

The Ecological Rationality of Heuristics

Gerd Gigerenzer

Max Planck Institute for Human Development, Berlin, Germany

The study of bounded rationality set out with the goal of improving empirical realism in economics and ended up becoming indistinguishable from neo-classical economics with its reliance on “as-if” arguments. Although the program of adding free parameters to existing as-if models (as in prospect theory and inequity aversion theory) allows for a better fit of data – after the fact – it does not necessarily improve realism or even predictions. What is more, the program has been hampered by its preoccupation with irrationality, spending much effort listing cognitive fallacies that we Homer Simpsons cannot help but to fall prey to. Many of these alleged fallacies, however, turn out to be genuine human intelligence rather than logical errors or flaws in the statistical thinking of behavioral economics rather than of ordinary people. Research on bounded rationality could do better, be more courageous and provide a true revolution as once envisaged by Herbert Simon. In this talk I present a framework that extends decision making to situations of Knightian uncertainty in which individuals succeed by using intelligent heuristics and to the study of ecological instead of logical rationality. Heuristics are rules that guide economic agents in where to search for information, when to stop and how to make a final choice. The methodological basis includes the bias-variance trade-off, algorithmic modeling of heuristics and an analysis of their ecological rationality. Under uncertainty, heuristics are often more accurate than complex parameterized models in making predictions, which is why individuals and institutions rely on heuristics, not because of human cognitive limitations.

References

- Gigerenzer, G. (2015). *Simply rational: Decision making in the real world*. New York: Oxford University Press.
- Gigerenzer, G., & Selten, R. (Eds.). (2001). *Bounded rationality: The adaptive toolbox*. Cambridge, MA: MIT Press.