

How Others See Our Identity Depends on Moral Traits, Not Memory

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We may view our memory as being essential to who we are, but new [findings](#) suggest that others consider our moral traits to be the core component of our identity. Data collected from family members of patients suffering from neurodegenerative disease showed that it was changes in moral behavior, not memory loss, that caused loved ones to say that the patient wasn't "the same person" anymore.



The findings are published in *Psychological Science*, a journal of the [Association for Psychological Science](#).

"Contrary to what you might think — and what generations of philosophers and psychologists have assumed — memory loss itself doesn't make someone seem like a different person. Nor do most other factors, such as personality change, loss of higher-level cognition, depression, or the ability to function in daily activities," says psychological scientist Nina Strohminger of the Yale University School of Management, lead researcher on the study.

"This is interesting because it shows that someone can change quite a bit and still seem like basically the same person. On the other hand, if moral faculties are compromised, a person can be rendered unrecognizable."

Strohminger and co-author Shaun Nichols of the University of Arizona had conducted previous research showing that people tend to associate moral traits with identity over other mental or physical traits. They wanted to see if this association would hold up in the context of real-world cognitive change.

The researchers recruited 248 participants with family members suffering from one of three types of neurodegenerative disease: frontotemporal dementia, Alzheimer's disease, and amyotrophic lateral sclerosis (ALS). Both frontotemporal dementia and Alzheimer's disease are associated with cognitive

changes, and frontotemporal dementia is specifically associated with changes to frontal lobe function that can affect moral behavior. ALS, on the other hand, is primarily associated with loss of voluntary motor control.

The participants, mostly spouses or partners of the patients, reported the extent to which their loved one showed various symptoms typical of their disease (rating each symptom as none, mild, moderate, or severe). They also indicated the extent to which their family member had changed on 30 different traits, and how much their relationship with the patient had deteriorated since the onset of the disease.

Finally, participants reported how much they perceived the patient's identity as having changed as a result of the disease, answering questions like "Do you feel like you still know who the patient is?" and "Regardless of the severity of the illness, how much do you sense that the patient is still the same person underneath?"

The results revealed that both Alzheimer's disease and frontotemporal dementia were associated with a greater sense of identity disruption than ALS, with frontotemporal dementia leading to the greatest deterioration in identity. Importantly, the association could not be explained by differences in overall functional decline.

Statistical models showed that perceived identity change was strongly linked with change in moral traits. Almost no other symptom, including depression, amnesia, and changes in personality traits, had an observable impact on perceived identity change.

The researchers also found that the degree of perceived identity change was associated with how much the participants thought their relationship with the patient had deteriorated, and this association was driven by the degree of change in the patient's moral traits:

"Continuing to see a loved one as the same person they've always been is crucial to the health of the social bond," explains Strohming.

Aphasia was also linked with perceived identity, albeit not as strongly as morality:

"When you think about it, it makes perfect sense: Language is the most precise tool we have for conveying the content our minds to others," says Strohming. "If someone loses this ability, it may be easy to see that person as having vanished as well."

Together, these findings suggest that moral capacities form the core of how we perceive individual identity.

Given that an estimated 36 million people are living with some form of neurodegenerative disease worldwide, these findings have direct implications for our everyday experience:

"Most of us know someone with neurodegenerative disease or some form of cognitive decline. Whether a loved one's self disappears or persists through the progression of this condition depends very much on which parts of the mind are affected," Strohming concludes.

With these findings in mind, the researchers argue that future therapies for neurodegenerative disease must address the issue of preserving moral function, a factor that is typically overlooked, in order to ensure the well-being of patients and their families.

All data and materials have been made publicly available via Open Science Framework and can be accessed at <https://osf.io/ezqft/> and <https://osf.io/6rfmv/>, respectively. The complete Open Practices Disclosure for this article can be found at <http://pss.sagepub.com/content/by/supplemental-data>. This article has received badges for Open Data and Open Materials. More information about the Open Practices badges can be found at <https://osf.io/tvyxz/wiki/1.%20View%20the%20Badges/> and <http://pss.sagepub.com/content/25/1/3.full>.