

UPDATING, EVIDENCE EVALUATION, AND OPERATORS: A FRAMEWORK FOR UNDERSTANDING BELIEF

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WHAT EXPLAINS IRRATIONAL BELIEFS?

BELIEF FRAMEWORK

We propose a novel framework for understanding belief

LEVEL 1: UPDATING

Voluntary belief is impossible: **Try to believe you've won the lottery!**
 Instrumental belief is unlikely:
 1. Beliefs contribute to achieving goals **by being true** (Fodor, 2000)
 2. Beliefs are often formed well **in advance** of decisions – instrumental beliefs are problematic if truth is important later (Gallistel, 1990)

LEVEL 2: EVIDENCE EVALUATION

Characteristics of Level 2 Processes:
 1. **Necessarily Heuristic**
 Impossible to, e.g., search for all relevant information
 2. **Cognitively Penetrable**
 Unlike updating, motivated search or reasoning is possible

We identify five Evidence Evaluation Processes

INVARIANT CHARACTERISTICS

Stable factors that make **available** various Level 2 **operators**

- Operators*: specific algorithms that implement Level 2 processes (e.g., confirmatory vs. disconfirmatory search)
- Operator Availability*: the accessibility of Level 2 operators determines how people reason about new evidence

IMPLICATIONS

Belief updating itself may be rational, but Evidence Evaluation processes are fallible and subject to motivation

- This results in erroneous and motivated beliefs
 - For example, you can't choose to believe the Earth is flat, but you can choose to look for evidence of a flat Earth, or to try to debunk scientific evidence of roundness**

PAPER

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