

Inherited traits can be overstated, study shows

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Behavioral similarities between parents and their offspring are less marked than is often suggested, a new study shows.

People are only slightly more likely to share [personality traits](#) with their parents than they are with a random stranger, researchers say.

The study concludes it is impossible to accurately predict a child's patterns of thinking, feeling and behaving from those of their mother or father.

The findings do not mean traits are not influenced by inherited genes, but that [genetic factors](#) are only half the reason people differ in personality, the researchers say. Moreover, the team says, people only inherit half of their genes from any one parent.

"This is why the genes that a parent passes on to their children are not sufficient to make most of their personality traits similar," says lead author Dr. René Mottus.

The study was carried out by a team from the University of Edinburgh's School of Philosophy, Psychology and Language Sciences and the University of Tartu in Estonia.

Researchers recruited more than 1,000 pairs of relatives from the Estonian Biobank—a large collection of health information from volunteers across the country.

More than 2,500 participants reported their own levels of five key traits—openness, conscientiousness, extraversion, agreeableness and neuroticism, as well as [life satisfaction](#). Each person was a relative of at least one other participant.

Second opinion

Each person's ratings of their personality traits were backed up by a [second opinion](#) from an "informant"—usually the participant's partner.

This made trait assessment much more accurate than in most previous studies that only used self-ratings.

The results put the heritability of personality traits and life satisfaction at around 40%—compared with 25% in a typical self-report study.

Researchers say even this is not enough to suggest people are much more likely to share personality traits with parents than they are with a random stranger.

Besides, comparison of a person's first-degree relatives—parents, siblings or offspring—with more [distant relatives](#) provided no evidence that shared family experiences would make people more similar.

There is, for instance, no evidence that being adopted into a family makes people's personality traits similar to their [foster parents](#) or other children in the family.

Dr. Mottus says the findings do not conclude that personality traits are not heritable, but that this heritability is not significant. Instead, personality traits are most likely inherited through genes rather than through upbringing.

"According to the most accurate estimates, about two-thirds of the reasons that people have different personality traits have something to do with their genes," says Dr. Mottus.

"But this is not enough to make parents and children much more similar than strangers."

The study has been released as a [pre-print](#) on the *PsyArXiv* server and has yet to be peer-reviewed.

More information: René Mõttus et al, Familial Transmission of Personality Traits and Life Satisfaction Is Much Higher Than Shown in Typical Single-Method Studies, *PsyArXiv* (2024). [DOI: 10.31234/osf.io/7ygp6](https://doi.org/10.31234/osf.io/7ygp6)

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