

The Benefits of 'Binocularity'

Will advances in neuroscience move reasonable people to abandon the idea that criminals deserve to be punished? Some researchers working at the intersection of psychology, neuroscience and philosophy think the answer is yes. Their reasoning is straightforward: if the idea of deserving punishment depends upon the idea that criminals freely choose their actions, and if neuroscience reveals that free choice is an illusion, then we can see that the idea of deserving punishment is nonsense. As Joshua Greene and Jonathan Cohen speculated in a [2004 essay](#): “new neuroscience will undermine people’s common sense, libertarian conception of free will and the retributivist thinking that depends on it, both of which have heretofore been shielded by the inaccessibility of sophisticated thinking about the mind and its neural basis.”

This past summer, Greene and several other colleagues did empirical work that appears to confirm that 2004 speculation. The new work finds that when university students learn about “the neural basis of behavior” — quite simply, the brain activity underlying human actions — they become less supportive of the idea that criminals deserve to be punished.

According to the study’s authors, once students are led to question the concept of free will — understood as the idea that humans “can generate spontaneous choices and actions not determined by prior events” — [they begin to find the idea of “just deserts” untenable](#). “When genuine choice is deemed impossible, condemnation is less justified,” the authors write.

To see what is right — and wrong — with the notion that neuroscience will transform our idea of just deserts, and, more generally, our idea of what it means to be human, it can help to step back and consider a strange-sounding metaphor that I encountered first in the work of the British philosopher Jonathan Glover. He said that if we want to understand what sorts of beings we are in depth, we need to achieve a sort of [intellectual “binocularity.”](#)

With the metaphor of binocularity, Glover was saying that, just as we need two eyes that integrate slightly different information about one scene to achieve visual depth perception, being able see ourselves though two fundamentally different lenses, and integrate those two sources of information, can give us a greater depth of understanding of ourselves.

Through one lens we see that we are “subjects” (we act) who have minds and can have the experience of making free choices. Through the other we see that we are “objects” or bodies (we are acted upon), and that our experiences or movements are determined by an infinitely long chain of natural and social forces.

Just as we need two eyes that integrate slightly different information about one scene to achieve visual depth perception, we need to view ourselves through two lenses to gain a greater depth of understanding of ourselves.

Consider one mundane example. As I sit at my computer writing these words, I am having an experience of choosing words to express what I am thinking. When they are published, you and I can both judge my choices. Because I am the subject who has made them, I will enjoy your praise or be stung by your derision. Whether it is praise or blame, you and I will agree that it is I who deserve it. This experience I have as a subject with a mind is as real a feature of the world as is the body that is the necessary condition for that experience.

And, it is equally true that we could give a very long causal explanation of the forces that produced the words you are reading. Among those forces would be my neurons, my genes, what I ate for breakfast, the microbiota in my gut, my upbringing, what I learned in school, the history of my country, the expectations of my editor, and so on. Through the object lens we see the explanation for the appearance of these words. At least in principle, we can see that and how they were determined.

When I put it that way, it seems easy enough to agree: to understand ourselves in depth, we need to see ourselves as both subjects and objects. But intellectual binocularity itself is not easy to achieve. While visual binocularity comes naturally, intellectual binocularity requires effort. In fact — and this is one source of the trouble we so often have when we try to talk about the sorts of beings we are — we can't actually achieve perfect binocular understanding. We can't actually see ourselves as subjects and as objects at the same time any more than we can see Wittgenstein's famous duck-rabbit figure as a duck and as a rabbit at once. Rather, we have to accept the necessity of oscillating between the lenses or ways of seeing, fully aware that, not only are we unable to use both at once, but that there is no algorithm for knowing when to use which.

Because oscillating between lenses takes effort, it is not surprising that we are prone to take a rest with just one — to settle for “monocularity.” Indeed, when Francis Crick, who co-discovered the structure of DNA with James Watson, published his 1994 book, *The Astonishing Hypothesis*, he was engaged in what I take to be a form of monocularity. In that book he delivered the news that neuroscience would radically transform our understanding of what it means to be human. He wrote, “ ‘You,’ your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules.” Notice the scare quotes around *you*. “You” think that you are something special, a subject who experiences joys and sorrows, memories, ambitions, a sense of identity and a free will. But that, Crick wants to inform you, is an illusion. “You” are an object. “You” are your body, a collection of nerve cells, albeit enmeshed amidst many other kinds of cells.

Part of what Crick was reacting so forcefully against was a form of monocularity found in some versions of Platonism and Christianity — conceptions of persons which posit that we are constituted by two substances, but only one of which is “real.” On such accounts, our minds (or “souls”) are taken to be

eternal, immaterial and truly real, and understandable only in contrast to our bodies, which are taken to be impermanent, material and illusory.

To make sure his readers knew which view of the nature of persons he was rejecting, he placed, as a foil, the catechism he heard as a boy at the head of the chapter in which he announced his astonishing hypothesis. According to that catechism, “The soul is a living being without a body, having reason and free will.” It was the idea of a disembodied mind or soul that drove Crick to say that, no, it wasn’t the body that was illusory, but the mind or soul that was. The irony is palpable: in the throes of his passion to reject one form of monocularity — the Christian form where the mind/soul is the real — Crick ends up with his own form, in which only the body is.

When I said in the beginning that there’s something right about the reasoning of those researchers who reject the idea that our choices are “spontaneous” and not determined by prior events, I was referring to their rejection of the idea that our choices are rooted in some God-given, extra-natural, bodyless stuff. I’m with Crick and those researchers on that point. My complaint is that they slip from making the reasonable claim that such extra-natural stuff is an illusion to speaking in ways that suggest that free will is an illusion, full stop. To suggest that our experience of choosing is wholly an illusion is as unhelpful as to suggest that, to explain the emergence of that experience, we need to appeal to extra-natural phenomena.

The more difficult — and, I would argue, better — way to go about trying to understand what sorts of beings we are is to see ourselves as *both* free subjects and as determined objects, and to accept that we aren’t wired for seeing ourselves in both ways at once. Using either lens alone can lead to pernicious mistakes. When we use only the subject lens, we are prone to a sort of inhumanity where we ignore the reality of the natural and social forces that bear down on all of us to make our choices. It would be hard to exaggerate, for example, the inhumanity of locking up huge numbers of people who are clearly mentally ill. When we use only the object lens, however, we are prone to a different, but equally noxious sort of inhumanity, where we fail to appreciate the reality of the experience of making choices freely and of knowing that we can deserve punishment — or praise.

Our conceptual lives would be tidier if we could see ourselves only as subjects or only as objects, but our understanding would be shallower. If we want to understand persons in deeper ways than either lens alone can offer, we need to practice a more binocular habit of thinking. Such a way of thinking would accept the necessity of oscillating between seeing ourselves as beings who can — and can’t — deserve punishment. Neuroscience can help us grind one of those lenses, but it can’t obviate the need for the other.

Erik Parens is a senior research scholar at The Hastings Center, a bioethics research institute in Garrison, NY., and the author of “[Shaping Our Selves: On Technology, Flourishing, and a Habit of Thinking.](#)”