Churchland on "The Semantic Problem"

William Ramsey
Philosophy, UNLV

As college educators, we recognize the need to continually update our course material, especially in fields that are constantly changing like cognitive science. Generally, this means we should periodically replace familiar texts with new books that include cutting-edge treatment of contemporary debates and topics. Of course, every so often a text comes along that is so good at explaining the central theories, issues and debates that it proves to be an exception to this rule. Some texts are so pedagogically valuable and do such a great job of framing the central issues that they merit repeated use in our courses, despite being written several decades earlier.

Paul Churchland's *Matter and Consciousness* is just such a book. It has become a classic, a model of how to spell-out some of the most abstruse ideas and topics in the philosophy of mind/cognitive science with a remarkable degree of clarity. There are, of course, many ways to explain our philosophical investigations of the mind/brain, and no one organizational scheme is perfect. But Churchland seems to have discovered an ideal framework for covering a great deal of ground in a succinct and digestible format. This is especially true of the chapter entitled "The Ontological Problem", which lays out the arguments for and against a variety of different metaphysical theories of the mind. This chapter is so well crafted and clear that it has become the central reading in the mind section of many introductory anthologies. The book not only allows the uninitiated to comprehend difficult material, but it also engages the reader in a way that even non-philosophy majors find fascinating. With the publication of a third edition, we can be confident that *Matter and Consciousness* will continue to provide the fundamental framework through which many future philosophers of mind and cognitive science form their initial conception of the discipline.

Of course, no volume is perfect and while it would be easy to continue with the praise, I am instead going to use these brief comments to pose some questions about a chapter that I find to be the most tricky to incorporate in my courses. I am referring to the 3rd chapter entitled *The Semantic Problem*. Many of the views expressed here are flushed out in greater detail in Churchland's other writings, and especially in his earlier important work, *Scientific Realism and the Plasticity of the Mind* (Cambridge, 1979). Thus, it is perfectly reasonable for these views to find their way in Churchland's treatment. Still, the chapter is the one part of the book that both I and some students find a little confusing. I'll first explain the chapter and then discuss what I find tricky about it.

The semantic problem is introduced as the problem of explaining how the terms of our public language that refer to mental states – terms like 'belief', 'pain', and 'consciousness' – come to get their meaning. Here, Churchland introduces a theory of meaning for mentalistic terms, but he clearly thinks it applies to most of our language. Churchland is a strong proponent of a form of conceptual role semantics, the view that linguistic meaning is grounded in conceptual meaning which in turn is based upon the conceptual and inferential roles our different notions play in our cognitive economy. More specifically, psychological terms are associated with our concepts of mental states, which get their meaning through the role they play in our commonsense or "folk" psychological theory of the mind. Churchland is one of the original supporters of what is now known as the "theory-theory", the view that we explain and predict behavior by employing a commonsense theory of the inner workings of the mind that is gradually acquired during childhood. This theory is comprised of various laws or platitudes that describe different relations between the different mental states and cognitive input and output. Pain is

something that is caused by bodily damage, causes anxiety, distress, wincing, doctor-seeking behavior and so on. Thus, for Churchland, the word 'pain' gets its meaning not by some sort of inner ostension, but by serving as a label for a theoretical posit that is meaningful through the various (causal, inferential, psychological) roles it is assigned by our folk theory of the mind.

Churchland extends this account to the problem of explaining the intentionality of propositional attitudes. In particular, he notes that an old conundrum is explaining just how our inner beliefs, desires and other propositional attitudes come to represent the things they do. But Churchland sees no deep mystery here. Propositional attitudes, insofar as they exist, can get their intentional content through the various inferential roles they play in our cognitive activities. Insofar as intentionality is thought to be a challenge to materialism, Churchland points out the similarity between our language of propositional attitudes, expressed as, for instance, "S has the belief that P", and our language of physical phenomena, expressed as "S has the velocity of P", or "S has the mass of P". Moreover, the network of laws that comprise our folk psychology function no differently than the laws of our physical theories. Thus, intentional content is no deep mystery and folk psychology is not so different from other physical theories.

That's roughly the gist of the chapter. In terms of commentary, what I have to offer is not really criticism of the chapter but instead a few queries about its scope and emphasis.

An immediate question concerns the chapter's focus. The chapter at least tacitly implies that discussions about the meaning of public language terms for mentalistic words like 'belief' and 'pain' take center stage in current philosophical theorizing about the mind. But this is far from clear. Granted, the topic is not insignificant, and it certainly has a rich history, as Churchland's discussion of behaviorism and positivism make clear. Yet it is a bit surprising to see it presented as a major issue in a philosophy of mind text, as the topic probably receives more attention these days in the philosophy of language. By contrast, it would seem that THE semantic problem that has dominated discussions in both philosophy of mind and cognitive science over the last 40 years is not the problem of meaning for public language words, but rather the problem of explaining how parts of the brain, at whatever level of analysis, come to function as representations of things and properties in the world. Whether we view these states neurologically, or as classical computational symbols, or as activation vectors in some sort of network, it is something of a mystery just how they a) manage to function as representations, and b) when they do function in such a manner, how the come to get the specific intentional content they have. It would not be an overstatement to say that solving these mysteries has been one of the most important areas of investigation occupying philosophers of psychology for several decades.

Now this topic is at least partially addressed in this chapter, in the final section regarding the intentionality of propositional attitudes. Here, as noted, Churchland argues that the intentionality of beliefs and other attitudes is easily explained by simply extending his network theory of meaning to them -- a propositional attitude is about what it is about because of the different causal and inferential relations it participants in within the cognizer's system. For me, it is this discussion that generates much of the head-scratching.

First, as I just noted, the challenge of explaining the intentional nature of mental representations is presented as almost a secondary concern, as an extension of a more important discussion regarding the semantics of public language terms. But this seems to get the order of significance backwards. Just as philosophers today worry more about how conscious experience is possible than the meaning of the term 'consciousness', so too, philosophers are far more concerned about how states like beliefs get their

content than about the content of the word English word 'belief'. Second, the discussion can be easily misread to imply that the problem of intentionality pertains just to propositional attitudes. But, of course, there is a wide array of psychological states that represent and thus have some form of representational content, including individual concepts, various forms of mental imagery, dreams, unconscious elements of perceptual processing, and so on. So the problem of explaining how cognitive representations represent is a much broader problem than suggested here. Third, I'm not sure what to make the of the structural similarity between propositional attitude sentences like "X believes that P" and so-called numerical attitude sentences like "X has a length_{m} of N". Both of these are examples of straightforward predicate modifiers. "Has the belief that P" is also structurally similar to sentences like "has a dress style of X" or "has a gymnastic difficulty of X" but I don't regard this as a reason to think fashion or gymnastics tells us something important about the mind.

Fourth and more importantly, there are a number of well-known difficulties with conceptual role accounts of content for mental representations, as detailed by writers such as Jerry Fodor. Of course, all accounts of content have their problems and Churchland is hardly out of line to endorse this one. However, the chapter implies that the network solution to the problem of intentionality, while not universal, is "now fairly widespread among researchers in the field". That is far from clear. What *is* fairly widespread among researchers is the conviction that representational function and representational content can be naturalized – that is, explained in terms of *some* sort of physical-causal, relational properties of neurological states. Since Churchland's ultimate goal is to defend content naturalism, it would help to mention at least a few of the other approaches that have received considerable attention in the literature. For instance, there are many who think that to explain representational content, the internal network of relations needs to be supplemented with "wider" causal head-world links as suggested by Putnam's observation that meaning "ain't in head". Alternatively, philosophers and cognitive researchers have both put great effort into explaining cognitive representation in ways inspired by the functioning of non-mental representational devices like thermostats or maps and models. The idea that informational content is reducible to some sort of co-variation or law-like dependency relation between representation and what is represented, or some sort of structural similarity between the two is not only philosophically appealing, it is also very popular among cognitive scientists, many of whom have developed the sort of models of cognition that Churchland seems to admire in later chapters. Indeed, Churchland's later proposal that we think of conceptual representation as activation vectors of a network seems much more in keeping with these latter accounts of representational content than the inferential role/network picture he endorses in chapter 3.

So I find puzzling the emphasis upon public language semantics over mental representation semantics, and I find puzzling the neglect of various naturalistic approaches to understanding the latter. I think what needs to be made clearer is that there are really *two* distinct semantic problems that probably merit different treatments: one is the business of explaining the nature and content of various mental representations including sophisticated states like propositional attitudes, but also lower-level concepts, recognitional capacities and so on. The other is explaining the nature and content of various *meta*-representations that are about such states, like our public language words for propositional attitudes, or perhaps more importantly, our inner *conception of* mental states. A clearer differentiation of these two problems, along different analyses, might prove beneficial. For instance, in addressing the former Churchland could talk about the plusses and minuses of the different attempts to naturalize mental representation that have been at the center of so much excellent work in philosophy and psychology by people like Fred Dretske, Ruth Millikan, Robert Cummins and various others. He could also note many of the approaches to cognitive representation that have been endorsed my scientific researchers like

McCulloch and Pitts, Gallistel, and O'Keefe and Nadel . And in addressing the latter, he could promote his version of the theory-theory, along with the network account of conceptual meaning (and, secondarily, linguistic) meaning. In discussing his theoretical account of the explanation and prediction of behavior, he could also say something about its current main competitor, the simulation theory. In any event, I suspect that by making these two problems more distinct, students would see more clearly that theories about the nature of mental states can be very different from our theories about our conception of mental states, even though the two topics are closely related.

Now none of these comments should be taken to undermine my earlier claim that this is an outstanding text that provides an excellent introduction to philosophical and scientific investigations of the mind. If anything, they should be read as my own 2 cents on where an already superb text can perhaps be improved. My hope is that in 10 years there will be a 4th edition, and if so, Churchland might consider some of these suggestions regarding changes that could be made. Until then, I'm quite happy to continue putting *Matter and Consciousness* on my course syllabus as the primary text.