

My sympathy aside, some doubts remain. The example I have offered is rather simple, and one might hold that musical understanding should not discount the kind of structural hearing evinced in such cases; but what about more difficult cases of structural hearing, like hearing a retrograde inversion? Davies would allow that listeners need not explicitly employ the music-theoretic concept *retrograde inversion* in order for them to identify and understand such cases (p. 104); and, in chapter ten, Davies briefly points to some empirical evidence that purportedly shows that listeners can identify retrograde inversions (p. 153). But, it seems to me that more needs to be said. Learning the standard structure of a pop song is something that one typically learns through a long period of enculturation. Such understanding seems to come naturally. I am unsure that the same is true for hearing retrograde inversions. Rather, I wonder if one only learns to hear such musical structures after having been prompted to do so. Indeed, in the study that Davies cites, subjects were specifically asked whether the test melody that they heard was 'an exact inversion' or not (W. Jay Dowling, 'Recognition of Melodic Transformations', *Perception and Psychophysics* 12 (1972), pp. 417–21; see p. 419–20). I worry that, if one needs to be prompted, then we are talking about musical structures that go beyond the typical practice of listening, which may count against the recognition of those structures being demanded of the understanding listener.

In summary, Davies book expands in helpful ways on earlier positions that the serious student or scholar of the philosophy of music must take into account.

Department of Philosophy and Religion  
 Appalachian State University  
 401 Academy Street  
 Boone, NC 28608  
 USA  
 bartelcj@appstate.edu  
 doi:10.1093/mind/fzu131

CHRISTOPHER BARTEL

***Descartes and the Puzzle of Sensory Representation***, by Raffaella De Rosa. New York: Oxford University Press, 2010. Pp. xiv + 208, H/b \$60.00.

There are a number of puzzles in Descartes's metaphysics about the relations between minds and bodies. Among the most famous are: How can an immaterial mind *move* a material body? How can a material body *change* an immaterial body, by producing sensations? De Rosa sets these puzzles aside to focus on an equally important puzzle: How can immaterial sensations *represent* material bodies?

There are four views in the literature. The first is that our sensations do not represent anything; in the contemporary idiom, sensations are purely

qualitative states. The second is that a sensation represents an apple because the apple caused it. The third is that a sensation represents the apple because the apple is beneficial for our body. The fourth is that a sensation represents the apple by describing it. De Rosa criticizes the first three responses (Chs 2–4) and endorses a sophisticated version of this fourth response (Chs 5–6).

De Rosa's book succeeds on many levels. It is careful, clear, knowledgeable, and provocative. It contains the most comprehensive survey available of the literature on Cartesian sensations. And yet it is wonderfully short; one can finish it in an afternoon. For all these reasons, it would be an excellent textbook, even for undergraduates. It is also an ideal book for experts who want to solidify and deepen their understanding of these issues. We are confident it will become a definitive text in the field.

We will spend the remainder of this review suggesting ways to defend causal accounts against De Rosa's four objections and then raise two issues about her own descriptive account. To start, De Rosa objects that causal accounts do not explain why sensations represent (p. 79). As she notes, a fire might melt a candle, but it does not follow that the candle represents the fire. She infers that, even if an apple causes a sensation, it does not follow that the sensation represents the apple. She concludes that causal accounts do not explain why sensations represent. But this objection is misdirected. A dualist like Descartes can easily explain why sensations represent while candles do not. Sensations represent because they are modes of the mind and it is the nature of minds to represent. Candles do not represent because they are extended substances. The causal account is not supposed to explain this difference between sensations and candles. The causal account is supposed to explain why the relevant sensation represents *this apple* rather than something else. De Rosa's objection applies only to materialists, because they claim that sensations and candles are both extended substances, and therefore must explain why sensations represent while candles do not.

De Rosa also objects that causal accounts cannot explain misrepresentation (pp. 76–8). But proponents of causal accounts have a straightforward explanation. A sensation represents whatever object causes it. In our example, the apple. But a sensation might still *misrepresent* its cause, by representing it as involving a different pattern of motion. In our example, it might represent the apple's particles as moving in a different way than they are actually moving. How is that possible? Suppose that red sensations are normally caused by bodies whose particles are moving in one way (say, clockwise) while yellow sensations are normally caused by bodies whose particles are moving in another way (say, counter-clockwise). In that case, red sensations represent clockwise motion, while yellow sensations represent counter-clockwise motion. Suppose an apple causes a red sensation. That sensation will correctly represent the apple's particles as moving clockwise. But an apple might also cause a yellow sensation, because something

interfered with the normal causal chain. A yellow sensation will misrepresent the apple's particles as moving counter-clockwise. Such misrepresentations will be ubiquitous, because there are almost always forces interfering with the causal chain. We might rarely have a sensation with exactly the right shade of red. Many contemporary naturalists accept a framework like this. But they have trouble distinguishing 'normal causes' from other causes. Descartes does not have this trouble, because he can appeal to God's intentions, for example, that God intended red sensations to be caused by clockwise motion, just as he intended thirst to be caused by a lack of water in the body.

De Rosa also objects that causal accounts imply that sensations represent more proximal causes, such as the state of our sensory organ (p. 80). But proponents of causal accounts can embrace this implication. Our sensations might be confused, in part, because they represent, but do not distinguish, all their causes. Moreover, the sensation might still *primarily* be about the apple in that it contains more information about the apple than other causes. Mechanists can distinguish between the influence of different causes. Our sensation might primarily represent the apple, because the apple is the most influential cause — the state of our sensory organs is more like a background condition.

There is another reason to be unmoved by the first three objections. They apply to *any* attempt to link causation and representation. According to many philosophers, we *still* lack solutions. Descartes would have been among the first to develop a causal theory of representation. Therefore, he might have accepted the causal account even if he did not fully comprehend, acknowledge, or solve many of its problems.

De Rosa's final objection is that causal accounts cannot explain why sensations are materially false (p. 76). Descartes writes 'my only reason for calling an idea materially false is that, owing to the fact that it is obscure and confused, I am unable to judge whether or not what it represents to me is something positive which exists outside of my sensation' (The Philosophical Writings of Descartes, trans. Cottingham, Stoothoff, Murdoch. Cambridge: Cambridge University Press, 1984–85 (CSM) II 145; *Oeuvres de Descartes: Revised Edition*, Adam and Tannery (eds.), Paris: Vrin/C.N.R.S, 1964–76, (AT) VII 206). Causes are always positive things that exist outside of one's sensations. De Rosa infers that the causal accounts cannot explain this passage. But that is too quick. Suppose warm sensations are normally caused by objects with at least a certain amount of internal motion, while cool sensations are normally caused by all other objects, though not in virtue of a shared, positive feature. Warm sensations would then represent their causes as having at least that much internal motion, whereas cool sensations would not represent anything positive about their causes. In other words, both warm and cool sensations would represent their causes, but only warm sensations would represent their causes as having a positive feature. Because that is not something that is revealed to us by merely reflecting on our warm

and cool sensations, these sensations would be materially false. More generally, sensations are materially false because we are unable to judge which sensations represent positive features. We are also unable to judge the mechanical nature of those features, like that warm sensations represent an amount of internal motion, rather than a direction of internal motion.

We do not think any of our responses are decisive. But we hope they are enough to suggest that causal accounts are more plausible than De Rosa contends. We also intend our responses to illustrate a limitation of De Rosa's approach. De Rosa almost exclusively focuses on arguments and views already in the literature. While it is important to engage with such arguments and views, she is often so focused on Wilson, Schmaltz, etc., that she neglects alternatives.

Let us now turn to De Rosa's descriptive account. According to De Rosa, every sensory idea has two elements. It contains an intellectual idea, which represents the perceived object by describing its geometrical properties, as well as a further element of sensory phenomenology. These two elements are confused rather than distinct, because they represent one and the same body as if it possessed both geometrical and phenomenal properties. Bodies do possess geometrical properties, so the intellectual component of the idea is accurate, but bodies cannot possess phenomenal properties, so the sensory component of the idea is necessarily inaccurate.

This is an ingenious proposal that is worth careful study. For now, we would just like to raise two issues. First, according to De Rosa's descriptivist reading, the intellectual component of a sensory idea describes its referent in terms of the particular shape it actually has. But is the intellectual component that specific? We do not deny that intellectual ideas can represent specific shapes. Descartes gives examples in which the pure intellect conceives of triangles, squares, chiliagons and myriagons. But in all of those cases he is quite clear that the object so conceived is presented as possible, not actual. So it is a further question whether intellectual ideas are equally particular when they figure in sensory ideas, which present their objects as actual.

De Rosa says the intellectual component becomes clear and distinct when it is, as Descartes says, 'so sharply separated' (CSM I 207–8; AT VIIA 22) from the sensory content that it describes bodies only in terms of extension. Thus, we can look at a case where Descartes renders an intellectual idea of a body clear and distinct and see how specific that idea is. A prime example is given in Meditation Two, where Descartes reflects on 'this piece of wax' (CSM I 20; AT VII 30). He begins with the common sense perceptual idea of the wax as something which has a particular 'colour, shape and size', is 'hard and cold', and 'makes a sound' if you tap it. But then he observes that all of these particular properties—both phenomenal and geometrical—can be lost, and 'yet the wax remains'. What remains after 'taking away everything which does not belong to the wax' is 'merely something extended, flexible

and changeable'. Thus, he goes from having a conception of the wax which was 'imperfect and confused', to one that is 'clear and distinct'. The latter is due to the intellect alone, to 'purely mental scrutiny'. It has lost all sensory content. But notably, it has also lost its particularity. It does not represent the wax as having any specific shape, but merely as having one of 'countless' possible shapes. This idea describes the essence of the wax as an extended thing, and that essence is not unique to the wax but is possessed by all extended things, all bodies. As such, the description is too general for descriptivism to explain how the idea refers to one particular body and not others. This is not a conclusive objection, but it suggests that more needs to be said about how the intellectual component of a sensory idea gets to be as specific as it needs to be to pick out a particular, actual body.

Second, it is unclear how sensations can misrepresent geometrical qualities such as sizes, shapes, and motions. Descartes mentions a number of situations in which we misrepresent these qualities, including when the sun appears close, a straight stick appears bent, and a rectangular tower looks round. But, according to De Rosa, sensations represent objects by correctly describing their geometrical properties, so sensations cannot misrepresent objects' sizes, shapes, and motions. In addition, intellectual ideas cannot misrepresent. It is therefore unclear how sensory ideas could misrepresent in virtue of containing intellectual ideas that represent sizes, shapes, and motions. The only misrepresentation that seems possible on her reading, and the only kind she considers, consists in sensory ideas depicting bodies as having phenomenal properties. But that seems to leave her without an explanation of how sensory ideas misrepresent geometrical qualities.

We hope De Rosa will treat these criticisms as an invitation to further develop her view. We also hope others will have as much fun working through her arguments.

326a and 326b Milbank Hall  
 Barnard College  
 Columbia University  
 3009 Broadway  
 New York, NY 10027  
 USA  
 epaul@barnard.edu  
 jmorrison@barnard.edu  
 doi:10.1093/mind/fzu158

ELLIOT SAMUEL PAUL AND JOHN MORRISON

*Philosophos: Plato's Missing Dialogue*, by Mary Louise Gill. Oxford: Oxford University Press, 2012. Pp. vii + 290. H/b £32.00, P/b £18.99.

This is a brilliant and provocative book. Gill has the courage to construe four or five of Plato's most difficult dialogues as components of a single project,