

23. Pinker 1998, Rationality and the robot challenge

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Last time: Cordelia Fine on the empirical evidence for irrationality coming from the “heuristics and biases” tradition in psychology.

For many of these empirical effects, there are competing (rational vs. irrational) explanations!

How to adjudicate?

Example: **Belief Perseverance**; the tendency to maintain your beliefs (to some degree) even after they’ve been debunked.

- *Irrational explanation*: Once beliefs are formed, people resist evidence against them beyond what’s reasonable.
- *Rational explanation*: Sophisticated trust management.
→ If fully trust debunking, revert to original estimate; if fully trust feedback, stay at high estimate; if unsure, go in between.

How to assess these competing explanations?

→ Empirical predictions?

→ Explanatory picture?

“Heuristics and biases” vs. “rational analysis”.

Pinker thinks the rational picture fits better with cognitive science.

It’s incredibly challenging to engineering a mind that can do even a fraction of what we do effortlessly.

- Vision routinely solves “ill-posed problems”.
- Motor control is unparalleled.
- Common sense and the “frame problem”.

Wheels vs. legs. Cassie the robot, 2021.

Always infinitely many consequences of any action! Which are relevant?

Argument for rational explanations:

P1 It requires incredibly sophisticated computational systems to accomplish the everyday feats of human cognition.

P2 If P1, we should expect most aspects of human cognition to be highly sophisticated and finely tuned.

P3 If P2, we should favor rational explanations of human cognition.

C We should favor rational explanations of human cognition.