

Changing the Cartesian Mind: Leibniz on Sensation, Representation and Consciousness

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What did Leibniz contribute to the philosophy of mind? To judge from most Leibniz commentaries and textbooks in the philosophy of mind the answer is: not much. Perhaps that is because Leibniz's philosophy of mind looks a lot like a generally Cartesian philosophy of mind, and the Cartesians got there first. Like Descartes and his followers, Leibniz claims that the mind is immaterial and immortal; that it thinks (indeed is always thinking); that *qua* thinking thing, it is a different kind of thing from body that obeys its own sorts of laws; that it comes stocked with innate truth-tracking intellectual ideas and an epistemically annoying habit of forming confused sensory ideas on the occasion of external corporeal events. Nothing is new here. Of course, Leibniz includes unconscious states of mind in the form of his famous *petites perceptions* and he offers a unique solution to the problem of mind-body interaction in the form of his infamous pre-established harmony. In the overall scheme of things, however, these look like little more than minor alterations in the philosophy of mind that Descartes purports to have cut from whole cloth fifty years earlier. Or so it appears.

Leibniz is not, in fact, a Cartesian philosopher of mind. In the opening of the *New Essays on Human Understanding*, arguably his most thorough treatment of the mind, Leibniz's spokesman announces in no uncertain terms: "I should tell you the news that I am no longer a Cartesian" (*NE* I.i, A/RB 71).¹ While Leibniz alludes to many things with this announcement, the list of theses that he presents to justify the renunciation of Cartesianism is dominated by issues in the philosophy of mind. One of the most dramatic, if under-emphasized and so under-appreciated, disagreements that Leibniz has with Descartes and his followers concerns the very nature of mental activity, and so of the mind itself. The Cartesians, famously enough, take *consciousness* to be the distinguishing mark of thought, and so of the mind. Leibniz emphatically rejects this view, maintaining instead that *representationality* of some sort is the mark of the mental. This is no minor alteration. Leibniz's theory of mind is meant to replace, not simply mend, the Cartesian theory. We thus have in Leibniz a challenge to Cartesianism that dramatically changes the shape of early modern philosophy of mind as we typically understand it today.

That Leibniz's challenge to the Cartesian theory of mind is under-appreciated is clear from statements like the following from a recent collection of essays on consciousness:

Until the time of Freud, there was no proper theoretical framework in which to reject the Cartesian idea of equating mind with consciousness. In other words, consciousness was generally taken to be "the point of division between mind and not mind"--the mark of the mental.²

In fairness, the author of this passage does mention that Leibniz is an exception who "can be said to have anticipated some very important developments to come in psychology two centuries ahead of their time," but clearly Leibniz is not regarded as a pivotal figure in the history of the philosophy of mind.³ In fact, however, it is Leibniz, not Freud, who offered not only a comprehensive framework for rejecting the equation of mind with consciousness, but also a metaphysical ground for that framework--something the empirically minded Freud never attempted to do.^{4,5}

With his representationalist conception of mind, Leibniz develops an explanatory program in the philosophy of mind that no Cartesian could have imagined, and that is arguably more powerful than its Cartesian counterpart. While his explanatory

innovations impact his treatment of all mental phenomena, nowhere is the impact felt more acutely than in his account of sensation, which therefore provides the focus for this essay. After examining some of the chief differences between the Cartesian and Leibnizian conceptions of mind quite generally in Section 1, I turn to sensation in particular to illustrate the explanatory effects of Leibniz's general theory of mind. Section 2 sketches a familiar portrait of the Cartesian account of sensation that serves as Leibniz's target. Section 3 develops an interpretation of Leibniz's account of sensation that emphasizes the ways in which it differs from the Cartesian account, and the ways in which it reflects his alternative conception of mind. The essay concludes with the suggestion that Leibniz's attempt to change the Cartesian mind illuminates both the philosophical pressures that the historically predominant Cartesian conception of mind has put on the study of the mind and the advantages that an alternative representational conception of mind offers.

1. Early Modern Theories of Mind: The Cartesians vs. Leibniz

First a word of clarification is in order concerning my use of "the Cartesian theory of mind." Whether the theory I outline below is an accurate interpretation of Descartes' own considered views about the mind or those of his followers is an open interpretive question. I, myself, have reservations about its success as an accurate interpretation of Descartes or as a blanket interpretation of his followers, though I do think that it is a fairly accurate interpretation of one of his leading followers, viz., Malebranche. My reason for casting the theory as I do is twofold. First, it represents a familiar 20th century interpretation of Descartes' theory of mind, one that has been particularly influential on 20th century Anglo-American philosophers of mind. Second, it represents Leibniz's own interpretation of Descartes' theory of mind.⁶ Since this essay is chiefly concerned with Leibniz's neglected efforts in the philosophy of mind, accuracy in the portrayal of the historical Cartesians is of less importance than accuracy in the portrayal of the view against which Leibniz takes himself to be moving. In any event, the controversial aspects of the interpretation of the Cartesians will not undercut the main points of the comparison with Leibniz, as I will explain below.

1.1. The Cartesian Theory of Mind

The Cartesians are, of course, substance dualists, the two sorts of substance being body and mind (or soul).⁷ The essence of mind is *thought*, and thought includes everything from pains and tickles to sensory perceptions to volitions to the purely intellectual understanding that God is infinite.⁸ What ties all of these phenomena together under the single category of thought? Consciousness. Descartes himself is explicit about this: "By the term 'thought' I understand everything that is happening within us of which we are conscious, insofar as we are conscious of it."⁹ Malebranche similarly writes: "...by *thought*...I generally understand all those things that cannot be in the soul without the soul being aware of them through the inner sensation it has of itself."¹⁰ Arnauld too claims that thought is "conscious of itself" (*est sui conscia*).¹¹ There are, of course, some notable problems for the view that consciousness is the mark of the mental: dispositional beliefs; as-yet-undiscovered innate ideas; memories; the judgments that Descartes said we make but do not notice when we perceive objects at a distance. All of these seem to be mental phenomena, and so thoughts, but none is conscious. Descartes routinely bites the consciousness bullet either by claiming that the phenomenon in question is not really a thought (e.g., memories, innate ideas and, presumably, beliefs are not thoughts but dispositions to have thoughts),¹² or by claiming that while the phenomenon appears to be *unconscious* it is really just *unremembered* (e.g., distance judgments are conscious, but they happen so quickly that we do not subsequently remember them).¹³ All thought in the Cartesian mind, then, is by its very nature conscious.

Among the conscious thoughts of the Cartesian mind, some are representational and some are not. Nonrepresentational thoughts are conscious states that bear no

cognitive relation to the world: they do not tell us, or even purport to tell us, anything about how things are outside the mind; for the most part, they are mere modifications of consciousness itself.¹⁴ Representational thoughts, by contrast, bear some sort of cognitive relation to the world, or at least to *possibilia*. There is plenty of interpretive debate, both old and new, over just where and how Descartes draws the line between representational and nonrepresentational thoughts, and over what exactly it means for a thought to be representational. Indeed it is unclear whether Descartes has any precise and fixed views on the matter. Descartes' followers only increase the interpretive problem, as they develop very different views on the nature and extent of the mind's representationality.¹⁵ By all accounts, however, my intellectual understanding that a cube has six sides and my sensory perception that there is a cube on the table are representational thoughts within the Cartesian theory of mind. My bad and good moods, on the other hand, are at least good candidates for nonrepresentational thoughts; if the blood is too thick and sluggish, Descartes suggests, then its movement "produces a feeling of sadness in the mind, although the mind itself may perhaps not know of any reason why it should be sad."¹⁶ Some thoughts seem to have both representational and nonrepresentational components. Descartes describes emotions, e.g., as *ideas*, which are representational insofar as they are "as it were likenesses of things,"¹⁷ *plus some additional form*;¹⁸ thus my fear that there is a mouse in my kitchen represents to my mind a potentially existing state of affairs in which there is a mouse in my kitchen, but it adds to that representational content an additional form, viz., the feeling of fear. Wherever one draws the line, and however one fleshes out the details of this picture of the mind the important point for present purposes is that although all the thoughts in the Cartesian mind are by their nature conscious, they may not be (entirely) representational. At the very least, the role that representationality plays in the Cartesian theory of mind is quite unsettled.

I.2. Leibniz's Theory of Mind

Leibniz introduces several substantive changes to the Cartesian theory of mind. Perhaps the most obvious is that while the Cartesians entertain only one sort of created mental substance, viz., mind or soul, Leibniz entertains three: bare monads (or 'entelechies'), souls and minds.¹⁹ The three sorts of mental substance differ in cognitive ability: bare monads are capable of only 'simple perception', which is an unconscious form of mental activity; souls of sensation; minds of reason and reflection. Unlike the Cartesians, then, Leibniz distinguishes the cognitive achievements of soul and mind: "When [substances] have sensation they are called 'souls,' and when they are capable of reason they are called 'minds'" (letter to Queen Sophie Charlotte, G VI 506/L 551; see also PNG §4, G VI 599-600/AG 208; M §§ 29-30, G VI 612/AG 217; letter to R.C. Wagner, G VII 529). Leibniz is explicit that he sees this distinction as a departure from the Cartesian theory: "It is hardly necessary for all souls and entelechies to be rational; those Cartesians who draw this conclusion seem to me to be very much overhasty" (letter to John Bernoulli, GM III 560-561/AG 170). Of the further distinction between soul and bare monad Leibniz writes: "...since sensation is something more than a simple perception, I think that the general name of 'monad' and 'entelechy' is sufficient for simple substances which only have perceptions" (M §19, G VI 610/AG 215). This lowest category of mental substance, the bare monad or entelechy, distinguishes Leibniz's theory of mind even more dramatically by introducing a form of unconscious mental life anathema to the Cartesians. Leibniz clearly prides himself on this fact: "It is for want of this distinction [between conscious and unconscious perception] that the Cartesians have failed, taking for nothing the perceptions of which we are not conscious" (PNG §4, G VI 600/AG 208; see also M §14, G VI 608-9/AG 214 and NE II.xix.4, A/RB 162). In what follows, what I call 'Leibniz's theory of mind' should be understood to include the study of all the monads, but most especially souls and minds whose cognitive activity is in some sense conscious.

Leibniz's second innovation appears at first to be merely terminological: Leibniz's catch-all term for mental activity is not 'thought' (*pensée, cogitatio*), as it is for the Cartesians, but 'perception' (*perception, perceptio*). As thought constitutes the essence of mental substance for the Cartesians, so perception constitutes the essence of mental substance for Leibniz (see *PNG* §2, G VI 598/AG 207).²⁰ This innovation is not merely terminological, however, for the terms are not co-extensive. Leibnizian perception includes something that Cartesian thought does not:

There are hundreds of marks that force us to judge that there is at every moment an infinity of perceptions in us, unaccompanied by awareness and unaccompanied by reflection; that is, an infinity of changes in the soul itself of which we are not aware (*NE* Preface, A/RB 53).

As for the more familiar Cartesian term 'thought', Leibniz is explicitly interested in changing the meaning of the term:

One might, I believe, replace 'thought' by a more general term 'perception', attributing thought only to minds, whereas perception belongs to all [substances]. But still I would not challenge anyone's right to use 'thought' with that same generality, and I may sometimes have carelessly done so myself (*NE* II.xxi.72, A/RB 210; see also II.xxi.4, A/RB 171).

In its new and technical sense, then, 'thought' refers exclusively to the rational forms of perception possessed by minds alone—understanding, reflection and reasoning (see also *NE* II.ix.1, A/RB 134 and II.xxi.5, A/RB 173). As this passage makes clear, however, Leibniz also uses term 'thought' in a more liberal sense, in a way that is interchangeable with 'perception', a fact that makes the term 'thought' a moving target for the interpreter. In its more liberal sense, Leibnizian 'thought' casts a wider net than Cartesian thought (including unconscious perceptions), while in its stricter sense, it casts a narrower one (excluding everything but purely rational forms of cognition). For the sake of clarity, I will distinguish Leibniz's liberal and technical uses of the term 'thought' by the labels 'thought_{liberal}' and 'thought_{strict}'.

Finally, the most important difference for present purposes concerns the Cartesian and Leibnizian conceptions of mental life quite generally, and this difference underwrites the others. By contrast with Cartesian thought, Leibnizian perception is by its very nature representational. "The nature of a monad," Leibniz writes, "is representative" (*M* §60, G VI 61/AG 220).²¹ Perception just is a special form of representation or, in Leibniz's idiolect, a special form of 'expression'. For Leibniz, one thing represents or expresses another "when there is a constant and fixed relation between what can be said of one and what can be said of another" (letter to Arnauld, G II 112/L 339; see also *NE* II.viii.13, A/RB 131). Representation thus requires some form of isomorphism between *res repraesentans* and *res repraesentata*. Resemblance is the paradigm case of representation, but any isomorphism will do; thus planar projective drawings represent solids, maps represent cities, musical notation represents a musical composition and so on. What is distinctive about *perceptual* or *mental* representation, Leibniz tells us, is that in perception "many things are expressed in one" (*PNG* §2, G VI 598/AG207; *M* §13, G VI 608/AG 214; letter to Des Bosses, G II 311). Making full sense of this enigmatic claim is beyond the scope this essay, but at the very least Leibniz seems to have in mind that mental representation involves an isomorphism between many external things and an internal state of a *single, unified substance* or monad (*PNG* §4, G VI 600/AG 208; letter to Arnauld, G II 114/L 340). Thus a mirror may represent many things outside itself at once, but because it is not itself a single, unified substance (but is rather an aggregate composed parts), it does not engage in distinctively mental representation.²² Whatever the details of Leibniz's conception of mental representation, the crucial point for present purposes is this: because the Leibnizian monad is by nature a representing thing, there

can be no nonrepresentational state (or quale) present in it. All mental phenomena must be accounted for in representational terms. This fact marks one of the most significant difference between the Leibnizian and Cartesian theories of mind.²³

The asymmetry does not stop there, however. Although all Leibnizian perceptions are representational, we have seen that only some of them are conscious, and this marks an equally important departure from the Cartesian theory of mind. We can see now how Leibniz puts himself in a conceptual position to allow for the possibility of unconscious perceptions: perception is a form of representation, and there is nothing in the nature of representation itself that implies consciousness. So long the distinctive *unity* of the mentally representing subject is not explained by an appeal to consciousness (e.g., in terms of a unity of consciousness), then consciousness turns out to be inessential to the life of the representing mind. And that opens the door to a whole domain of mental phenomena unthinkable to the Cartesian and explanatorily indispensable to the Leibnizian.

It must not be thought that Leibniz's reconceptualization of the nature of the mental as a form of representation is a matter of simple fiat. It is motivated in part by a combination of Cartesian and Lockean intuitions. Leibniz agrees with the Cartesians that a substance can never be without its essential activity (on pain of ceasing to be what it is); a soul can therefore never be without thought (see *NE* Preface, A/RB 53 and II.i.9-10, A/RB 111). He agrees with Locke and common sense, however, that the soul is sometimes without conscious thought, as when it is asleep or in a comma. Reconciling these two intuitions, he submits, "is undoubtedly the crux of the matter—the difficulty by which able people have been perplexed" (*NE* ii.i.11, A/RB 113). If the soul is always thinking, but not always conscious, then clearly consciousness cannot be essential to thought. Thought must be conceived in some other terms. Leibniz's proposal is the representation of many in one. At the very least, a serious burden of proof is now on the Cartesians to maintain a conceptual connection between thought and consciousness, and Leibniz frequently reminds the Cartesians of this burden (see *NE* II.i.11, A/RB 113; II.i.18, A/RB 117; II.i.19, A/RB 118).

Establishing the conceptual possibility of unconscious perception is one thing. Establishing its existence is another. Leibniz applies himself to the task of establishing the existence of unconscious perception persistently throughout his late works, and especially in the *New Essays*. As these arguments have received plenty of examination in the literature, I will only call attention to the great variety and number of arguments that Leibniz develops in support of his position. He employs four rather different kinds of argument: (a) theological arguments to the effect that we can make a better case for the immortality of the soul if we posit unconscious perceptions (*PNG* §4, G VI 600/AG 208; *M* §14, G VI 609/AG 214-215); *NE* II.xix.4, A/RB 162); (b) a famous *reductio* to the effect that if every perception were conscious, then, since consciousness involves the reflective perception of a perception, we should remain transfixed in a perpetual cycle of reflection on reflection (*NE* ii.i.19, A/RB 118); (c) *a posteriori* arguments, including arguments from analogy and inference to the best explanation (*NE* Preface, A/RB 54; II.i.9-10, A/RB 112; II.i.13-15, A/RB 115-116; II.xx.6, A/RB 164-165; II.xxi.5, A/RB 173); and (d) *a priori* arguments grounded in the fundamental principles of Leibnizian metaphysics, such as the principle of continuity (*NE* Preface, A/RB 56-57; II.i.15, A/RB 116; II.i.18, A/RB 117) and the pre-established harmony of body and soul (*NE* II.i.15, A/RB 116; letter to Arnauld, G II 90/AG 81). Leibniz is quite explicit that establishing the existence of unconscious perceptions in the soul is a crucial change from the received Cartesian theory of mind, and no doubt this is why he put so much argumentative energy into it. In missing unconscious perceptions, he charges, the Cartesians have "failed badly" (*M* §14, G VI 608-9/AG 214; *PNG* §4, G VI 600/AG 208) and "have been conquered by a loose philosophy--one as ignoble as it is flimsy" (*NE* II.xix.4, A/RB 162).

In short, by recasting thought as essentially representational rather than conscious, Leibniz opens the door to a whole new realm of unconscious mental phenomena

unimaginable on the Cartesian model. At the same time, he closes the door on nonrepresentational, merely qualitative, states of consciousness. In so doing, Leibniz effectively turns the Cartesian mind inside out: whereas all Cartesian thoughts are conscious and only some representational, all Leibnizian perceptions are representational but only some conscious. The consequences of this theoretical inversion are considerable, and they are particularly brought to light in the account of sensation.

2. A Cartesian Account of Sensation

Sensations, taken quite generally in the early modern period, are mental states that the mind receives through the senses; they are thus contrasted with mental states that the mind receives through the intellect. The Cartesians make a more subtle distinction between sensations proper and full blown sensory perception, which includes, besides sensations, a variety of habitual judgments by the intellect and will.²⁴ More restrictively still, sensations include only the so-called bodily sensations (tickles, pain, hunger) and secondary quality sensations (sensations of color, sounds, flavor, and so on), leaving out our immediate sensory apprehension of primary qualities like size, shape, position, and the like. For present purposes, ‘sensation’ should be understood in this restrictive sense. An influential interpretation of nature of Cartesian sensations runs as follows: sensations are (1) primitive (2) states or acts of consciousness that are (3) ineffable or inexplicable; they are (4) stirred up by motions in the body but (5) do not resemble those bodily motions and (6) do not represent anything bodily.

First, sensations are primitive in the sense that they are the first phenomena to occur in the mind as a result of bodily stimulation at what Descartes called the ‘second grade of sensory response.’ They may be subsequently rearranged, combined and embellished by judgments of the intellect, at what Descartes called the ‘third grade of sensory response,’ but sensations are the immediate results in the mind instituted by nature of follow upon bodily motions at the pineal gland.²⁵ Second, precisely because they are effects in the Cartesian mind, sensations must, by their nature, be states or acts of consciousness. Third, sensations are ineffable or inexplicable both in the sense that there is nothing more primitive available in terms of which to analyze or explain them and in the sense that they bear no necessary connection to the bodily motions that stir them up. Fourth, there is plenty of disagreement among the Cartesians concerning whether sensations are genuinely caused or simply occasioned by bodily motions, but one can safely say that sensations and bodily motions are type-type correlated: a given type of sensation occurs in the mind when and only when a given type of motion occurs in the body. Fifth, when the Cartesians claim that sensations do not resemble bodily motions, all one needs to understand by that claim is that sensations do not present phenomenally to the mind anything that could really exist, as presented, in bodies: color, sounds, pains as phenomenally presented to the mind cannot be proper modifications of *res extensa*. Finally, perhaps because they do not resemble bodily motions, sensations do not represent anything corporeal; they are, as we might say, *mere* sensations. Descartes writes: “the mind [has] diverse sensations, which we call sensations of flavor, odor, sound, heat, cold, light, color and the like, which represent nothing residing outside thought” (AT VIII-A 35). Malebranche adds that if sensations represent anything at all to us, it is the soul (of which they are mere modifications).²⁶

This interpretation of Cartesian sensations is controversial, especially in its claim that Cartesian sensations are nonrepresentational.²⁷ It is arguably a better interpretation of Malebranche or perhaps Desgabets than it is of Descartes, and it is surely a bad interpretation of Arnauld. Nevertheless, it is an interpretation that is consistent with the general Cartesian conception mind as chiefly a center of consciousness. What is more, it is true to Leibniz’s own understanding of the Cartesian account of sensations:

...[the Cartesians] believe that our ideas of sensible qualities [i.e., sensations] differ entirely from motions and from what happens in objects, and are something primitive and inexplicable, and even

arbitrary, as if God made the soul sense whatever he had a whim it should sense instead of what happens in the body (*NE* II.xx.6, A/RB 165-166).

In the end, even if this interpretation of Cartesian sensations is wrong in certain of its details, this fact is not likely to align Leibniz with the Cartesians in anything more than a superficial way. If Cartesian sensations turn out to be representational, it will not be for Leibnizian sorts of reasons, nor will the account of their representationality be Leibnizian. Its interpretive weaknesses, then, are not consequential for present purposes.

On Leibniz's view, the Cartesian account "is nowhere near the right analysis of our sensory ideas" (*NE* II.xx.6, A/RB 166). He challenges almost every component of the Cartesian account. On his view, sensations are (1') complex (6') representations of bodily motions that are (4') stirred up by the bodily motions they represent; in some respect they even (5') resemble those bodily motions; they are (3') explicable in terms of their components and, if conditions are right, they (2') stand out to consciousness without themselves being, by their nature, states or acts of consciousness. The only point on which Leibniz agrees with the Cartesians is (4): sensations occur when and only when there are bodily motions. Of course, this agreement is quite shallow: he disagrees insistently with any Cartesian understanding of the metaphysics underlying the relation between sensations and bodily motions (replacing his pre-established harmony for any causal or occasionalist line).

On analysis, Leibniz's disagreement with the Cartesian over the nature of sensation is in large part a reflection of his more general disagreement with them over the fundamental nature of the mind itself. In what follows, I examine in some detail three of the anti-Cartesian components of Leibniz's account of sensation: the rather loose connection that sensations bear to consciousness; the alleged complexity of sensations; and the representational nature of sensations. Each of these components reveals Leibniz's innovative and comparatively robust explanatory program at work. Or so I will argue.

3. Leibniz's Account of Sensation

3.1 Sensations and Consciousness

Sensation, Leibniz tells us, is a special kind of perception the possession of which distinguishes animal souls from bare monads lower down on the chain of created mental substances. What makes sensation special? Here we might expect Leibniz to say that sensation is *conscious* perception: animal souls enjoy conscious perception while vegetable and mineral monads have only unconscious perception. Instead Leibniz says that sensation is an especially 'distinct' (*distinguée, distincte*) or 'heightened' (*relevée*) form of perception: "[i]f a perception is more distinct it makes a sensation" ("Specimen of Discoveries About Marvellous Secrets," G VII 217; see also *M* §19, G VII 610/AG 213 and "[On the Souls of Animals]," G VII 330).²⁸ What is this distinctness that, if sufficiently great, raises mere perception to the level of sensation? Perhaps here is where consciousness comes in. Perhaps 'distinctness' is just another word for 'consciousness,' so that sensation is, after all, just conscious perception.²⁹

There certainly is a connection between distinctness and consciousness. In the *New Essays*, Leibniz's spokesman, Theophilus, says:

Bear in mind that we think_{liberal} about many things all at once, but we take notice only of those thoughts_{liberal} that are the most distinct (*NE* II.i.11, A/RB 113).

And:

We are never without perceptions, but, necessarily, we are often without conscious perceptions [*apperceptions*], namely when there are no distinct perceptions (*NE* II.xix.4, A/RB 162; see also perceptions (*PNG* §13, G VI 604/AG 211).

These passages testify to a connection between distinctness and consciousness, but they leave unclear just what the connection is.³⁰ Before pursuing this question further we should consider briefly what Leibniz has to say about consciousness itself.

Consciousness, on Leibniz's view, requires two perceptual acts: a first-order perception of x ³¹ and a second-order reflective perception of the original perception of x . Consciousness, in other words, amounts to some sort of perception of perceptions. In an oft-quoted passage from the *Principles of Nature and Grace* Leibniz writes:

... it is good to distinguish between 'perception', which is the internal state of the monad representing external things, and 'apperception', which is 'consciousness' [*conscience*], or the reflective knowledge of this internal state, something not given to all souls, nor at all times to the same soul (*PNG* §4 G VI 600/AG 208).

Thus in order to be conscious of the tree outside my window, in Leibniz's view, I have to have not only a perception of the tree, but also a second reflective perception of that perception.³² This two-perception view of consciousness flies in the face of the Cartesian intuition that consciousness is built into the very notion of perception (or indeed of any mental state). It sounds as if Leibniz is saying that in order to be conscious of the tree outside my window, I have to be conscious of being conscious of the tree outside my window. And that sounds like an excessive amount of consciousness, not to mention an epistemological disaster. Leibniz's substantive point, however, is that consciousness is not brutally built into the very notion of perception. In perceiving x , a soul simply *represents* x ; so far there is no consciousness involved at all. (Thus my perceiving the tree outside my window, in Leibnizian language, in no way suggests that I am conscious of the tree.) Leibniz's suggestion is that what introduces consciousness into the soul's perceptual life is reflective second-order perception.³³ In discussing conscious perception, Leibniz somewhat awkwardly speaks 'noticing perceptions.' This is not exactly a matter of introspective exercise. To notice a perception of x amounts simply to having a conscious perception of x .³⁴

Returning to the issue at hand, the simplest interpretation of the connection between distinctness and consciousness is that they amount to the same thing, so that sensation, *qua* distinct perception, is just conscious perception.³⁵ We are now in a position to see that even if distinct perception were just conscious perception, Leibniz's account of consciousness would preclude the interpretation that sensations are conscious in just the way they are for the Cartesian. For to say that sensation is conscious perception could mean either of two things in a Leibnizian context. First, it could mean that a sensation is a *noticed perception*, that is, a first-order perception that has the special feature of being the representational object of some second-order perception; in that case, consciousness is not an intrinsic, but a relational property of sensation. Second, it could mean that a sensation is a *noticing* of a perception, that is, a complex of first- and second-order perceptions that, together, make for conscious perception; in that case, consciousness would be intrinsic to sensation, but sensation itself would have to be understood as a complex of two perceptions. On either interpretation, the relation that sensations bear to consciousness would be quite different from the relation suggested by the Cartesian account, according to which sensations just are simple modifications of consciousness, i.e., first-order intrinsically-conscious thoughts.

In fact, however, it is implausible to think that, according to Leibniz, a sensation's distinctness simply consists in its being conscious--in its being either a noticed perception or a noticing of a perception. First of all, Leibniz suggests that even in a dreamless sleep there is some "faint sensing" going on (*NE* Preface, A/RB 55; I.i.11, A/RB 113; and II.i.13, A/RB 115);³⁶ insofar as there is sensing going on, there is distinct perception going on, and yet there seems to be no noticing, no consciousness, at all. Admittedly, these passages are puzzling. It is tempting to write them off, especially since they appear

in the *New Essays*, where Leibniz's language is often muddled by his attempts to accommodate his Lockean interlocutor. Consider also, however, the following passage:

[W]hen we are not alerted, so to speak, to take heed of some of our own present perceptions, we let them pass without reflection and even without noticing them. But if someone alerts us to them straight away, and makes us notice, for example, some noise that we just heard, we remember it and *are aware of having had some sensation of it*. Thus these were perceptions of which we were not immediately aware. Awareness, in this case, came only when we were alerted to them after some interval, however brief (*NE Preface*, A/RB 54; italics mine).

We were not aware of the noise when it happened, and yet we had a sensation of it.³⁷ Together, these passages suggest that Leibniz intends there to be some conceptual space between sensation and consciousness.

Leibniz's language also strongly suggests some conceptual space between distinctness and consciousness. He frequently intimates that consciousness is a *consequence* of a perception's distinctness: the fact that a perception is distinct *explains why* it is noticed when it is. He says, for example, that we "notice only thoughts [i.e., perceptions] that stand out most distinctly" (*NE* II.i.11, A/RB 113) and that, conversely, the indistinctness or confusion of a perception "puts awareness in suspense" (*NE Preface*, A/RB 55). In other words, we notice the ones that are, antecedently, distinct and fail to notice ones that are, antecedently, indistinct. But if distinctness explains why a perception is conscious, then it cannot simply be the same thing as consciousness.

If distinctness is not the same thing as consciousness, then what is it? My suggestion is a rather simple one. To say that a perception is distinct is to say that it is *distinctive*; that it *stands out* against the sea of perceptions co-present with it in the soul. That's why it gets noticed or captures a second-order perception. This is precisely the way Leibniz talks about them: distinct perceptions, he writes, are "so to speak in relief and stronger in flavor" than other perceptions (*M* §24, G VI 611/AG 216); indistinct or confused perceptions, by contrast, "do not distinguish themselves enough for one to be conscious of them" (*NE* II.i.9, A/RB 112). He also writes of many sensations that they are "notable" perceptions (*perceptions notables*) (*NE* II.i.11, A/RB 113; II.xx.1, A/RB 162; II.xx.6, A/RB 164; II.xxi.41, A/RB 194). To say that sensations are distinct perceptions is therefore to say not that they are noticed, nor that they are noticings, but that they are *noticeable* or *apt* to be noticed. And that means that the relation between sensation and consciousness is quite different than initially expected: Leibnizian sensations are not conscious perceptions but perceptions that are *disposed* to be conscious. Of course, dispositions are not always actualized: one can have a sensation, a noticeable perception, without, for all that, actually noticing it. That is what gives Leibniz the room to say that there may be some faint sensing going even when we are in a deep and dreamless sleep; the point is that there may be some perceptions in the sleeping soul that are distinctive or noticeable, but that nonetheless fail, under the circumstances, to be noticed--to attract a second-order perception--because the soul is asleep.

One might object that to say that a perception is noticed *because it is noticeable* has the ring of dormitive virtue to it. The objection has force if nothing further is said about what grounds the noticeability of the perception. Leibniz, however, has a great deal to say about what grounds a perception's noticeability (or lack thereof)--about what features of a perception make it noticeable (or not). In the following passage, he identifies size, number and variability as among the relevant factors:

[There] is at every moment...an infinity of changes in the soul itself of which we are not aware *because these impressions are too small and numerous or too unvarying, so that they are not sufficiently distinct on their own* (*NE Preface*, A/RB 53; italics mine).

Leibniz illustrates the way in which he thinks lack of variation can adversely affect a perception's distinctness in the following familiar passage:

This is how we become so accustomed to the motion of a mill or waterfall, having lived by it for some time, that we do not notice it. It is not that this motion ceases to strike our sense organs, or that something corresponding to it no longer occurs in the soul because of the harmony between soul and body, but the impressions that are in the soul and in the body, lacking the appeal of novelty, are not strong enough to attract our attention and our memory, which are applied to more compelling objects (*NE* Preface, A/RB 53-54).

Leibniz is calling attention here to the phenomenon we now call perceptual habituation: the monotony of the mill-perceptions eventually renders them indistinct or unnoticeable, and so they cease to attract second-order perceptions and fade from consciousness. In just the same way, he surmises, although we have perceptions representing everything going on in our bodies, we fail to notice most of the things going on, e.g., digestion and blood circulation, because we have become habituated to it all; as a result, we only take notice when something new and unusual happens in the body, as when something is going wrong with digestion and we develop a stomach ache (see *NE* II.i.15, A/RB 116 and his letters to Arnauld, G II 90/AG 81 and G II 114/L 340-341). This discussion of habituation is only one of many attempts on Leibniz's part to provide an account (however incipient) for why some perceptions make it into consciousness, why some fade out of consciousness and why some never surface to consciousness at all (see other examples, see *NE* II.ix.1, A/RB 134 and II.xx.6, A/RB 164-5).³⁸ The details of Leibniz's psychological speculations are not important. What is important in Leibniz's treatment of sensation as distinct or noticeable perception is the fact that Leibniz initiates a search into the factors that *explain perception's rise to consciousness*, a search that would have been unthinkable in the context of a Cartesian theory of mind.

Leibnizian sensations, then, are typically conscious perceptions. Leibniz does not challenge this commonplace understanding of sensations. At the same time, sensations are not conscious by definition. By definition they are simply noticeable perceptions, i.e., perceptual representations that attract consciousness. So consciousness is neither *essential* nor *intrinsic* to sensation. It is not essential to sensation since unconscious sensations are in principle possible; these are noticeable perceptions that are not in fact noticed.³⁹ Even when it is present, consciousness is not intrinsic to sensation since it is the result of the sensation's being the object of some second-order perception (where size, number, variability and the like help to explain why sensations, but not other perceptions, attract such second-order perceptions). On the Cartesian account, by contrast, consciousness is both essential and intrinsic to sensations: sensations just *are* modifications of consciousness.

Leibniz's position on the relation of sensation to consciousness reflects the fact that consciousness is not a brute feature of the Leibnizian mind. The fact that our sensory life is conscious is, in the Leibnizian framework, a fact to be explained. The demand for explanation is twofold: (a) we need an explanation, in representational terms, for *what consciousness is* and (b) we need an explanation for *why it turns up where it does*—an explanation for what is it about sensations that brings consciousness into the picture. In his attempt to provide an explanation for these things, Leibniz advances the study of the mind in at least three ways. First, he formulates perhaps the first representational account of consciousness. Second, he creates the conceptual space for exploring the question why some mental representations surface to consciousness while others do not, and a relatively detailed attempt to answer that question in his discussions of the effects of size, number and variation on the noticeability of a perception. Finally, Leibniz introduces the resources, in the form of unconscious perceptions, to formulate a cognitive psychological explanation for a number of psychological and behavioral phenomena that seem to

demand representation of the environment without consciousness of it: he explicitly appeals to them to explain perceptual habituation (*NE* Preface, A/RB 53-54), the intentional noticing of a past stimulus (*NE* Preface, A/RB 54), the unintentional change of attention from one object to another (*NE* II.i.14, A/RB 115), waking up (*NE* II.i.13, A/RB 115) and motivated but undeliberated action (see *NE* II.i.15, A/RB 115-116 and II.xxi.36 ff., A/RB 188 ff.); although he does not discuss them, one could easily formulate Leibnizian explanations, employing unconscious perceptions, for such currently discussed phenomena as blindsight (i.e., being able to respond appropriately to stimuli in the environment that one is not phenomenally aware of), priming (e.g., interpreting the word “bank” as a financial institution, rather than as the side of a river, when the word has been preceded by a subliminal picture of a dollar sign), automated behavior (e.g., playing the harpsichord without attending to the motion of each finger), the cocktail effect (e.g., noticing your name, but nothing else, when it is uttered across a crowded and noisy room) and the sudden noticing of the cessation of a stimulus (e.g., hearing the refrigerator go off when you never noticed it was on in the first place). All of these phenomena seem to require representation of the environment without consciousness, and this is what Leibniz’s unconscious perceptions provide. Such developments would not have been conceptually possible in the context of a Cartesian philosophy mind, where consciousness is omnipresent.⁴⁰

3.2 Sensations and Complexity

By contrast with Cartesian sensations, Leibnizian sensations are complex; that is, they are composed of parts. The parts of which sensations are composed are, of course, *petites perceptions*--subsensory individually unnoticeable perceptions, or “the insensible parts of our sensible perceptions” (*NE* Preface, A/RB 56). Leibniz’s favorite illustration of the complexity of sensations is familiar:

To hear the [roar of the sea] as one does, one must hear the parts that compose this whole, that is the noise of each wave, although each of these little noises makes itself known only in the confused collection of all of them together, and would not be noticed if the wave that made it were by itself (*NE* Preface, A/RB 54).

The same is true, Leibniz claims, of our sensations of light, color, flavors, and all the other secondary qualities:

A perception of light or color of which we are aware is made up of many *petites perceptions* of which we are unaware (*NE* II.ix.4, A/RB 134).

And:

...[*petites perceptions*] constitute that *je ne sais quoi*, those flavors, those images of sensible qualities, vivid in the aggregate but confused as to the parts (*NE* Preface, A/RB 54-55).

All sensations, then, are themselves complex collections of *petites perceptions*.

Why does Leibniz claim that sensations are complex in this way? By and large, his arguments are grounded in some of the general principles of Leibnizian metaphysics. By the law of continuity (according to which Nature never makes leaps), Leibniz argues, “anything that is noticeable must come from parts that are not: nothing, whether thought or motion, can come into existence suddenly” (*NE* II.i.18, A/RB 117). Sensations are noticeable perceptions, and so they must come from smaller unnoticeable perceptions, just as the noticeable growth of a child must come gradually from unnoticeable growth and just as noticeable bodies are composed of individually unnoticeable ones (see also *NE* Preface, A/RB 54, 56, 57 and 58).

The principle of the harmony of soul and body provides the ground for a somewhat different, but equally important, argument: the soul represents the body, but

body is divisible, and so the perceptions that represent them must also be divisible in some sense; for example, if the impression that the roar of the ocean makes on my auditory physiology is divisible into smaller impressions made by individual waves, then the sensation that I have of the roar of the ocean must itself be divisible into smaller perceptions of individual waves. Just how seriously are we to take the divisibility on the part of sensations? There is some suggestion in the text that Leibniz intends the complexity of sensations (and perceptions in general) to be merely a representational complexity, so that a sensation (or indeed any perception) is complex only in the sense that it represents something complex or has a complex content. In a letter to Samuel Masson he writes: “since thoughts, which are in a soul not composed of parts, represent things composed of parts, it is only in this sense that these perceptions are called composite...” (G VI 627/AG 228). The advantage of this position is that it is consistent with Leibniz’s definition of perception as the representation of many things *in one*. If a sensation (or any perception) were literally a collection of smaller perceptions, then in what sense could it be *one*? The letter continues, however, in a way that makes it clear that what Leibniz is in fact trying to argue that sensations are themselves complex, or made up of parts that are themselves individual perceivings (or acts of perceiving):

...the simplicity of a substance does not prevent it in any way from having many modes in it all at once. There are successive perceptions, but there are also simultaneous ones, for when there is a perception of the whole, there is at the same time perceptions of its actual parts. It is even the case that each of those parts has more than one modification. There is perception all at once not only of each modification but also of each part. These perceptions, however much they are multiplied, are different from one other, even though our attention cannot always distinguish them (letter to Masson, G VI 628/AG 229; see also *PNG* §13, G VI 604/AG 211).

I will consider Leibniz’s reason for insisting that there are actually many different perceivings of parts in section 3.3. But meanwhile, what of Leibniz definition of perception as the representation of many *in one*? Is it compromised by the complexity of sensations? Perhaps not. Leibniz’s position is not so much that *perceptions* are simple, but rather that the *soul itself* remains simple despite the complexity of its perceptual modifications: “In natural perception and sensation it is sufficient that what is divisible and material and is found dispersed among many beings should be expressed or represented in a single indivisible being or in a substance which is endowed with a true unity” (letter to Arnauld, G II 112/L339).⁴¹

When discussing the complexity of sensations, Leibniz frequently describes them as ‘confused,’ a fact that is curious given that he defines sensation as distinct perception. Our sensation of the roar of the sea, he says, is a “confused collection” (*NE* Preface, A/RB 54). Leibniz cannot mean that sensations are confused in the sense discussed above of being unnoticeable. To the contrary, sensations are, in that sense, distinct by definition. What Leibniz has in mind here is that sensations are literally a con-fusion, a running together of many perceptions into one. (And this provides further evidence that he means the complexity of sensation quite literally.) They are *constitutively* confused. The following passage about the sensation of light helps to clear this up:

...there are motions in the fire that are not distinctly sensible individually [i.e., they are not individually noticeable], but whose confusion [*confusion*] or conjunction [*conjonction*] becomes sensible [i.e. distinct or noticeable] and is represented to us by the idea [sensation] of light (*NE* II.viii.15, A/RB 132).

In other words, the sensation of light is distinct in the sense that it is noticeable; it is confused in the sense that it is constituted by a con-fusion, a running together, of a number of smaller, individually unnoticeable *petites perceptions*.

Leibniz's claim that sensations are confused collections of smaller perceptions raises a puzzle: sensations do not *seem* to be confused collections of other perceptions. The dull ache in my temples seems quite simple and unanalysable, as the Cartesians maintained. Leibniz is in no position to deny this. Something funny, then, must happen to *petites perceptions* on their collective way to consciousness: as they are run together a transformation of sorts must occur. Just what sort of transformation occurs is not clear. Leibniz could say either of two things here. First, he could say that a genuine metaphysical transformation occurs: something emerges from the mixture of *petites perceptions*, something that is itself simple and unanalysable, just as it phenomenologically seems to be. On this view, sensations are the emergent results of confused collections of *petites perceptions*.⁴² If Leibniz were to opt for this position, however, then it would be misleading at best to say that *petites perceptions constitute* sensations, or that sensations are *con-fusions* of *petites perceptions*. What is more, it would undermine his arguments for the complexity of sensations. More troubling still, as we will see, this claim would jeopardize Leibniz's account of the representationality of sensations--something that his theory of mind demands, for if sensations emerge metaphysically from collections of *petites perceptions* as something simple and unanalysable in the mind, then it looks as though what is emerging are qualia, and there is simply no room for such phenomena in the Leibnizian mind.

The better way for Leibniz to go is to say that the appearance of simplicity is just that: an appearance. The transformation is not a metaphysical one but only an epistemic one. What is really just a mixed up collection of *petites perceptions* appears simple. This is clearly what Leibniz has in mind in the following passage:

I believe one could say that sensible ideas [=sensations] are simple in appearance because, being confused, they do not provide the mind with any way to distinguish what they contain. It is like distant things that appear rounded because one cannot discern their angles, even though one is receiving some confused impression from them (*NE* II.ii.1, A/RB 120; see also *NE* II.xx.6, A/RB 165 and III.iv.16, A/RB 299).

Leibniz illustrates the point with an example:

[When a cog-wheel is rotated quickly], this makes the teeth [of the wheel] disappear and an imaginary transparent and continuous ring appears in their place. The ring is made up of successive appearances of the teeth and of the gaps between them, but the succession of them is so rapid that our imagination cannot distinguish them (*NE* IV.vi.7, A/RB 403).

What is convenient about Leibniz's choice of example is that, because the apparent ring is temporally induced, we actually can gain conscious access to the tooth-and-gap perceptions that constitute it: all we have to do is stop the wheel or blink quickly. The very same sort of thing happens, Leibniz proposes, every time we have a sensation, although unlike the tooth-and-gap perceptions the *petites perceptions* that constitute most sensations are not recoverable to consciousness by any simple tricks.

Of course, when we recover the tooth-and-space perceptions, the appearance of the transparent ring disappears. It ceases to exist. In its place appear a myriad of tooth and space sensations. The complexity of the apparently simple ring is revealed. I think this helps us to understand what Leibniz means when he says of the transparent ring that "it is *in its nature* to be confused" (*NE* IV.vi.7, A/RB 403; italics mine). If the perceptions that constitute it were unraveled, so to speak, the ring would cease to be. So too, it is *in the nature* of a yellow sensation, or a pain, or any other sensation to be constitutively confused. If it were untangled, it would not *be* (see *NE* II.xxiii.11-12, A/RB 219). These sensations too are phantoms, though phantoms of a more durable sort

than the ring. Leibnizian sensations, then, are complex mental phenomena that appear simple.

Leibniz is, of course, cautiously optimistic that we will eventually reach a proper analysis of sensations:

[Sensations] are only simple in appearance. They are accompanied by circumstances that bear a connection with them...These accompanying circumstances provide something explicable and analyzable, which gives some hope that one day we shall be able to find the reasons for these phenomena (*NE* III.iv.16, A/RB 299).

Leibniz is quite clear, however, that the analysis cannot be performed phenomenologically, by introspection. Concerning secondary qualities, he writes:

...it would never be in our power to recognize their causes sensorily in our sensory ideas [=sensations], which are the confused effects of bodies acting on us. For instance, we now have a complete analysis of green into blue and yellow, and have almost nothing else to ask about it except concerning these ingredients; yet we are quite unable to discern the ideas [=perceptions] of blue and yellow within our sensory idea [=sensation] of green, simply because it is a confused idea [=perception] (*NE* IV.vi.7, A/RB 403).

However hard we concentrate, sensations are going to appear simple from the inside. Instead the analysis will have to be done indirectly by examining the micro-motions of the bodies that cause them:

[I]t is by considering the body and not by considering the mind that we can discover something distinct and intelligible concerning [confused perceptions] (*NE* II.xxi.41, A/RB 195; see also *NE* II.ii.1, A/RB 120).

From the physical analysis of the micro-motions of bodies we can infer, by the harmony of body and soul, that there are *petites perceptions* corresponding to them, and that these *petites perceptions* collectively and con-fusedly constitute our sensations. Consider Leibniz's favorite example of green:

It is clear...that green comes from blue and yellow mixed together, which makes it credible that the idea [=sensation] of green is composed of these two ideas [=perceptions], although the idea [=sensation] of green seems just as simple as those of blue and of yellow, or as that of warmth (*NE* II.ii.1, A/RB 120; see also *NE* III.iv.4-7, A/RB 297).

What makes it clear to Leibniz that green is composed of blue and yellow is not introspection, but Newtonian science (see *NE* IV.iii.16, A/RB 382-383).⁴³

How does Leibniz's claim that sensations are complex and confused collections of *petites perceptions* that appear simple reflect his theory of mind more generally? We saw in the last section that appearances, within the confines of the Leibnizian mind, can mislead, for the light of the mind does not shine everywhere and does not shine strongly enough. We now find that not only does the Leibnizian mind may perceive things without noticing (that is, without any accompanying awareness of what it is perceiving), but sometimes things that *are* noticed are other than they appear: sensations appear simple although they are really complex. As Leibniz puts it, *petites perceptions* are "concealed" or "hidden" (*cachées*) within sensations (*NE* IV.xvii.9, A/RB 487). It would be misleading to say that Leibniz denies that the mind has some sort of privileged access to its own states. To have privileged access, however, is not to have utterly reliable access. Indeed one's first person access to ones mental states is often unreliable as compared with the sort of third person access one gains by way of investigating the mind's associated body. If there is to be a genuinely Leibnizian science of the mind,

then, it seems it ought best to be conducted indirectly by way of the science of the body or brain. Such an explanatory strategy is inconceivable within the transparent quarters of the Cartesian mind. Why would such a strategy be desirable? Quite apart from the obvious methodological advantages of studying the mind via the body, the theoretical availability of unconscious and inaccurately perceived (but fully representational) mental states has explanatory advantages that will we see Leibniz develop in the next section.

3.3 Sensations and Representationality

Leibniz and the Cartesians are agreed that sensations are type-type correlated with motions in the brain and, at least generally, with the distal causes of those motions. They are disagreed, however, about the nature of the relation between sensations and these motions. The Cartesians by and large maintain two things about it: (a) that there is no resemblance between sensations and bodily motions and (b) sensations are arbitrarily correlated with bodily motions. God could just as well have made it the case that the reflection of light and subsequent jiggling of the optic nerve give rise to sensations of sound as to sensations of color. Indeed, on Malebranche's view, such inverted spectra phenomena seem to be a real possibility to contend with.⁴⁴ It is to this arbitrariness that Leibniz chiefly objects:

...the Cartesians (like our author [Locke], discerning as he is), regard it as arbitrary what perceptions we have of these [sensory] qualities, as if God had given them to the soul according to his good pleasure, without concern for any essential relation between perceptions and their objects. This is a view that surprises me and appears unworthy of the wisdom of the author of things, who does nothing without harmony and reason (*NE* Preface, A/RB 56; see also II.viii.13, A/RB 131).

One important consequence of the Cartesian position is that it is not clear how sensations could be understood to represent anything corporeal to the mind. We might seize on the regularity between sensations and corporeal events and treat the former as signs of the latter, but sensations certainly do not seem to intrinsically represent anything bodily.⁴⁵ Malebranche is perhaps the most extreme of the Cartesians, for on his view the correlation between types of sensations and corporeal events is not in fact all that reliable, so that even using sensations as signs for corporeal phenomena is epistemologically risky business.⁴⁶

Leibniz's position is that sensations are not arbitrary in this sense. And this *has* to be his position: if the mind is essentially representational, then insofar as sensations are mental phenomena they had better be representational. Sensations, Leibniz asserts, represent bodily motions. First and foremost, sensations represent what happens in the sentient creature's own body: "[sensations] are expressions of the details of what happens in bodies" (*NE* IV.iii.6, A/RB 381). Sensations also represent what happens in other bodies, but only indirectly by way of their casual effects of the creature's own body.⁴⁷ In this assertion, Leibniz is surely indebted to Spinoza, who said much the same thing a decade earlier.⁴⁸ But Leibniz goes further. Sensations, he claims, represent bodily motions by way of *resembling* them:

[W]hen the organ and the intervening medium are properly constituted, the internal bodily motions and the ideas [=perceptions] which represent them to the soul resemble the motions of the object which cause the color, the warmth, the pain, etc. (*NE* II.viii.21, A/RB 132-133).

This claim of Leibniz's has, understandably, puzzled commentators. In what sense does a sensation of light *resemble* motions in the fire that cause it? The problem here is not simply how something mental can resemble something corporeal, but how a sensation of *light* can be understood to present to the mind by resemblance *motions* in a body.

At times, Leibniz appears to recognize the apparent absurdity of this claim and back off by saying instead that sensations bear a “resemblance of a sort” to the bodily motions that are correlated with them:

It must not be thought that ideas [=sensations] such as those of color and pain are arbitrary and without relation or natural connection with their causes; it is not God’s way to act with so little order and reason. I would say, rather, that there is a resemblance of a sort--not a perfect one which holds all the way through, but a resemblance in which one thing expresses another through some orderly relationship... (*NE* II.viii.15, A/RB 131).

Leibniz seems to be softening the resemblance requirement on representation in this passage. But the apparent concession does not help. The “resemblance of a sort” relation he has in mind is an intelligible isomorphism, as his illustration makes clear:

[A]n ellipse, and even a parabola or hyperbola, resemble in some fashion the circle of which they are the projection on a plane, since there is a certain precise and natural relation between what is projected and that projection which is made from it, with each point of one corresponding to each point on the other according to a certain relation (*NE* II.8.13, A/RB 131).

The apparent concession does not help, however, for there does not seem to be any more of an intelligible isomorphism between a sensation of light and motions in the fire than there does an exact resemblance.

No amount of fiddling with the notion of resemblance is going to help here. Leibniz, I think, means the resemblance talk quite literally (or as literally as one can take the resemblance between physical and mental states or events): a sensation of light presents to the soul a mental image of motions. The key to this resemblance between sensations and bodily motions lies in the *petites perceptions* that constitute Leibnizian sensations. Leibniz somewhat cryptically remarks in the Preface of the *New Essays* that *petites perceptions* “bring it about that those perceptions of colors, warmth and other sensible qualities are related to the motions in bodies which correspond to them” (A/RB 56). What could underwrite this strange claim? Leibniz’s suppressed argument must run as follows. *Petites perceptions* are, by metaphysical hypothesis based on the harmony of body and soul, the mental counterparts (and so representations) of the minute motions that the physicists tell us are going on in the body: every bodily event has a corresponding perception in the soul. As such, again by metaphysical hypothesis, *petites perceptions* bear a straightforward resemblance to those motions; that is, they represent those motions to the mind in such a way that, if we had conscious access to them, we should be able to tell on the basis of those perceptions just what those motions are really like in the world—the images resemble reality. If only we had a “mental microscope” to apply to our sensation of light, we would discover within it perceptions presenting images of all the motions that the 17th century physicists tell us are really in the fire. Or, restated from a first-person point of view, if only we had more penetrating second-order perceptions, we would have sensations of all the motions that the physicists tell us are really in the fire instead of having a sensation of light. The resemblance between sensation and bodily motion is thus located in the subsensory level of the Leibnizian mind, in the *petites perceptions*: the sensation of light resembles its bodily correlate because the *petites perceptions* of which it is constituted do. It is just here that one finds the real payoff, from Leibniz’s point of view, for the claim that sensations are constituted by *petites perceptions*: it forges the necessary representational link between sensations and the bodily motions with which they are correlated.

Now it is important for Leibniz that the fact that the *petites perceptions* are run together (literally con-fused) in the mind not change their representational content; that content must be embodied (or enminded as it were) in the resulting confused sensation.

This provides another reason why it is important that the con-fusion of *petites perceptions* actually constitute, and not give emergent rise to, sensations. Because the con-fusion of *petites perceptions* takes on a new appearance as it rises to consciousness, however, we are unable consciously to recognize, from inside our conscious experience, what is being represented to us by the sensation: the *petites perceptions* that do the representational-cum-resemblance work are cloaked by the appearance that they collectively and confusedly present to consciousness of a simple light or color or sound or flavor and so on. To determine just what bodily motions our sensations are inchoately representing, we must “undertake the analysis of them by means of further experiments and by means of reason” (*NE* II.ii.1, A/RB 120). The experiments and reasoning, of course, will be conducted by the pneumatologist who investigates the *petites perceptions* of the mind; and the pneumatologist will have to turn to the physicist, as we saw in the previous section, to determine what bodily events serve as the occasion for our sensations, and so as the *res repraesentata* of the *petites perceptions* of which they are constituted.

Notice how the Cartesians and Leibniz are pushed in opposite directions with respect to the representationality of sensations. They are agreed that sensations do not represent what they seem to represent, for they seem to represent something that, on metaphysical reflection, could not possibly exist as such in corporeal reality, that is as a modification of *res extensa*. Their responses to this fact are quite different. Leibniz, committed to the view that everything in the mind, *qua* mental, represents, must find a way to say that sensations represent something other than what they appear to represent; he is pushed to find a way to connect sensations to bodily events, and he does so via unconscious but fully representational *petites perceptions*. There is no room in the transparent Cartesian mind, however, for hidden perceptions lurking within the sensations, providing them with this sort of representational link to corporeal reality. With no such recourse to unconscious perceptions, the Cartesian must either argue that sensations do not represent anything bodily at all (they just *seem* to), or he must develop a special account for how sensations manage to represent corporeal phenomena without in any way resembling them—say, as arbitrary signs that represent corporeal phenomena only extrinsically by God’s fiat.

I do not want to suggest that Leibniz has successfully explained away all of the mystery about sensations. The question remains why the con-fused collections of *petites perceptions* that constitute our sensations appear as they do, and whether it would be in principle possible for a collection of *petites perceptions* to constitute a sensation with a different qualitative appearance from the one it in fact has. This mystery is one that Leibniz does not even try to explain away:

It would be enough for our purposes to understand [sensations] as well as we do that artificial transparency [i.e., the transparent ring of the cog-wheel]; it would be neither reasonable nor possible to pretend to pretend to know more (*NE* IV.vi.7, A/RB 404; see also his letter to Queen Sophie Charlotte, G VI 500/AG 187).⁴⁹

It may look as though Leibniz has simply pushed the same old problem back from the mind-body gap into the mind itself. This relocation of the mystery, however, is significant, for it changes the nature of the problem. By tying sensations representationally to their bodily causes, Leibniz at least takes a step toward restoring the cognitive link between mind and world that the Cartesians seem to have severed: sensations represent bodily motions via individually unconscious *petites perceptions*. What is more, he does so in a way that remains faithful to the prevailing mechanistic conception of the corporeal world; that is, he does so without retreating to the scholastic Aristotelian position that the corporeal world is colored and smelly in just the way that it phenomenally appears to be through the senses. The catch is that because the explanatory representational vehicles are the *petites perceptions* confusedly

constituting sensations, it turns out that the mind does not have immediate and infallible access to what is being represented to it by its own sensations. But this is surely a step toward a more modern conception of mind.

4. Rethinking the Mind

I hope it is clear that the landscape of early modern philosophy of mind is much richer than it is typically thought to be. There is a striking tension between the Cartesians and Leibniz over the nature of mentality and, consequently, over the structure of the mind. According to the Cartesians, the mark of the mental is consciousness. The role of representationality in the Cartesian philosophy of mind is at best unclear. In the Leibnizian philosophy of mind, however, consciousness takes a back seat to representationality. Representationality of a certain kind the very mark of the mental, and that means that all mental phenomena will have to be explained in representational terms. The differences in these conceptions of mind are reflected in their accounts of sensation: Cartesian sensations are the cognitively empty phenomenal effects on the mind of motions in the body; Leibnizian sensations, by contrast, are complex and fully representational states of mind that present themselves as simple to the mind. By the end of the 17th century, Leibniz has introduced a whole new way of thinking about the mind that challenges the received Cartesian view.

How significant is Leibniz's challenge? Certainly by Leibniz's lights it is significant, for he takes himself to be doing for the science of the mind nothing short of what Descartes had done the science of body. Descartes challenged the Aristotelian assumption that bodies are, by their nature, sensible: "there is no compelling reason to believe that all the bodies that exist must affect our senses" (AT VIII-A 44). Leibniz, in turn, challenges the Cartesian assumption that minds are, by *their* nature, sensible and transparent to themselves: why suppose that all the perceptions that exist in the mind are present to consciousness, or that the ones that are present to consciousness are just as they appear to be? In the Preface to the *New Essays* Leibniz writes:

...insensible perceptions have as great a role to play in pneumatology as corpuscles do in physics, and it is just as unreasonable to reject the one as the other under the pretext that they are beyond the reach of our senses (A/RB 56).

And:

if one really thought that things of which we were unaware exist neither in the soul nor the body, one would fail in philosophy...[W]e would not have a sound physics that explains the nature of things in general, still less a sound pneumatology (*NE* Preface, A/RB 57; see also II.i.15, A/RB 116).

Leibniz clearly thinks that the Cartesian science of the mind failed because it did not allow for the possibility of insensible and yet representational mental states. Just as Descartes forces his audience to rethink the nature of body, so Leibniz forces his audience to rethink the nature of mind in terms of representationality rather than consciousness. Unfortunately for Leibniz, this reconceptualization of mind did not catch on; or rather, it remained by and large eclipsed by a persistent Cartesian conception of mind.⁵⁰

The disappearance of Leibniz's challenge to the Cartesian theory of mind is unfortunate. As philosophers, we routinely define our projects against the background of our ghostly ancestors. In the philosophy of mind, Descartes has single handedly set the terms of the debate: almost nobody is a Cartesian anymore,⁵¹ but almost every philosopher of mind still feels the need to respond to him. Leibniz set out to change the terms of the debate already in the 17th century. Interestingly, some of the platforms of contemporary philosophers of mind are reminiscent of Leibniz—many argue that the mind is exhausted by representational states and that consciousness must itself be

understood as a form of representation;⁵² cognitive psychologists too echo Leibniz when they posit the processing of unconscious mental representations to explain conscious psychological phenomena from perception to thought to action. I am not suggesting that we have or should become Leibnizian philosophers of mind. I am, however, suggesting that there is a lot we can still learn from carefully investigating Leibniz's attempt to change the Cartesian mind.

Leibniz's challenge exposes, already in the 17th century, weaknesses in the Cartesian conception of mind. First, because the Cartesian mind is transparent, there is, implausibly, no room for error about the contents of our own mind. Second, for the same reason, there are few resources available to develop cognitive psychological explanations for mental and behavioral phenomena. When Descartes does attempt to introduce some cognitive processing, as when he proposes, for example, that to see the size of objects we "estimate their size by the knowledge or opinion we have of their distance, compared with the size of the images that they impress on the back of the eye" (AT VI 140), he is forced, again implausibly, to say that these judgments occur consciously but too rapidly for us to remember it. Finally, because consciousness is built brutally into the nature of the Cartesian mind, it is and must remain an irreducible and inexplicable feature of mind (and the bane of philosophers of mind).

More importantly, however, Leibniz's challenge to the Cartesians illustrates (from a healthy historical distance) the ways in which these two fundamentally different conceptions of mind naturally give rise not only to alternative explanations of particular psychological phenomena, but also to very different general programs for the study of the mind. We have seen in some detail how Leibniz's representational conception of mind shapes his account of sensation in a way that is different from the Cartesian account. Leibniz's representational conception of mind also, however, profoundly changes the problem space of the science of the mind itself, and does so in at least two ways. First, with its unconscious representations, it introduces a form of cognitive psychological explanation that Descartes could not have imagined. Second, it raises a set of foundational philosophical questions about the mind that could not be asked from within the Cartesian framework: *What is consciousness? Why are sensations conscious? What is the structure of a sensation? Where do we find an appearance-reality distinction within the mind? How do sensations represent bodies?* In short, Leibniz proposed not only a change in the explanation of mental phenomena; he proposed a change our conception of what needs explaining. We don't have to agree with the details of Leibniz's theory of mind or with his underlying metaphysical commitments for him to be useful; we only have to think he is on the track in reframing the debate. And this makes Leibniz's challenge to the Cartesian conception of mind significant not only by his own lights, but also by our own.⁵³

Notes

¹ References to Leibniz's works are given in the text according to the following abbreviations: A for *Sämtliche Schriften und Briefe*, vol. 6, Academy edition (Darmstadt and Berlin: Akademie Verlag, 1923-); AG for *Leibniz: Philosophical Essays*, trans. and ed. Roger Ariew and Daniel Garber (Indianapolis: Hackett, 1989); C for *Opuscules et Fragments Inédit de Leibniz*, ed. Louis Couturat (Paris: Presses Univeritaires, 1903); DM

for *Discourse on Metaphysics*; G for *Die philosophischen Schriften von G.W. Leibniz*, 7 volumes, ed. C.I. Gerhardt (Berlin: Weidmann, 1875-90); GM for *Die Mathematische Schriften von G.W. Leibniz*, 7 volumes, ed. C.I. Gerhardt (Berlin: A. Asher, 1849-55); L for *Leibniz: Philosophical Papers and Letters*, ed. L.E. Loemker (Dordrecht: D. Reidel, 1969); M for *Monadology*; NE for *New Essays on Human Understanding*; PNG for *Principles of Nature and Grace*; RB for *Leibniz: New Essays on Human Understanding*, trans. and ed. Peter Remnant and Jonathan Bennett (Cambridge: Cambridge University Press, 1996). Translations are my own, but I have benefited from those found in AG, L and RB.

² Güven Güzeldere, introduction to *The Nature of Consciousness*, ed. Ned Block, Owen Flanagan and Güven Güzeldere (Cambridge, MA: MIT Press, 1997), 18.

³ Güzeldere, 19.

⁴ Interestingly, Leibniz's philosophy of mind, and in particular his rejection of the Cartesian view that consciousness is the mark of the mental, was widely discussed, if not widely adopted, in Europe in the 19th century, long before Freud. Sir William Hamilton, writing in 1860, laments that Leibniz's views about mind were not more widely adopted simply for the reason that he was "unfortunate in the terms which he employed to propound his doctrine" (*Lectures on Metaphysics and Logic* (Boston: Gould and Lincoln, 1860), vol. 1, 251). "As to any refutation of the Leibnitzian doctrine," he continues, "I know of none" (*ibid.*). Brentano, writing in 1874, launches an extended attack on a whole series of German and English writers who had already taken up Leibniz's view that consciousness is not essential to the mind, including Hamilton, Eduard Beneke, Gustav Fechner, Johann Herbart, George Lewes, Henry Maudsley and Hermann Ulrich. One finds in these texts many of Leibniz's own examples and arguments, and Brentano himself repeatedly invokes Leibniz as the source of this view (*Psychology from an Empirical Standpoint*, ed. Oskar Kraus, trans. Antos Rancurello,

D.B. Terrell and Linda McAlister (New York: Routledge, 1995; originally published Leipzig, 1874), I.iii.6 and II.ii).

⁵ French commentators have been more attentive to the innovations of Leibniz's philosophy of mind, and in particular to Leibniz's representationalism, than their Anglo-American counterparts. See, e.g., Jacques Jalabert, "La Psychologie de Leibniz," *Revue Philosophique de la France et de l'Étranger* 136 (1946), 453-472.

⁶ It should also be said that although Leibniz opens the *New Essays* by opposing Locke and the Cartesians on the mind, he several times aligns Locke with the Cartesians, particularly when he is moving against their shared views that consciousness is the mark of the mental and that sensations are arbitrarily related to the bodily motions that give rise to them. These are topics that will be of central interest in this paper, and so, for present purposes, we might even count Locke a proponent of the Cartesian theory of mind despite his rejection of so many other particulars of Cartesianism.

⁷ Descartes himself uses the terms 'mind' and 'soul' interchangeably. For reasons that have largely to do with the scholastic connotations of the term 'soul', however, he preferred the term 'mind' (see AT III 371-372; AT VII 161 and 355-356). References to Descartes' works will be given in the text according to the following abbreviation: AT for *Œuvres de Descartes*, 12 vols., ed. Charles Adam and Paul Tannéry (Paris: Vrin, 1964-76), citing volume and page numbers. Translations are my own, but they have benefited from consulting those found *The Philosophical Writings of Descartes*, 3 vols., ed. and trans. J. Cottingham, R. Stoothoff, D. Murdoch and A. Kenny (Cambridge: Cambridge University Press, 1985-91).

⁸ In Descartes, see AT VII 28 and 176; AT VIII-A 17; AT XI 224 and 342-343. Despite their many idiosyncrasies, two of the more famous Cartesians, Arnauld and Malebranche, explicitly share this commitment with Descartes. See Arnauld's *On True and False Ideas*, trans. Elmar Kremer (Lewiston: The Edwin Mellen Press, 1990), ch. 2. See

Malebranche's *The Search After Truth*, trans. Thomas Lennon and Paul Olscamp (Columbus: Ohio State University Press, 1980), Bk. III, pt. i, ch. 1 & pt. ii, ch. 1.

⁹ AT VIII-A 7; see also AT VII 160 and 246. Whether Descartes intended to claim that thought just *is* consciousness (that consciousness is, as it were, the essence of thought) or rather that consciousness is a universal accident of thought (i.e., something that accompanies all thought), is a more difficult interpretive question to answer. Descartes sometimes intimates that consciousness is all there is to thought, as when he writes that understanding, willing, imagining and so on all fall under “the common concept of thought or perception or consciousness” (AT VII 176). At other times he identifies thought with intellection, as when he identifies one of the two ultimate classes of things as “intellectual or thinking things” (AT VIII-A 23 and 30) and when, in Meditation VI, he writes that sensory perception and imagining count as “additional” modes of thinking because they include an “intellectual act” in their essential definition (AT VII 78). It is possible, then, that thought is essentially intellection, and that consciousness is something else, something that inevitably accompanies intellection and makes intellection immediately known to us. It is unclear, however, just what intellection amounts to, and Descartes is notoriously unwilling to talk about it (see AT VII 422 and AT X 524). Should intellection amount simply to consciousness, then the two positions would, of course, collapse. Either way, what is important for present purposes is that thought is inevitably attended by consciousness, either essentially or as a universal accident.

¹⁰ *The Search After Truth*, Bk. III, pt. ii, ch. 1, p. 218.

¹¹ *On True and False Ideas*, ch. 6, p. 25.

¹² Sensory memories are actually stored as traces in the brain that are disposed, under the right circumstances, to give rise to a conscious thought (AT III 425 and AT IV 114).

Concerning innate ideas he writes: “When we say that some idea is innate in us, we do

not mean that it is always there before us...but only that we have in us the power of calling up the idea” (AT VII 189; see also AT VIII-B 166-167).

¹³ See AT III 423, AT V 222 and AT VII 246.

¹⁴ I say “for the most part” because arguably Cartesian volitions have a non-representational component (the assent or dissent of the will that is directed to a representational thought) that cannot be adequately described as a *mere* modification of consciousness since it is an *act* of the soul. I thank Michael Della Rocca for calling my attention to this detail.

¹⁵ According to Arnauld, all conscious thought is at the same time representational: “... since it is clear *that I think*, it is also clear that I think of something, because thought is essentially thus...it is impossible to think without thinking of something” (*On True and False Ideas*, ch. 2, p. 6). Whether Arnauld means to rule out the possibility that some of these representational thoughts have non-representational aspects or components to them is less clear. Malebranche, by contrast, draws a very sharp line between (a) thoughts that are representational, viz., pure perceptions directed to representative entities (ideas) in God that serve as their immediate objects and (b) thoughts that are nonrepresentational, viz., sensations, feelings and passions that are mere modifications of the mind itself (see *The Search After Truth*, Bk. I, ch. 1, p. 2). Malebranche’s view, it should be said, is complicated somewhat by his insistence that while there is no necessary connection between sensations and external bodies, sensations nevertheless manage to inform us about the beneficial and harmful effects that external bodies may have on our own bodies; thus, for example, “I know through the sense of taste that a given fruit is good” (*Search*, Bk. I, ch. 5, p. 21; see also Bk. I, ch. 10, p. 51). Passages like these may suggest that sensations play at least some sort of representational role after all.

¹⁶ AT VIII-A 317; see also AT XI 398.

¹⁷ AT VII 36.

¹⁸ AT VII 37.

¹⁹ Leibniz is never entirely clear whether one is to think of these mental substances along Cartesian lines, as free-standing immaterial substances, or rather along more Aristotelian hylomorphic lines, as substantial forms or unifying principles of organic bodies. He typically treats monads hylomorphically, as the (active) forms of (passive) bodies that are, in fact, never entirely separated from body (see, e.g., *NE* III.vi.24, A/RB 317-318; letter to Arnauld 28 November/8 December, G 75-76/AG 78-79; *On Nature Itself*, G IV 511/AG 162; *PNG* §3, G VI 599/AG 207; “[On the Souls of Animals],” G VII 330).

Leibniz invites a more Cartesian reading of his monadic mental substances, however, both when he discusses the pre-established harmony between body and mind (according to which pre-established harmony pre-empts any need for causal commerce between what would seem to be distinct and heterogeneous substances) and when he suggests, at the opposite extreme, that bodies are merely well-founded phenomena (for in that case, there is really nothing for the monads to be the substantial forms *of*).

²⁰ Strictly speaking, it is not simply perception that constitutes the monadic essence, but perception *and* *appetition*--the active principle of change that propels a monad from one perceptual state to another. See fn. 23 for a discussion of the relation between perception and appetite.

²¹ On this point Leibniz is surely indebted to Spinoza, who casts his discussion of mind in largely representational terms. I have chosen to examine Leibniz’s theory of mind rather than Spinoza’s in part because Leibniz works out his representational conception of mind in more explicit detail and is more insistent about its anti-Cartesian thrust. For an extensive discussion of the role of representationality in Spinoza’s theory of mind, see Michael Della Rocca, *Representation and the Mind-Body Problem in Spinoza* (New York: Oxford University Press, 1996).

²² One naturally wants to know what the unity of the unified substance amounts to, since that seems to be the key to distinguishing mental representation from other forms of representation. It is tempting to suppose that this unity is something like a Kantian unity of consciousness, so that the problem with the mirror is that it does not have a single, unified conscious experience of the things it represents. That interpretation, however, is implausible, for the reason that Leibnizian mental representation is not all conscious representation. A more Leibnizian suggestion is that the unity he has in mind is the unity of a single point of view, so that all the external things represented in a monad are represented from the same point of view. But what's this point of view, if not a *conscious* point of view? Arguably a camera obscura represents many external things from a single *physical* point of view without having a *conscious* point of view, but that doesn't help, for the camera obscura does not engage in mental representation. It seems that an undischarged appeal to substance with a single *metaphysical* point of view is doing a great deal of work in distinguishing mental representation from other forms of representation (see, e.g., "A New System of Nature," G IV 482-3/AG 142). For a more detailed discussion of Leibnizian perception, see Mark Kulstad, "Some Difficulties in Leibniz's Definition of Perception," in *Leibniz: Critical and Interpretive Essays*, ed. Michael Hooker (Minneapolis: University of Minnesota Press, 1982), 65-78 and Robert McRae, *Leibniz: Perception, Apperception, and Thought* (Toronto: University of Toronto Press, 1976), ch. 3.

²³ One might object that although Leibnizian *perception* is representational, that does not mean that the essence of a monad is representational, for its essence includes *appetition* as well. Leibniz does not simply say, however, that the nature of perception is representational, but that the nature of the *monad* is representational (*M* §60, G VI 61/AG 220, quoted above). Does Leibniz really intend to suggest that appetition is representational? Leibniz is not very explicit about the nature of appetition, but what he

does say opens up a couple of possible responses to the objection. Appetition, he tells us, is the “action of the internal principle that brings about the change or passage from one perception to another” (*M* §15, G VI 609/AG 215) so that all one can find in a monad are “perceptions and their changes” (*M* §17, G VI 609/AG 215). Leibniz might claim that at the very least there are no non-representational *states* in the monad, appetite being just the *change* from one representational state and another. Somewhat more robustly, Leibniz might argue that ultimately all appetitions derive from the representational content of the first perception, for, as Leibniz frequently suggests, all the subsequent perceptions of the monad are in some way contained in and determined by the original perception (see, e.g., *DM* §29, G IV 4454 and *M* §22, G VI 610/AG 216). If that’s true, then one could in principle derive each appetite, each change of perception, from a monad’s original perception. And if that’s the case, then it seems reasonable to say that the monad is essentially and fundamentally representational. I am indebted to Michael Della Rocca (personal communication) for a helpful discussion of this matter.

²⁴ For Descartes’ fullest discussion of the distinction between sensation and sensory perception see his Sixth set of Replies at AT VII 436-439. For a parallel discussion in Malebranche, see *The Search After Truth*, Bk. I, ch. 10.

²⁵ AT VII 437.

²⁶ Even so, sensations represent the soul to us only confusedly (see *The Search After Truth*, Bk. III, part ii, ch. 1).

²⁷ For recent defenses of the nonrepresentationality of Cartesian sensations, see Ann Wilbur MacKenzie, “Descartes on Sensory Representation: A Study of the *Dioptrics*” *Canadian Journal of the History of Philosophy*, supp. vol. 19 (1990), 109-147 and, for a related reading, Alan Nelson, “The Falsity in Sensory Ideas: Descartes and Arnauld” in *Interpreting Arnauld*, ed. E.J. Kremer (Toronto: University of Toronto Press, 1996), 13-32. (Nelson, it should be said, argues for the rather Malebranchean view that Cartesian

sensations are representational, but that what they represent are modifications of *mind*.) For alternative interpretations, according to which internal and external sensations *are* representational (or perhaps misrepresentational), see Lilli Alanen, “Sensory Ideas, Objective Reality, and Material Falsity” in *Reason, Will, and Sensation: Studies in Descartes’s Metaphysics*, ed. John Cottingham (New York: Oxford University Press, 1994), 229-250; Martha Bolton, “Confused and Obscure Ideas of Sense” in *Essays on Descartes’ Meditations*, ed. Amélie Rorty (Berkeley: University of California Press, 1986), 389-404; Paul Hoffman, “Descartes on Misrepresentation,” *Journal of the History of Philosophy* 34 (1996), 357-381; Margaret Wilson, “Descartes on the Representationality of Sensation” in *Central Themes in Early Modern Philosophy*, ed. J.A. Cover and M. Kulstad (Indianapolis: Hackett, 1990), 1-22.

²⁸ In addition to being distinct, Leibniz persistently claims that sensation involves attention and memory. He writes, for instance, that sensation “is perception that involves something distinct and is conjoined with attention and memory” (“[On the Souls of Animals],” G VII 330; see also *NE* Preface, A/RB 54, *PNG* §4, G VI 600/AG 208). For present purposes, I will attend only to Leibniz’s claim that sensation is distinct perception.

²⁹ It should be said that Leibniz does offer a straightforward definition of the term ‘distinct’ in several of his writings. A distinct concept or idea, he writes, is one that is (a) clear, i.e., one that enables its possessor to recognize instances of it, and (b) enables its possessor to explain *why* something counts as an instance of it by offering an analysis of the concept’s distinguishing marks (see, for example, *Meditations on Knowledge, Truth, and Ideas*, G IV 423/AG 24). Thus my concept of a square is distinct, since (a) I am able to recognize square things and distinguish them from circular things and (b) I can say why one thing counts as a square while another does not by giving an analysis of the distinguishing marks of a square (viz., planar figure with four right angles and four equal

sides). The cognitive activities in terms of which distinctness is defined here, however, only make sense within the life of a *mind* or substance that is able to reflect, form concepts and reason. Indeed, the definition is given for concepts or ideas, not for perceptions generally. Sensations, however, are had by creatures who have no capacity for these higher cognitive activities at all, who have no concepts or ideas. The notion of distinctness that is used to distinguish sensation from other lower forms of perception therefore cannot be the one that Leibniz explicitly defines in these passages.

Unfortunately, he never properly defines the term ‘distinct’ as it is used in these contexts, so interpretive work is needed to determine its meaning.

³⁰ There is a parallel connection between perceptual indistinctness or confusion and unconsciousness (see *NE* Preface, A/RB 53 & 55).

³¹ Or perception that *p*. As with most of the early moderns, Leibniz does not make a careful distinction between object perception (e.g., perception of a tree) and perception of states of affairs (e.g., perception that there is a tree over there). What is more, perception is certainly not taken to be a success word, such that to perceive *x* (or that *p*) is to veridically perceive *x* (or that *p*).

³² It is a matter of considerable interpretive controversy just what this second-order reflective perception (and so *apperception*) is supposed to be. One problem is that this and other passages make it sound as if the second-order perception is something performed by what Leibniz calls the faculty of reflection. Strictly speaking, however, only rational minds have the faculty of reflection. If consciousness requires the faculty of reflection, then only rational minds (and not animal souls) can be capable of consciousness. Robert McRae defends this interpretive conclusion in *Leibniz: Perception, Apperception, and Thought*, cited above. In his late works, however, Leibniz quite clearly commits himself to animal consciousness (see, e.g., *NE* II.xxi.5, A/RB 173). Indeed, in this very passage Leibniz is trying to distinguish the normal

(presumably conscious) mental states of animals from those they have when they are occasionally reduced to the state of lower monads (as when in a deep sleep or stupor), i.e., unconscious perceptions. Animals, then, are being attributed apperception or consciousness. Does this mean that we have to attribute some sort of faculty of reflection to animals, contrary to Leibniz's explicit claim that reflection belongs to rational minds alone? Mark Kulstad defends this interpretive conclusion in *Leibniz on Apperception, Consciousness, and Reflection* (Munich: Philosophia Verlag, 1991). I am inclined to agree with Kulstad on this issue and claim that animals must have some capacity for reflection, although certainly not of the sort that rational human minds have, for Leibniz's commitment to animal consciousness seems to me difficult to dismiss in the late works.

³³ It is far from clear just *how* the second-order perception is supposed to introduce consciousness into one's perceptual life, but investigation into this matter is beyond the scope of this paper. See my "Distinct Confusion: Leibniz on Sensation," manuscript.

³⁴ One might object to my reading of *PNG* §4 as follows: what Leibniz is distinguishing in this passage is not unconscious perception from conscious perception, but rather conscious perception from something like self-conscious perception (see, for example, Nicholas Rescher, *The Philosophy of Leibniz* (Englewood Cliffs: Prentice-Hall, 1967), ch. 10). Apperception on this reading does not introduce consciousness of the tree outside my window into the soul, but rather something more like self-consciousness of my (conscious) perception of the tree. The proper way to read the *PNG* §4 passage quoted above, on this reading, is not as identifying apperception with consciousness full stop, but rather with consciousness *of my internal states*. In other words, "consciousness" is grammatically tied in this passage to the direct object "this internal state." This is an untenable suggestion. First, as mentioned in the preceding note, the *PNG* §4 passage occurs in the midst of Leibniz's attempt to distinguish the mental states

of lower monads, which are likened to the mental states we have when we are in a deep sleep or stupor, from the more typical mental states of animals; the distinction he is after must surely be that between unconscious and conscious perception, not conscious and self-conscious perception. Second, although the French verb *s'appercevoir de* indeed takes a direct object, so that it is true that it would be impossible simply to say that I am aware without being aware of something, Leibniz rarely follows his innovative nominalization of that French verb, *l'apperception*, with a direct object, and so it is perfectly plausible that apperception is not grammatically joined to “this internal state” in the passage. What is more, in the *Monadology* passage that parallels PNG §4, Leibniz distinguishes perception from apperception “or consciousness [full stop]” (*M* §14, G VI 609/AG 214).

³⁵ Montgomery Furth presents such an interpretation in his article “Monadology,” *Philosophical Review* 76 (1967); reprinted in *Leibniz: A Collection of Critical Essays*, ed. H. Frankfurt (Notre Dame: Notre Dame Press, 1972), 99-136, see esp. §4.

³⁶ Cf., however, *NE* II.xix.1, A/RB 161, where Leibniz writes that sensation is “awareness of an external body” and that sleep is the “cessation of sensation.”

³⁷ Elsewhere Leibniz similarly writes of an uneasiness that we “sense” but “are not cognizant of” (*NE* II.xxi.36, A/RB 188).

³⁸ Besides perceptual size, number and variation, Leibniz considers the effects of perceptual context and perceiver motivation and training on a perception’s distinctness: what is noticeable in one context may not be noticeable in another; and what is noticeable to one person may not be noticeable to another (or even to the same person at different times, say before and after that first cup of coffee in the morning). See, for example, *NE* II.ix.1, A/RB 134 and Preface, A/RB 54. To the extent that perceptual distinctness is sensitive to context and perceiver motivation, we should say that it is context and perceiver relative. This fact makes it clear that it would be a mistake simply to identify

perceptual distinctness with any single feature of a perception, such as its size, number or variation. Size, number and variation all conspire to ground perceptual distinctness. In the end, however, what it is for a perception to be distinct is not simply for it to have such and such a size, number or variation, but for those things to render the perception capable of being noticed, i.e., capable of attracting a second-order perception, under the perceptual circumstances.

³⁹ It is tempting to argue that surely *some* sensations, like pleasure and pain, are essentially conscious even by Leibniz's lights. Leibniz sometimes suggests such a view. He writes, for instance, that a wholly unconscious monad (such as a bare monad or an animal soul that has effectively been reduced to a bare monad by death) "would be without pleasure and without pain" (*NE* II.i.11, A/RB 113) and that the notion of pain includes consciousness (*NE* II.xxi.36, A/RB 162). On the other hand, he explains why an unconscious monad would be without pleasure and pain by claiming not that these are essentially conscious or noticed perceptions, but that they are essentially notable or noticeable perceptions (*perception notables*) (*ibid.* and II.xx.1, A/RB 162). What is more, he defines pleasure and pain as follows: "pleasure is a sensation of perfection, and pain a sensation of imperfection, each being notable enough that one can be conscious of them" (*NE* II.xxi.36, A/RB 194). Furthermore, although he grants that hunger is a particularly notable or noticeable perception, "even when one is hungry, one does not think about the hunger all the time, but when one thinks about it, one is aware of it, for it is a very noticeable disposition" (*NE* II.i.19, A/RB 118). It is not clear then that there are any sensations that are essentially conscious for Leibniz.

⁴⁰ In effect the mind is a much shallower place in the Cartesian world. To explain a phenomenon like habituation, Descartes would have to claim that the sense organ itself becomes so habituated to the stimulus that it is no longer affected by it, and so in turn no longer produces any effect in the mind about the stimulus. That in itself is not implausible.

The difficulty comes in trying to explain why one subsequently notices when the stimulus stops, for if the motions of a mill, e.g., were no longer being represented in the brain or mind then it seems the cessation of the motions should have no new effect on the mind. Sophisticated automated behavior poses another difficulty for the Cartesian: the Cartesian might successfully explain some responses to the environment by automated physical feedback systems that bypass the mind altogether (consider, e.g., Descartes' famous explanation for how and why an automaton with no mind can rapidly withdraw its foot from fire, AT XI 141-142); but it is less likely that our more sophisticated interactions with the environment can be explained without appeal to mental representations of the environment, as, for example, our ability successfully to navigate turns in the road and traffic despite the fact that one is not conscious of doing so (because one is giving her full attention to a news story on the radio) or the ability of some sleepwalker not only to navigate her way around the house but even to manipulate objects that get in her way (such as opening closed doors and avoiding toys scattered on the floor).

⁴¹ It is not crystal clear just how this is possible, but the burden of proof was not on Leibniz here. Most of his opponents, and especially the Cartesians, would have accepted the claim that the soul is simple despite its having a multitude of complex perceptual modifications.

⁴² Robert McRae attributes such a position to Leibniz: "As qualitatively simple these sensible perceptions [e.g., the sensation of green] are not aggregates of insensible perceptions. Rather, they are novel emergents from a mass of insensible perceptions" (*Leibniz: Perception, Apperception and Thought*, 38).

⁴³ It is for this reason that Leibniz claims that we can give only a real definition of green (or any sensory quality) and not a nominal one: the real definition comes indirectly by way of natural philosophical investigation of the bodily causes of the sensation of green;

nominally, we can give no definition because we are incapable of analyzing the sensation from the inside (see *NE* III.iv.4-7, A/RB 297).

⁴⁴ He writes: “Now, given that men have their sensations only on account of their body, and given that their bodies are not all disposed in the same way, it often happens that words are equivocal, that the words we use to express the modifications of our soul mean just the opposite of what we intend, and that we often make people think of bitterness, for example, when we believe we are making them think of sweetness” (*The Search After Truth*, Book III, part ii, ch. 7, p. 238).

⁴⁵ It is not clear that all the Cartesians in fact commit themselves to the arbitrariness of the relation between types of sensations and corporeal phenomena or to their lack of representationality. Indeed, I don’t think that Descartes commits himself to such a position (see my “Are Cartesian Sensations Representational?” forthcoming in *Nous*).

⁴⁶ Malebranche develops his position most explicitly in *The Search After Truth*, Book VI, part ii, ch.2, 440-445. For a useful discussion of this aspect of Malebranche’s thought, see Tad Schmaltz, *Malebranche’s Theory of the Soul: A Cartesian Interpretation* (New York: Oxford University Press, 1996), ch. 2.

⁴⁷ Indeed sensations (as all perceptions) represent the goings on of the entire corporeal universe, though some more distinctly than others according as they have a significant effect on the sentient creatures own body. See, e.g., Leibniz’s letter to Arnauld, G II 112-113/L 339-340.

⁴⁸ See Spinoza’s *Ethics*, Part II, propositions 11-17 in *The Collected Works of Spinoza*, vol. 1, ed. E. Curley (Princeton, N.J.: Princeton University Press, 1985). Spinoza claims here that the human mind is an idea (or set of ideas) that first and foremost represents its associated body and indirectly represents other bodies by way of their causal effects on its associated body. Although Leibniz challenges the metaphysics underlying the claim that the mind *is* an idea or set of ideas (as opposed to the active principle of thought or

perception that *has* ideas), and extends the representational capacity of the mind to the entire corporeal universe, he seems to adopt Spinoza's general view about the mind's representational objects.

⁴⁹ Although Leibniz does not have an efficient causal explanation for why sensations appear as they do, he does have a teleological story to tell about the reason for our having sensations that appear as they do. For a helpful discussion of this story, see Martha Bolton, "The Explanation of Consciousness in Leibniz's *Nouveaux Essais*," manuscript.

⁵⁰ As mentioned above, there was something of a Leibnizian tradition in 19th century German psychology. See fn. 4.

⁵¹ Two exceptions are John Foster, *The Immaterial Self: A defense of the Cartesian Dualist Theory of Mind* (New York: Routledge, 1991) and W.D. Hart, *Engines of the Soul* (New York: Cambridge University Press, 1988).

⁵² William Lycan, for example, writes: "the mind has no special properties that are not exhausted by its representational properties, along with or in combination with the functional organization of its components. It would follow that once representation itself is (eventually) understood, then not only consciousness in our present sense but subjectivity, qualia, 'what it's like,' and every other aspect of the mental will be explicable in terms of representation together with the underlying functionally organized neurophysiology" (*Consciousness* (Cambridge: MIT Press, 1996), 11). See also David Armstrong, *The Nature of Mind and Other Essays* (Ithaca, NY: Cornell University Press, 1980); Fred Dretske *Naturalizing the Mind* (Cambridge: MIT Press, 1996); David Rosenthal, "Two Concepts of Consciousness," *Philosophical Studies* 49 (1986), 329-359; and Michael Tye, *Ten Problems of Consciousness* (Cambridge, MIT Press, 1996). As the Lycan passage makes clear, however, many contemporary defenders of a representational theory of mind simultaneously defend some form of naturalism about the mind, which is, of course, quite contrary to Leibnizian metaphysics. What is more, the form of

naturalism that is most often defended among these philosophers is functionalism, according to which mental states are type-individuated not by their intrinsic features but by their causal relations to other states. Nothing could be more contrary to Leibnizianism, for on Leibniz's view the apparent causal relations of a mental state are specified by the internal features of the mental state itself.

⁵³ I am grateful to Justin Broackes, Sean Greenberg, Ned Hall, Daniel Sutherland and the members of the New England Colloquium in Early Modern Philosophy for their detailed and insightful comments on earlier drafts of this paper. Earlier versions of this paper were presented at Princeton University and at the Midwest Seminar for Early Modern Philosophy, and I would like to thank these audiences for their helpful questions and discussion.