

Character traits outweigh material benefits in assessing value others bring us

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When it comes to making decisions involving others, the impression we have of their character weighs more heavily than do our assessments of how they can benefit us, a team of New York University researchers has found.

"When we learn and make decisions about people, we don't simply look at the positive or negative outcomes they bring to us—such as whether they gave us a loan or helped us move," explains Leor Hackel, a doctoral candidate in NYU's Department of Psychology and the study's lead author. "Instead, we often look beyond concrete outcomes to form trait impressions, such as how generous a person seems to be, and these impressions carry more weight in our future social decisions."

The study, which appears in the journal *Nature Neuroscience*, offers new insights into how we learn about people from our interactions with them—and departs from existing scholarship. A prevailing view in the field posits that when we learn from positive or negative feedback, we come to see the people or things we learned about in terms of the benefits—or "[reward](#) value"—they bring us.

To explore the criteria for the appraisals we make, the research team, which also included David Amodio, an associate professor in NYU's Department of Psychology, and Bradley Doll, a post-doctoral fellow at NYU and Columbia University, conducted an experiment in which participants made a series of "reward-based" decisions while their neural activity was monitored using functional magnetic resonance imaging

(fMRI).

In the experiment, participants learned about other people in a series of interactions in an economic game played over the computer. For each round of the game, the participant viewed two other players and chose one to interact with; the chosen player would then share an amount of money. Some shared a lot and others shared little. Importantly, some players had larger pots of money than others, and so the amount they shared could represent a large or small proportion of their funds. This proportion represented a player's generosity, which was independent from the absolute value of the money they shared.

The aim of this part of the study was to determine whether participants learned the relatively generosity of a player—a "trait impression"—in addition to learning the monetary worth of the player.

The researchers' statistical tests showed that participants learned generosity information (the proportion the player gave relative to his endowment) more strongly than reward value (the absolute amount the player actually gave). The strong tendency to focus on a player's trait characteristics was striking, the study's authors note, given that computer modeling revealed that a focus on a player's reward value would have yielded more shared money to the participant.

During the studied period, the researchers examined the brain activity of the subjects as they learned about the reward value and generosity of other players. Here, they found that subjects used a particular part of the brain—the ventral striatum—in learning reward value from the feedback of players—a result consistent with previous research. However, they found that the striatum was also involved in learning about a player's trait generosity, over and above their reward value, suggesting this neurological region has a broader role in learning than previously thought.

Finally, when participants were asked to choose which players they would prefer to interact with in a future cooperative task, their preferences were strongly guided by their trait impressions of [players](#), relative to a player's reward value.

"We think our findings will change the way scientists think about the role of value and the striatum in learning about people and things," observes Amodio. "In other words, our results show that people naturally see others and even objects in terms of more general characteristics—and not just in terms of mere reward value."

More information: *Nature Neuroscience*, [DOI: 10.1038/nn.4080](https://doi.org/10.1038/nn.4080)

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