the pure passivity of the receptive sense itself. It is precisely this commitment that comes under attack by our writers. As Rubius puts it, these views “strip the sense of its effective contribution to sensation.”  

One and the same sense must receive species and also act. The question now before us is: what pressures lead our authors to assert that the sense must be active in the elicitation of sensation?

**B. Grounds for an Active Sense**

The Jesuits generate two general sorts of argument for the claim that the senses are active: (a) a priori arguments that draw on some of the fundamental principles of

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which the species effectively works. Toletus argues that the species does not work through the sense, but rather the sense through the assistance of the species.

14 Rubius, p. 317. See also Collegium Conimbricensis, p. 213.
Aristotelian psychology, and (b) empirical arguments that draw on common sensory experiences.

The first a priori argument starts with the uncontested assumption that the sensitive soul is more noble than the vegetative soul. It is agreed by all Aristotelians that it is more noble to act than to suffer. It is also agreed that the faculties of the vegetative soul (nourishment, growth, and reproduction) are active. But if the sensitive faculties were merely passive, then it would follow that the faculties of the vegetative soul are more noble than those of the sensitive soul, and this is absurd. The sensitive faculties must therefore be in some way active on pain of losing their noble status.\(^{15}\)

The second a priori argument depends on the equally uncontroversial assumption, taken from the *De Anima* II.2, that sensation is a vital activity; that is, it is an activity of a living or ensouled thing.\(^{16}\) Vital activities by their nature proceed effectively from an *intrinsic* principle, that is from something within the living thing. Rubius writes: “life springs forth from an intrinsic principle, and so, consequently, must a vital operation.”\(^{17}\) If the reception of species were all that were required for sensation, then the only effective act to be found would be on the part of the object producing the species, and this activity is neither vital nor intrinsic: it does not proceed from from an ensouled creature (but typically from an object); and more to the point, it does not proceed from within the ensouled creature doing the perceiving (but from an object extrinsic to it). The sensitive faculties themselves, and not

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\(^{15}\) See *COLLEGIUM CONIMBRICENSES*, p. 215; *TOLETUS*, f. 75vb; *RUBIUS*, p. 318; *SUÁREZ*, p. 628b. This argument opposes the views of Thiene, Nifo, Romano, and Alexander mentioned above: insofar as the sensitive faculties are themselves regarded by these thinkers as exclusively passive, then no matter what other agent is introduced into the sensory process the sensitive soul looks to be less noble than the vegetative soul, which is contrary to accepted doctrine.

\(^{16}\) *ARISTOTLE*, *De Anima*, 414a12; see also 415b22.

\(^{17}\) *RUBIUS*, p. 316.
just the species, must engage in an efficient act if sensation is to be a genuinely vital, internally driven, activity.18

The third and final a priori argument turns on Aristotle’s claim in the Metaphysics IX.8 that sensation is an immanent (as opposed to a transeunt) activity.19 Immanent activities (like walking) begin and end in the agent; that is, the agent produces a change in itself. Transeunt activities (like throwing a baseball) end in something other than the performing agent (in the catcher’s mit); the agent produces a change in something else. Now the reception of species is clearly the end of a transeunt activity: species are produced by the object and received in the sense, thereby altering it. If sensation were simply a matter of receiving species from objects, then it too would be a transeunt activity. But this is contrary to doctrine. It is also contrary to common sense: sensing is something that perceivers do, not something they receive; they may receive species, but they certainly don’t receive sensations. For species to result in sensations, then, some further act on the part of the perceiver’s sensitive faculty is required.20

18 See Toletus, f. 77rb; Collegium Conimbricensis, p. 214; Rubius, p. 316; Suárez, pp. 626a, 627a-b, and 641a. This argument also opposes the views of Thiene, Nifo, and Romano, according to whom sensation is the result of the passive reception of species by the sense plus the activity of some extrinsic rather than intrinsic agent, viz., God or an Intelligence.

19 Aristotle, Metaphysics, 1050a24-1050b1.

20 See Rubius, p. 316; Collegium Conimbricensis, p. 214; Toletus, f. 77ra; Suárez, 627a. This argument opposes Jandun’s view insofar as his agent sense, while an intrinsic faculty, is nonetheless distinct from the species-receiving sense: the agent sense acts, but a different subject, the patient sense, receives the action. The Jesuits acknowledge that Jandun’s motive for introducing an agent sense is quite different from their own motive for introducing a sensory act. Jandun employs the agent sense to bridge an alleged ontological gap between material sensibles in the world and immaterial sensory faculties of the soul by “ennobling” or “spiritualizing” the sensibles in the form of species, thereby making them suitable for reception into the sense. The Jesuits find Jandun’s agent sense not only doctrinally suspect (an agent sense is never mentioned by Aristotle and it inexcusably doubles the number of sensitive faculties from five to ten), but also quite unnecessary. Activity is not needed to raise the ontological status of the sensibles from material to
The combined conclusion of these arguments is that insofar as sensation is a vital and immanent activity exercised by a sentient creature in virtue of the sensitive faculties of its soul, the senses must be active in its production. Although it is not yet clear just what this act amounts to, it is clear that the Jesuits mean the senses to play an efficient causal role in their sensations.

Empirical arguments reinforce the a priori ones. They also illustrate just what the act of sense contributes to the production of sensation. Species are received into many things without eliciting any sensation in them, for example, into mirrors and the air. This fact suggests that the reception of species cannot alone account for sensation; there must be something special about the sentient recipient. Of course, this in itself is not enough to show that some efficient act is needed on the part of the recipient: it could be that just as a seed planted in the right nutrient-rich soil will grow by its own active power, so a species landing in the receptive environment of a sense-informed organ will turn into a sensation. The Jesuits note further, however, that species can be received by the senses themselves without any attendant sensation (so-called “dead” receptions), as happens when they are received into the organs of animals that are asleep, or awake but attending elsewhere.

Rubius writes:

immaterial, for the senses are themselves material faculties (that is, they are faculties that operate through an organ). Since they are produced by a material object and received by a material faculty (and since effects are proportionate to their causes and accidents to their subjects), species themselves must be material, if only incompletely or “intentionally” so. For a discussion of Jandun’s view, see A. PATTIN, Pour l'Histoire du Sens Agent: la Controverse entre Barthelemy de Bruges et Jean de Jandun: ses Antecedents et son Evolution. Leuven, University Press, 1988; E.P. MAHONEY, “Agostino Nifo’s De Sensu Agente”, in Archiv für Geschichte der Philosophie, 53 (1971), 119-42. For a discussion of the Jesuit arguments concerning the ontology of species see A. SIMMONS, “Explaining Sense Perception: A Scholastic Challenge”, in Philosophical Studies, 73 (1994), 257-275.
...experience shows us that species received in the eye often do not produce vision, e.g. in someone who is asleep or someone who is awake but distracted by something else; therefore vision does not consist in the union of species with the faculty alone.\textsuperscript{21}

So what else is required? Attention or consciousness (\textit{attentio, advertentia, conatus}). But attention, it is argued, is unintelligible without an act on the part of the sense. Suárez writes:

> Often different people receiving the same species in [sensitive] faculties that are similarly disposed do not see equally for the reason that they do not attend equally. We find the same thing happening in a single person at different times. Without a doubt the cause of this is that the [sensory] activity does not flow from the species alone but even more so from the soul and the [sensitive] faculty.\textsuperscript{22}

Experience thus seems to confirm that above and beyond the reception of species, sensation requires an act of the sense, in particular an act of consciousness.

\textbf{C. Rethinking the Efficient Cause of Sensation}

The requirement that the senses act in the production of sensation complicates the philosophical psychology of sensation considerably. In the first place, the senses turn out to be multifaceted faculties that both act and suffer: one faculty does the job of what others

\textsuperscript{21} Rubius, p. 316. See also Toletus, f. 77ra; Collegium Conimbricensis, p. 214; Suárez, p. 625a.

\textsuperscript{22} Suárez, p. 628a. See also Toletus, f. 77ra; Collegium Conimbricensis, p. 225; Rubius, p. 316.
had thought took two. In the second place, there is a division of labor between the species and the sense in the causal account of sensation. The two are said to concur (concurrere), or enter into some sort of partnership, neither being adequate to account for sensation by itself. Rubius explains:

...the power alone cannot elicit the vital act of sensing unless it is determined and completed by the species; the species cannot by itself elicit the vital operation, which must by definition proceed from a vital and therefore intrinsic principle.

Together the species and sense form a complete principle, a principium integrum, of sensation. The species provides the sensation with intentional content, for instance, it makes my seeing be a seeing of the purple color of a flower, while the act of the sense provides the first-person awareness characteristic of sensation, for instance, it accounts for the flower’s purple color be noticed sensorily by me.

With the exception of Toletus, who denies genuine efficient causation to the species altogether, the Jesuits cast the partnership of species and sense as a genuinely causal one: species and sense share the role of efficient cause of the sensation, each being a partial cause of some sort. The precise nature of the partnership is a matter of dispute. The Coimbra commentator writes:

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23 See Toletus, f. 77va; Collegium Conimbricensis, p. 216; Rubius, pp. 318-319; Suárez, p. 641a.
24 Rubius, p. 321. See also Toletus, ff. 77va and 109va.
25 Rubius, pp. 318 and 320-321; Suárez, p. 629b.
The [sensitive] faculty has its own power \textit{[virtus]} for acting and similarly the species has its own. For that reason both are, as it were, two partial causes of different natures, or as it were two parts of one integrated agent which immediately confer and join their powers for the act of cognizing.\textsuperscript{26}

This passage seems to attribute equal partial status to the causal influence of species and sense on sensation. Rubius, by contrast, not only subordinates the influence of species to sense (the species merely determines the active power of the sense), but he actually claims that both species and sense are merely instrumental rather than partial principal causes of sensation (the object and soul are the partial principles causes that employ the species and sense instrumentally).\textsuperscript{27} Whatever the details, it is clear that there is some sort of two-part explanation of sensation according to which its content is accounted for by the species-producing object and its consciousness is accounted for by an act of the sensitive faculty of the soul. I now suggest that despite his dramatic new dualistic metaphysics of the perceiver and his new mechanistic account of nature, Descartes gives a very similar philosophical account of sensation.

\textbf{II. Descartes}

There is little doubt that for Descartes the senses are passive faculties of the soul.\textsuperscript{28} Not only does he repeatedly describe them as such,\textsuperscript{29} but also his proof of the existence of

\textsuperscript{26} \textsc{Collegium Conimbricensis}, p. 226. See also Suárez, 628b-29b.
\textsuperscript{27} Rubius, pp. 320-23;
\textsuperscript{28} All references to Descartes will be to R. Descartes, \textit{Œuvres de Descartes}, Nouvelle présentation, 11 vols., ed.by C. Adam and P. Tannéry. Paris, Vrin, 1983-91. References will indicate volume number and page number. Translations are mine.
\textsuperscript{29} See, for example, Descartes, \textit{Meditationes de Prima Philosophia}, AT VII, pp. 38, 75, and 79.
the external world depends on this fact: because there is clearly in me a “passive faculty of sensing, or of receiving and cognizing the ideas of sensible thing,” it stands to reason that there is some active faculty producing those ideas in me; they “come to me from something other than my mind.” Of the two available sources, God and an external world of objects, only the world is ultimately consistent with God’s nondeceptive nature. Later, in the *Passions of the Soul*, Descartes writes that all perceptions can be called “passions” for the reason that “it is often not our soul that makes them such as they are, and our soul always receives them from those things that are represented by them.” In his scientific account of sense perception Descartes further portrays the senses as passive: external objects produce motions in the sense-organs, which by way of the nerves produce further motions in the brain, which in turn “produce,” “bring about,” “excite,” “stimulate,” or “effect” sensations in the soul.

The claim that sensations are passively received by the soul from the outside is philosophically complicated, however, by the infamous problems concerning how and whether two substances so different in nature as body and soul can interact causally with one another. If there’s a problem about body-soul interaction, then there’s a problem about

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30 *Descartes, Meditationes de Prima Philosophia*, AT VII, p. 79.
32 See *Descartes, Meditationes de Prima Philosophia*, AT VII, p. 79; *Princípios da Filosofia*, AT VIII-A, pp. 40-41.
33 *Descartes*, AT XI, p. 342. See also the letter to Elizabeth, 6 October 1645, AT IV, p. 310; letter to Regius, December 1641, AT III, pp. 454-455.
35 The picture is also textually complicated by Descartes’ occasional claims that (a) all ideas are innate in the mind, and (b) sensations are “occasioned” by motions in the brain. For examples of (a), see *Descartes*, letter to Mersenne, 22 July 1641, AT III, p. 418; *Notae in
the soul's passively receiving its sensations from the outside world. The crux of the interaction problem is that Descartes commits himself to a causal “containment” principle according to which a total efficient cause must contain its effect, either formally or eminently. But bodies do not contain, formally or eminently, sensations, and so they cannot be the total and efficient causes of sensations. At the very least, something more is required (if not something altogether different).

One strategy that has been found for solving Descartes’ problem (or at least softening its blow) is the following. Descartes distinguishes in the Preface to the Meditations between an idea considered “materially, as an operation of the intellect,” that is as a mental act or episode of consciousness, and an idea considered “objectively, as the thing represented by the operation”, that is as having some (intramental) intentional or representational content. Descartes further says that ideas considered materially are caused by the soul itself; they are “operations [or acts] of the soul” and “proceed from me.” Descartes thus commits himself to the soul’s having a role in the efficient causation of its sensations, at least insofar as they are considered materially as mental acts. If this is true, then only the contents of ideas (ideas considered objectively) require an external cause. Bodies, then, are just partial efficient causes of sensations, and the containment principle does not apply to partial but only to total efficient causes. But then bodies need not contain

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Programma quoddam, AT VIII-B, pp. 358-359. For examples of (b), see DESCARTES, La Dioptrique, AT VI, p. 144; Traité de l'Homme, AT XI, p. 149. For discussion, see again M. WILSON, “Descartes on the Origin of Sensation”.

36 DESCARTES, Meditationes de Prima Philosophia, AT VII, pp. 41, 79, and 104; Princípi Philosóphiæ, AT VIII-A, p. 11.

37 DESCARTES, Meditationes de Prima Philosophia, AT VII, p. 8. A similar distinction is made at AT VII, p. 232.

38 DESCARTES, Meditationes de Prima Philosophia, AT VII, pp. 40 and 103.
their sensational effects, and we may have a way out of the metaphysical problem. There is, of course, the further question whether external bodies are sufficient to cause even the contents of ideas (or ideas considered objectively), and if so how. This is a particularly vexing problem in the case of secondary quality sensations which, on Descartes’ view, bear no resemblance to their alleged bodily causes. What is important for present purposes, however, is simply that external bodies need be, for Descartes, at most partial efficient causes of sensations; the soul too plays an active efficient causal role in the production of sensations. And this means that sensations turn out not to be entirely passive inhabitants of the Cartesian soul after all.

Like his Jesuit predecessors, Descartes provides a philosophical analysis of sensation that distinguishes content and consciousness and a corresponding analysis of the senses as partly passive and partly active. His immediate philosophical motives for attributing an act to the senses are different, but the explanatory division of labor between sensory passion and action looks much the same in the end: the senses are passive with respect to their contents, but they are active with respect to consciousness. For all the differences in metaphysical groundwork and natural philosophical detail, then, these thinkers adopt similar strategies for trying to explain the efficient cause of sensation.

III. Conclusion

I do not mean to suggest that Descartes (wittingly or unwittingly) inherited this philosophical problem, or his account of sensation, from his Jesuit predecessors. On the other hand, I do not mean simply to note the formal similarities between them either. The similarities in their respective answers to the question whether the senses are active or passive brings into focus a persistent (and natural) division between explanations of intentionality and consciousness in sensation. This division arises in (and challenges) the most diverse metaphysical and natural philosophical programs. Still today in an age of materialism the central philosophical problems about sense perception are its intentionality, on the one hand, and its consciousness, on the other. But perhaps this is as it should be: being a meeting of mind and world, sensation requires the active participation of both. The Jesuit and Cartesian analyses of sensation reflect this fact. Though we may reject the details of their accounts in favor of a more conservative metaphysics and a more up-to-date science, we inevitably share with them an explanatory problem space. For this reason, examination of these historical texts provides a richer understanding of a problem we are still wrestling with today when we ask, what’s the efficient cause of sensation?\footnote{I am grateful to Gary Hatfield and Richard Watson for comments on earlier drafts of this paper.}