

# People don't just think with their guts; logic plays a role too

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For decades, science has suggested that when people make decisions, they tend to ignore logic and go with the gut. But Wim De Neys, a psychological scientist at the University of Toulouse in France, has a new suggestion: Maybe thinking about logic is also intuitive. He writes about this idea in the January issue of *Perspectives on Psychological Science*, a journal of the Association for Psychological Science.

Psychologists have partly based their conclusions about reasoning and decision-making on questions like this one:

"Bill is 34. He is intelligent, punctual but unimaginative and somewhat lifeless. In school, he was strong in [mathematics](#) but weak in social studies and [humanities](#).

Which one of the following statements is most likely?

- (a) Bill plays in a rock band for a hobby.
- (b) Bill is an accountant and plays in a rock band for a hobby."

Most people will let their [stereotypes](#) about accountants rule and pick (b). But, in fact, we have no idea what Bill does for a living—he could be a politician, a concert pianist, or a drug dealer—so it's more likely that only one random possibility, the rock band, is true, than that both (a) and (b) would happen to be true.

This line of research has suggested that people don't use logic when making decisions about the world. But the truth is more complicated, De Neys says. When most people read a question like the one above, there's a sense that something isn't quite right. "That feeling you have, that there's something fishy about the problem—we have a wide range of ways to measure that conflict," De Neys says. For example, he has shown with brain imaging that when people are thinking about this kind of problem, a part of their brain that deals with conflict is active. "They stick to their gut feeling and don't do the logical thing, but they do sense that what they are doing is wrong," De Neys says.

De Neys thinks this sense, that something isn't quite right with the decision you're making, comes from an intuitive sense of logic. Other scientists have found that children start thinking logically very early. In one study, 8-month-old babies were surprised if someone pulled mostly red balls out of a box that contained mostly white balls, proof that babies have an innate sense of probability before they can even talk. It makes sense, De Neys says, that this intuitive [sense](#) of logic would stick around in adults.

This research deals with the basics of how we think, but De Neys says it may help explain more complex decision-making. If you want to teach people to make better decisions, he says, "It's important to know which component of the process is faulty." For example, if you want to understand why people are smoking, and you think it's because they don't understand the [logic](#)—that smoking kills—you might put a lot of energy into explaining how smoking is bad for them, when the actual problem is addiction. It's a long way from a question about Bill's career to understanding something like why someone decides to get married, for example; but research like this should help," De Neys says.

Provided by Association for Psychological Science

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