

William Hirstein

Mindmelding: Consciousness, Neuroscience, and the Mind's Privacy.

Oxford: Oxford University Press 2012.

304 pages

\$85 (cloth ISBN: 9780199231904)

William Hirstein defends a highly novel major claim, in order to defeat what he sees as a dogma in philosophy of mind. The dogma is that consciousness is essentially private; Hirstein believes that defeating it is important because he sees it as the major obstacle to a physicalist account of consciousness. (Hirstein avoids the word 'physicalist' in favor of 'materialist', without giving any indication as to why he avoids the more traditional term.) The highly novel claim is that what he calls *mindmelding* is possible. Mindmelding occurs when one person has direct access to the conscious states of another person. In order to defend the possibility of mindmelding and advance his physicalist agenda, Hirstein offers an account of the nature of consciousness and of how agents have access to their content states that is heavily driven by recent work in cognitive neuroscience.

While the claim that mindmelding is possible is novel, many central components of Hirstein's view are very traditional. He defends the adequacy and truth of folk psychology, claiming that folk psychological claims can be cashed out in cognitive neuroscientific terms. Crucially, he defends the existence of a self, with more or less the features that folk psychology ascribes to it. The self, Hirstein argues, is to be identified with the executive functions performed by the prefrontal cortex, or rather with the part of the brain that performs those functions. Mindmelding is possible because the self is identical to a part of the brain: it occurs when one agent's executive systems are hooked up, in the appropriate way, to another agent's conscious states (which Hirstein alleges are located in—and not merely correlated with—posterior areas of the brain). By properly hooking up my executive mechanisms, I can bring it about that I experience your conscious states. Mindmelding is therefore possible, given the physical organization of the brain. Indeed, Hirstein claims that mindmelding is possible with current technology.

Consciousness, Hirstein maintains (on the basis of well-known findings in cognitive neuroscience) is identical to bound representations, produced by synchronized oscillations of thalamocortical loops. These bound representations are carefully prepared for consumption by executive systems. The function of consciousness is to make evolutionarily salient properties of objects and the environment accessible to executive systems, for decision-making and manipulation. This account of consciousness has some features that are widely shared—the claim that thalamocortical loops and synchronized oscillations are, or are among, the neural correlates of consciousness is widely accepted—but other features are novel. Hirstein identifies conscious states with these neural states, independent of whether they are experienced by anyone and independent of connections to other mechanisms; he maintains that synchronized oscillations in a petri dish realize a content state lacking either content or subject. Hirstein thinks that states of bare consciousness—without subjectivity and sometimes without content—are common features of the brain. We become conscious *of* our own conscious states only when our executive processes are appropriately hooked up to them. Given that mindmelding is possible, Hirstein maintains it is possible for one agent to be conscious of the conscious states of another agent who is not and never will be conscious of those states.

It is worth remarking that there is little sustained attempt here to argue directly against rival accounts, according to which states become conscious only when appropriately hooked up to other processes. Indeed, this is characteristic of the book: Hirstein's ambition to offer a systematic account of consciousness requires him to deal with a large number of issues (the nature of the self, the opacity of reference, the nature of color, and more besides): inevitably he cannot enter into detailed argument with rival views on this wide range of topics. One might read him as attempting to offer an account that is consistent with the neuroscientific evidence and which deals satisfyingly with a wide range of philosophical issues, rather than attempting to show the account's superiority to rival views. Offering such an account is achievement enough for one book.

There are several problems with the account Hirstein offers. One problem is that he seems committed to the claim that bound representations are conscious states. But there is evidence for nonconscious binding; for instance, there is evidence that subjects become conscious of incongruous images quicker than they become conscious of those that are not incongruent, apparently indicating that nonconscious mechanisms detect relational properties. Hirstein might respond to this worry by distinguishing our access to the contents of conscious states from their existence, claiming that both incongruent and congruent states are in fact conscious prior to subjects being able to report them. This move would require us to abandon the tight linkage between reportability and consciousness that most neuroscientists tacitly assume. It might be justified on the basis that synchronized oscillations are the best candidates for conscious states. That picture is consistent with the evidence, but so is a rival picture, on which these states are conscious only when accessed by executive processes. Since that rival picture allows us to preserve the linkage between reportability and consciousness, it seems that the burden of proof is on Hirstein.

A more serious worry is that there is an argument against the possibility of mindmelding to which Hirstein gives little attention. He claims that advocates of the mind's privacy cannot give any content to the notion of the self. But a privacy advocate might accept Hirstein's own account of the self as identical to the executive processes and argue that the self makes a contribution to the phenomenal quality of the state accessed; it would follow that my accessing your conscious state would alter its properties and mindmelding is impossible. Hirstein denies that there are representations in the parts of the brain he identifies with the self. But the privacy advocate need not maintain the self is associated with representations. Instead, she might point to two features that plausibly alter the phenomenal qualities of conscious states. First, there seems to be top-down modulation of these states. Second, there seems to be a phenomenology of agency.

Both are serious threats to the possibility of mindmelding. Hirstein maintains that conscious states come prepared for executive processes, but there are reciprocal linkages between the parts of the brain he associates with the self and those he identifies with conscious representations, and there is independent evidence that personal-level attitudes modulate conscious contents. These facts suggest that there may be top-down modulation of conscious states. The phenomenology of agency is equally threatening. Hirstein points to states in which a person is totally absorbed as a state to which another might have direct access, but is not clear that I must actually act for my experience to be colored by my agency. Merely being poised for manipulation by my idiosyncratic self might impart phenomenal qualities to the state.

Finally, one might wonder how significant an obstacle privacy really is to a physicalist account of consciousness. It has played a minor role in arguments for property dualism, for instance: these arguments have instead focused on the knowledge argument, the conceivability of

zombies, and the explanatory gap. These more prominent weapons in the anti-physicalist arsenal receive little attention in the book, and what Hirstein says about them seems unsatisfactory. He claims that consciousness is no more mysterious than any other emergent property, such as combustion, but ignores the fact that we have good accounts of just how combustion emerges. It is possible to dispute how much explanatory power neuroscientific accounts of consciousness have, but it is fair to say that they have not yet bridged the explanatory gap.

The progress of science may yet bridge that gap, and something in the ballpark of the account of consciousness Hirstein offers has a fair claim to be regarded as the best hope to emerge as truly satisfying explanation of its nature. Hirstein's book should not be seen as offering the last word—as he would concede, its details await further scientific development—but the provocative and systematic account it offers must be taken seriously by physicalists and their opponents alike.

Neil Levy

Florey Neuroscience Institute