

When we think about nature vs. nurture, we're biased

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Credit: Alyssa Stone/Northeastern University

Do you think that infants know that one plus one equals two?

If you said no, you'd be in good company. Many people think that,

according to research by Iris Berent, professor of psychology at Northeastern. But you'd also be wrong. Studies have shown that newborns display an understanding of addition, says Berent. That suggests that humans might be born with those abilities—and perhaps providing more fuel to the long-standing "nature versus nurture" debate.

It's those wrong guesses that particularly intrigue Berent. Her research focuses on the question of how we think about human nature. Why is it, she asks, that people do not correctly intuit what characteristics or abilities might be innate in humans? What is holding us back from resolving the nature versus nurture questions that have intrigued philosophers, psychologists, and everyday thinkers for centuries?

Berent's latest research has revealed that our inability to reason about what is innate in humans may also be innate itself.

"These biases about human nature arise from [human](#) nature itself," she explains. "So it's the very way in which our minds work that obscures from us how our minds work."

So how, then, do our minds work?

It has something to do with assumptions that we make about the [body](#) and the mind, Berent writes in a paper published Monday in the journal *Proceedings of the National Academy of Sciences*. We tend to think of something connected to the body as something humans are born with, whereas something that we associate with the mind is often considered something that is learned or develops later.

Berent came to this conclusion by examining the logic behind the answers her study subjects gave to questions about what abilities humans are born with.

Give it a try yourself. Notice how you come up with answers for the following questions: Are humans born with the ability to recognize emotions? Are we born understanding language? Do babies understand physics?

What Berent found was that even when subjects answered differently from one another, their reasoning for their answers were much the same. They connected the things that they thought were innate to humans to the physical body, while they said the things that were learned came from the mind.

For example, she says, if someone says that we are born able to recognize emotions, they may reason that you can see (with your eyes) happiness in another person's smile or feel anger in your heart or butterflies in your stomach for anxiety. Or someone might say that we are not predisposed to understand language or physics because it is something that occurs in the mind.

For non-scientists, Berent says, "The mind is something separate. It's not in the body," she says. "There is a sense in which people think about [the mind] as something outside of the body."

"If you assume that what's inborn is in the body, which is actually true, and you also believe that there is some stuff that's kind of extra that's in the mind and it's not in the body, then that stuff cannot possibly be innate," she says. "It perfectly fits because it's those things that we perceive as ethereal, as in the mind, that we also think cannot be innate."

But if someone thinks of an ability as being rooted in the brain, rather than the [mind](#), that association with the physical body also makes it more likely for them to say that ability is innate.

This revelation about our biases as we attempt to reason about [human](#)

[nature](#) has consequences beyond the philosophical debate about what in humans is derived from our nature, and what from our nurture.

In previous studies, Berent examined how subjects related to descriptions of mental disorders that invoked the brain versus explanations that did not. For example, she would tell a subject either that a patient was tested for depression and responded to pictures of sad faces more than happy faces, or they would hear that that the patient's brain displays a stronger response to sad faces than happy faces.

"Then we asked, 'how likely is it that she was born this way, or how likely is it that her twin sister has depression, or if she was an egg donor that her child who never saw her will have depression,'" Berent says. And when subjects were told that the test was done in the brain, "people are more likely to think that depression is inborn. It's less likely to go away. It's more severe."

This suggests that when you tell someone that a disorder is in the body, it triggers a philosophy which tells them that it will never change, Berent says. She advises that understanding this bias could help us better navigate and reduce stigmas around mental disorders.

More information: Can we get human nature right? *Proceedings of the National Academy of Sciences* (2021). doi.org/10.1073/pnas.2108274118

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