

MIT Press • Open Encyclopedia of Cognitive Science

Transformative Experience

M.J. Crockett¹

¹Princeton University

MIT Press

Published on: Apr 02, 2026

DOI: <https://doi.org/10.21428/e2759450.8f8f9a82>

License: [Creative Commons Attribution-NonCommercial 4.0 International License \(CC-BY-NC 4.0\)](#).

Transformative experiences are revelatory and life changing. They provide new knowledge that you could not gain without having the experience, and this new knowledge changes you profoundly: your core preferences, your values, and your priorities and goals in life. Examples of transformative experiences include becoming a parent, moving to a new country, losing a loved one, going to war, falling in love, or facing a serious illness. The ubiquity of transformative experiences, their significant implications for human well-being, and the questions they raise for the nature of knowledge, decision-making, and the self have inspired diverse research programs across the cognitive sciences.

History

Fascination with transformative experiences spans millennia, from ancient epics like Homer’s *Odyssey*, to William James’s early psychological writings on religious experience, to contemporary cognitive science. Empirical work across the social and biological sciences has investigated aspects of transformative experiences since the early 20th century ([Chirico et al., 2022](#); [Yaden et al., 2017](#)). Within analytic philosophy, theoretical roots of the concept can be found in David Lewis’s work on how experiences teach us something new ([Lewis, 1990](#)) and Edna Ullmann-Margalit’s work on how big life decisions confound rationality ([Ullmann-Margalit, 2006](#)). L. A. [Paul’s \(2014\)](#) book *Transformative Experience* articulated a rigorous definition of the concept grounded in epistemology and metaphysics and identified a treasure trove of open empirical questions for cognitive science. In Paul’s framework, *transformative experiences* entail both *epistemic transformation* and *personal transformation*. Following its publication, interdisciplinary research on transformative experience has flourished.

Core concepts

Epistemic transformation

An *epistemic transformation* occurs when an experience teaches you something new—something you could not imagine without having the experience, like tasting durian fruit for the first time ([Paul, 2014](#)). Before you have tasted durian fruit, you don’t know what it’s like to taste it. Testimony from others, like, “It smells like dead rats,” or, “Something you either love or despise” ([Paul, 2014](#), p. 35), is insufficient to capture the phenomenal character of the experience and how you value it. When you taste durian for the first time, you are epistemically transformed—you now know what it’s like and how you value it.

Personal transformation

Some experiences bring about not just epistemic transformation but also *personal transformation*; they change who you are, radically altering your core preferences, values, goals, or priorities. Personally transformative experiences change “what it is like for you to be you” ([Paul, 2014](#), p. 16). A canonical example is becoming a parent; parenthood profoundly changes who you are and what you care about deeply. As with epistemic transformation, testimony from others cannot tell you what it will be like *for you to be you* after you have a child [see [Parenting](#)].

Transformative decisions

Some transformative experiences are ones we actively decide to undergo; these kinds of decisions are called *transformative decisions*. Many of life's most important decisions are transformative decisions ([Hechtlinger et al., 2024](#); [Paul, 2014](#)). Transformative decisions pose a challenge for rational decision-making. We cannot straightforwardly compare the subjective value of choosing versus avoiding a transformative experience because (1) we do not know what the experience will be like, and (2) the experience will change how we value things. Because of (1) and (2), transformative decisions cannot be made rationally ([Paul, 2014](#)).

Questions, controversies, and new developments

Rationality of transformative decisions

The claim that transformative decisions cannot be made rationally has generated significant debate [see [Foundations of Rationality](#)]. For example, some scholars argue that testimony from others about what a transformative experience is like can be sufficient to make transformative decisions rationally ([Bloom, 2019](#); [Dougherty et al., 2015](#)). One might view transformative decisions as rational by treating them as a social dilemma, aiming to maximize general value for present and future selves ([Pettigrew, 2019](#)). Cognitive science can inform these debates by furnishing empirical evidence about the cognitive mechanisms of transformative experiences and decisions.

Cognitive mechanisms

There are numerous empirical questions about the cognitive mechanisms of transformative experiences and decisions. Potential research directions include whether epistemic transformations necessarily precede personal transformation or whether both transformations can occur in parallel, to what extent epistemic and personal transformations are sudden versus gradual, and whether transformative experiences involve not just epistemic gains but also losses, in which you lose access to knowing what experiences were like for you before the transformation ([Bailey, 2023](#)). The computational mechanisms of epistemic transformation are also being explored ([Ongchoco et al., 2024](#)), as these have important implications for how people make transformative decisions in practice ([Hechtlinger et al., 2024](#); [Zoh et al., 2024](#)). Some data suggests that people might scaffold the subjective value of transformative decisions on current subjective values ([Barron et al., 2013](#)).

Methodological challenges

A major challenge in studying transformative experiences and decisions empirically is that they are difficult to create “on demand” in the laboratory. One notable exception is studies of psychedelic experiences, which have recorded both epistemic and personal transformations following administration of psychedelic substances in a controlled laboratory setting ([Griffiths et al., 2006](#)). Other work has taken a lab-in-the-field approach, studying the psychological correlates of transformative psychedelic and spiritual experiences as they are happening out in the world ([Forstmann et al., 2020](#); [Yudkin et al., 2022](#)).

Another promising approach is to study subjective reports of participants' transformative experiences in their own words ([Hechtlinger et al., 2024](#)). Because one feature of transformative experiences is that they cause lasting epistemic and personal changes, longitudinal approaches may be necessary to capture these changes ([Griffiths et al., 2006](#); [Yudkin et al., 2022](#)).

Broader connections

Future empirical work can explore connections between transformative experience and social cognition [see [Social Cognitive Neuroscience](#)]. For instance, choosing for future selves resembles deciding how to allocate resources between different people (i.e., interpersonal utility comparisons; [Briggs, 2015](#); [Harsanyi, 1955](#)); in both cases, the decision requires comparing values between minds that are inaccessible to one another. Both of these problems might have a common solution. Transformative experiences could also expand people's capacity to empathize with others who have undergone similar experiences; if this is the case, transformative experiences could be morally desirable. Transformation also raises important questions about the self and identity development [see [Social Identity](#)]. Having a well-developed identity is crucial for health and well-being, but transformative experiences in adulthood, despite their ubiquity, have received remarkably little empirical attention in identity research. Finally, transformative experiences raise vital epistemological questions about the extent to which embodied experience is required for knowledge ([Adam, 2006](#))—questions that are all the more pressing as individuals contend with disembodied “artificially intelligent” agents in their public and private lives.

Acknowledgments

The author acknowledges support from the John Templeton Foundation (#63313).

Further reading

- Hechtlinger, S., Schulze, C., Leuker, C., & Hertwig, R. (2024). The psychology of life's most important decisions. *American Psychologist*, 81(2), 157–183. <https://doi.org/10.1037/amp0001439>
- Paul, L. A. (2015). Précis of transformative experience. *Philosophy and Phenomenological Research*, 91(3), 760–765. <https://doi.org/10.1111/phpr.12249>
- Yudkin, D. A., Prosser, A. M. B., Heller, S. M., McRae, K., Chakroff, A., & Crockett, M. J. (2022). Prosocial correlates of transformative experiences at secular multi-day mass gatherings. *Nature Communications*, 13(1), 2600. <https://doi.org/10.1038/s41467-022-29600-1>

References

- Adam, A. (2006). *Artificial knowing: Gender and the thinking machine*. Routledge.



- Bailey, O. (2023). What must be lost: On retrospection, authenticity, and some neglected costs of transformation. *Synthese*, 201(6), 189. <https://doi.org/10.1007/s11229-023-04179-2>

↩

- Barron, H. C., Dolan, R. J., & Behrens, T. E. J. (2013). Online evaluation of novel choices by simultaneous representation of multiple memories. *Nature Neuroscience*, 16(10), 1492–1498.

<https://doi.org/10.1038/nn.3515>

↩

- Bloom, P. (2019). Arguing with the vampire. *Rivista Internazionale Di Filosofia e Psicologia*, 10(3), 320–329.

<https://doi.org/10.4453/rifp.2019.0027>

↩

- Briggs, R. (2015). Transformative experience and interpersonal utility comparisons. *Res Philosophica*, 92(2), 189–216. <https://doi.org/10.11612/resphil.2015.92.2.7>

↩

- Chirico, A., Pizzolante, M., Kitson, A., Gianotti, E., Riecke, B. E., & Gaggioli, A. (2022). Defining transformative experiences: A conceptual analysis. *Frontiers in Psychology*, 13, 790300.

<https://doi.org/10.3389/fpsyg.2022.790300>

↩

- Dougherty, T., Horowitz, S., & Sliwa, P. (2015). Expecting the unexpected. *Res Philosophica*, 92(2), 301–321.

<https://doi.org/10.11612/resphil.2015.92.2.5>

↩

- Forstmann, M., Yudkin, D. A., Prosser, A. M. B., Heller, S. M., & Crockett, M. J. (2020). Transformative experience and social connectedness mediate the mood-enhancing effects of psychedelic use in naturalistic settings. *Proceedings of the National Academy of Sciences*, 117(5), 2338–2346.

<https://doi.org/10.1073/pnas.1918477117>

↩

- Griffiths, R. R., Richards, W. A., McCann, U., & Jesse, R. (2006). Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance.

Psychopharmacology, 187(3), 268–283. <https://doi.org/10.1007/s00213-006-0457-5>

↩

- Harsanyi, J. C. (1955). Cardinal welfare, individualistic ethics, and interpersonal comparisons of utility.

Journal of Political Economy, 63(4), 309–321. <https://doi.org/10.1086/257678>

↩

- Hechtlinger, S., Schulze, C., Leuker, C., & Hertwig, R. (2024). The psychology of life's most important decisions. *American Psychologist*, 81(2), 157–183. <https://doi.org/10.1037/amp0001439>

↩

- Lewis, D. K. (1990). What experience teaches. In W. G. Lycan (Ed.), *Mind and cognition: A reader* (pp. 29–57). Blackwell.

↩

- Ongchoco, J. D. K., Davis, I. M., Jara-Ettinger, J., & Paul, L. A. (2024). When new experience leads to new knowledge: A computational framework for formalizing epistemically transformative experiences. *Open Mind*, 8, 1291–1311. https://doi.org/10.1162/opmi_a_00168

↩

- Paul, L. A. (2014). *Transformative experience*. Oxford University Press.

↩

- Pettigrew, R. (2019). *Choosing for changing selves*. Oxford University Press.

↩

- Ullmann-Margalit, E. (2006). Big decisions: Opting, converting, drifting. *Royal Institute of Philosophy Supplements*, 58, 157–172. <https://doi.org/10.1017/S1358246106058085>

↩

- Yaden, D. B., Haidt, J., Hood Jr., R. W., Vago, D. R., & Newberg, A. B. (2017). The varieties of self-transcendent experience. *Review of General Psychology*, 21(2), 143–160. <https://doi.org/10.1037/gpr0000102>

↩

- Yudkin, D. A., Prosser, A. M. B., Heller, S. M., McRae, K., Chakroff, A., & Crockett, M. J. (2022). Prosocial correlates of transformative experiences at secular multi-day mass gatherings. *Nature Communications*, 13(1), 2600. <https://doi.org/10.1038/s41467-022-29600-1>

↩

- Zoh, Y., Paul, L. A., & Crockett, M. J. (2024). How the evaluability bias shapes transformative decisions. *Synthese*, 203(2), 62. <https://doi.org/10.1007/s11229-023-04474-y>

↩