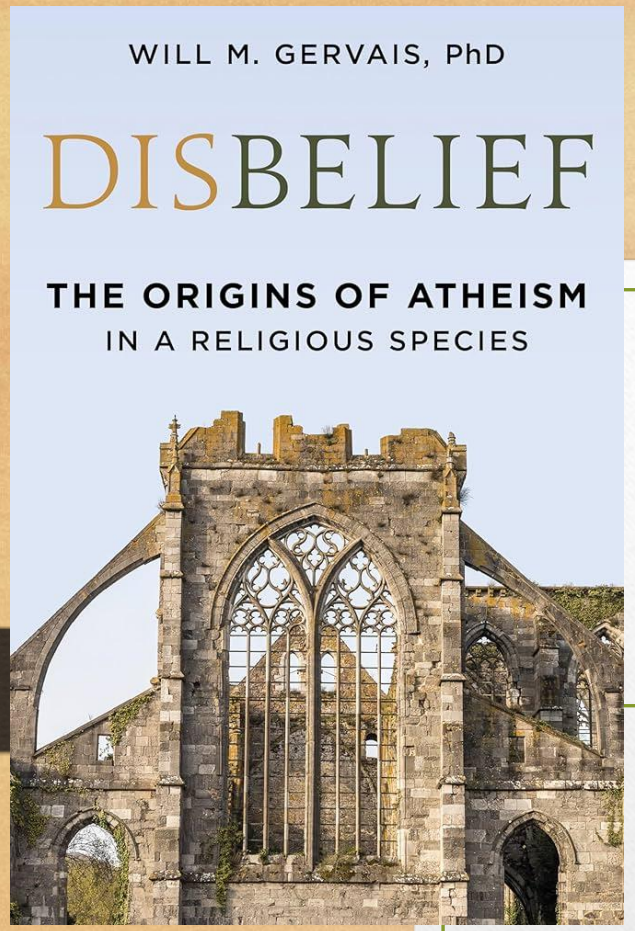
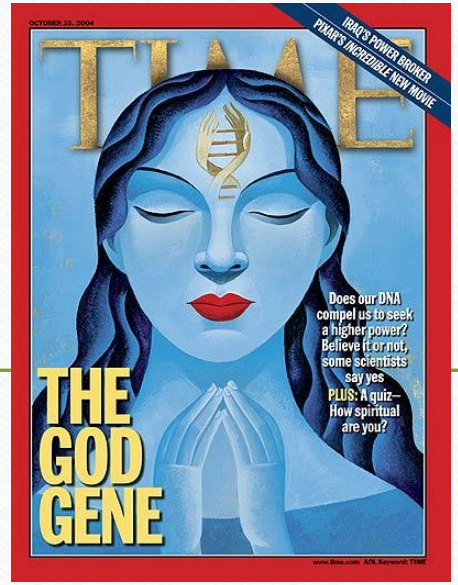


Scientific Study of Religion 3

Dr. Saeed Garmaroudi



Previously discussed





- Popular Nonanswers to the Puzzle of Faith
  - Opiate of the masses
    - Terror management
    - Hellfire
  - God center of our brains, or a God gene
  - Childhood Credulity

New atheism

Embodied Cognitive science

Mystical stance

Neuroscience

Cognitive science of religion

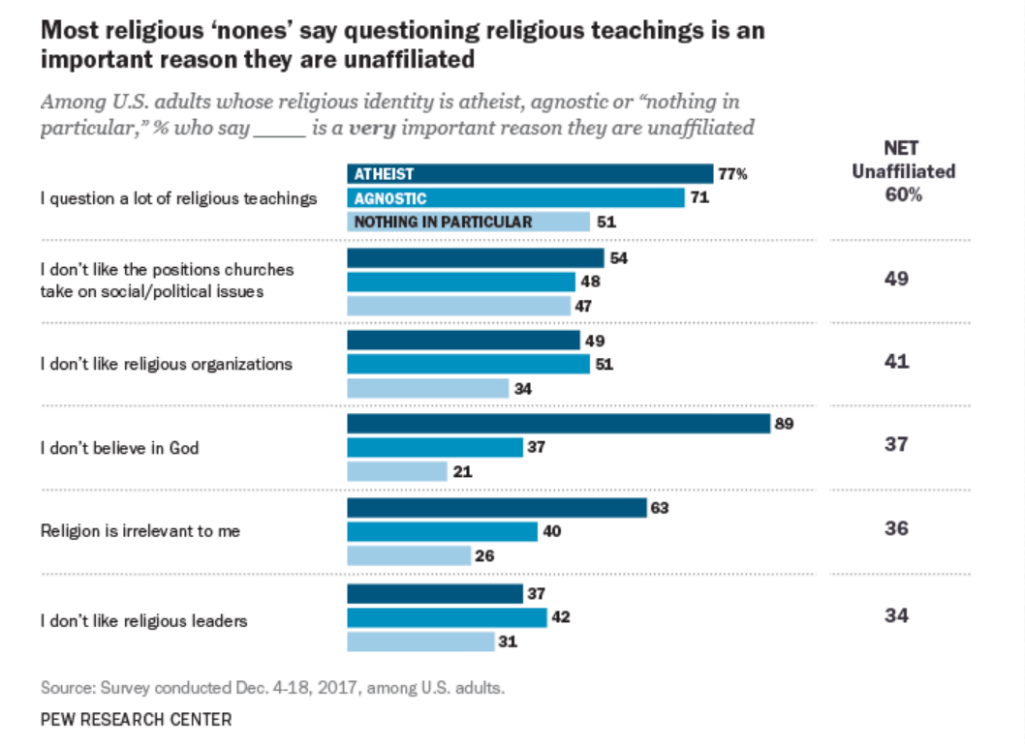
Predictive processing

Psychoanalytic perspective

Cultural Evolution

Is Atheism more rational?

- Rational struggle against religious indoctrination
- Getting into science, began asking hard questions about the fit
- Atheism resulting from rational, often effortful, thinking?
  - Science classes



Rational atheism thesis

- Rational thinking is a primary, and perhaps even necessary, cause of atheism
- Popular among lay atheists and celebrity atheists
  - Richard Dawkins: After reading Darwin
  - Michael Shermer: Philosophy classes
  - Sam Harris: After reading new atheism work



Here is the story!

- What does updated science say?
- Might atheism be rooted in rational thinking?
  - Upbringing or rational thinking?



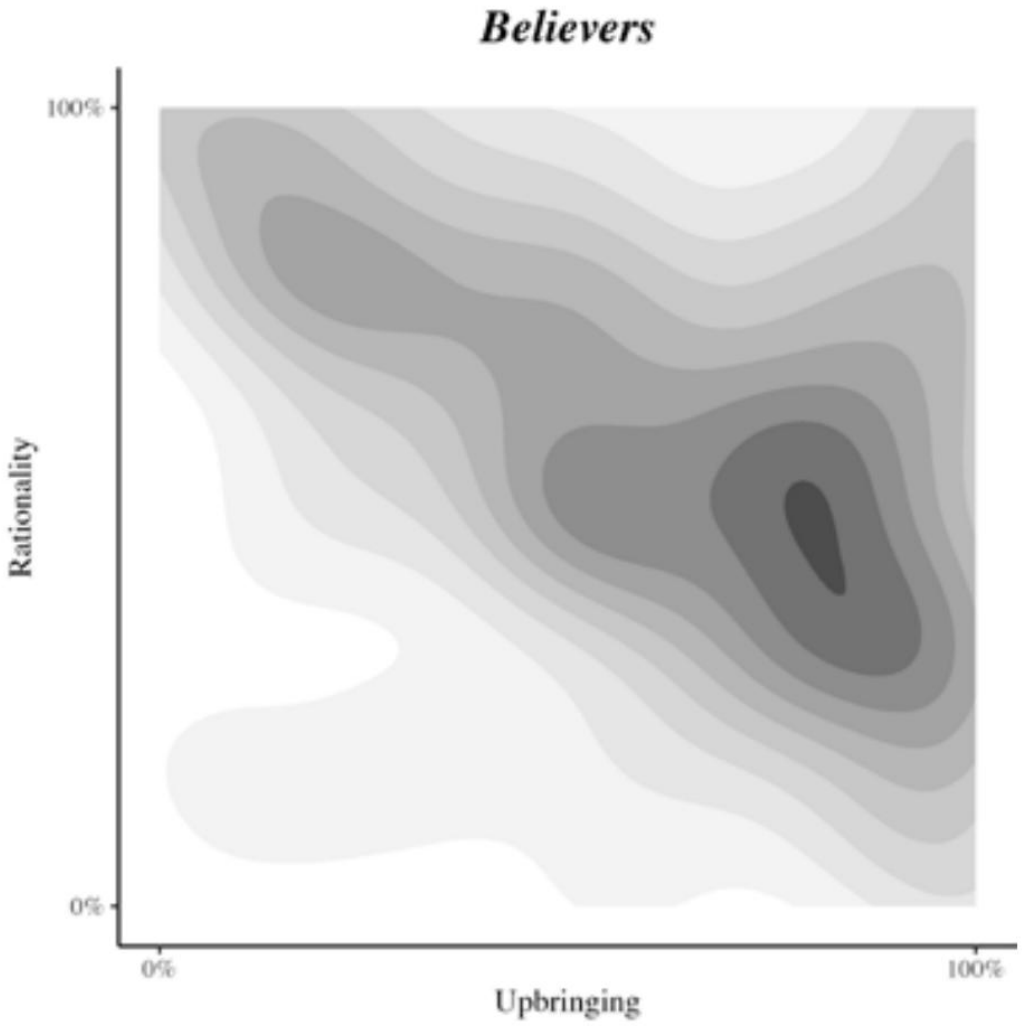


Figure 3.1. Religious believers (United States) attribute their faith largely to upbringing, with mixed attributions regarding rationality.

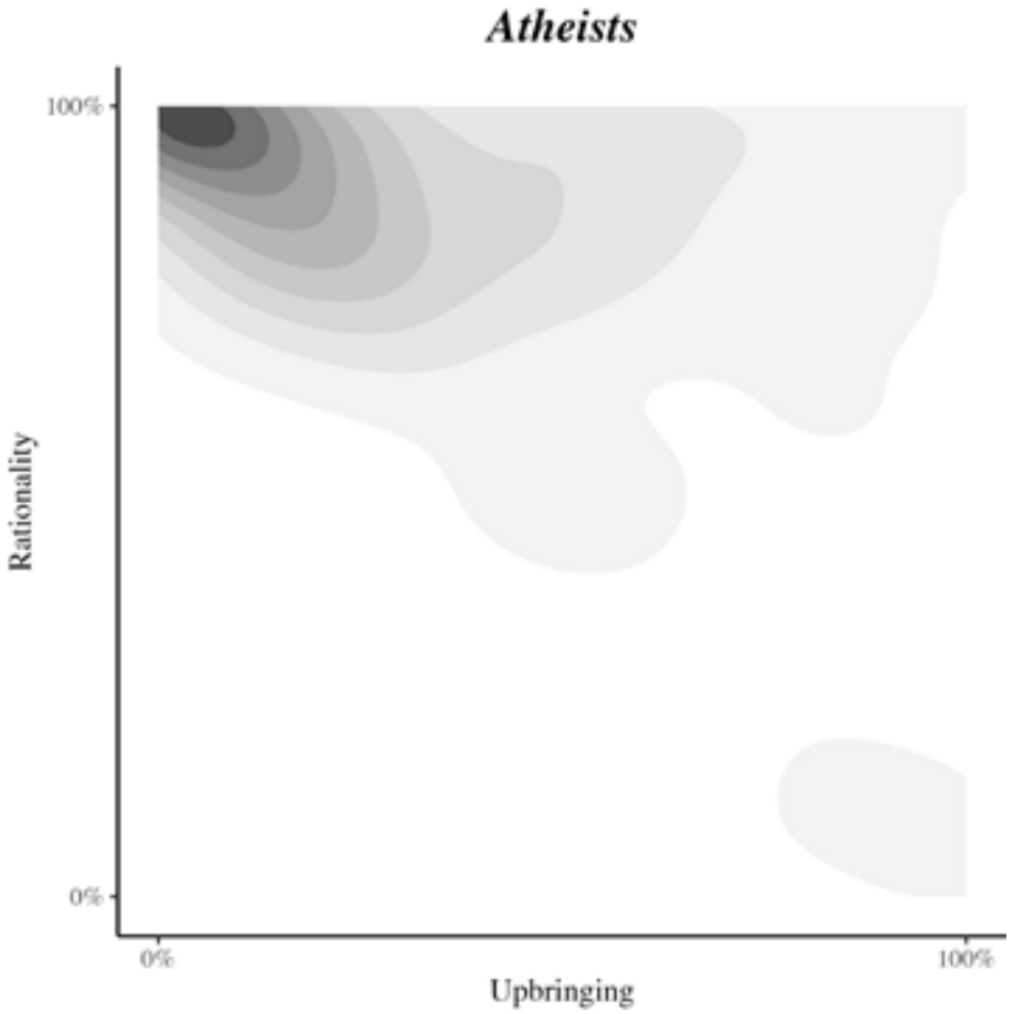
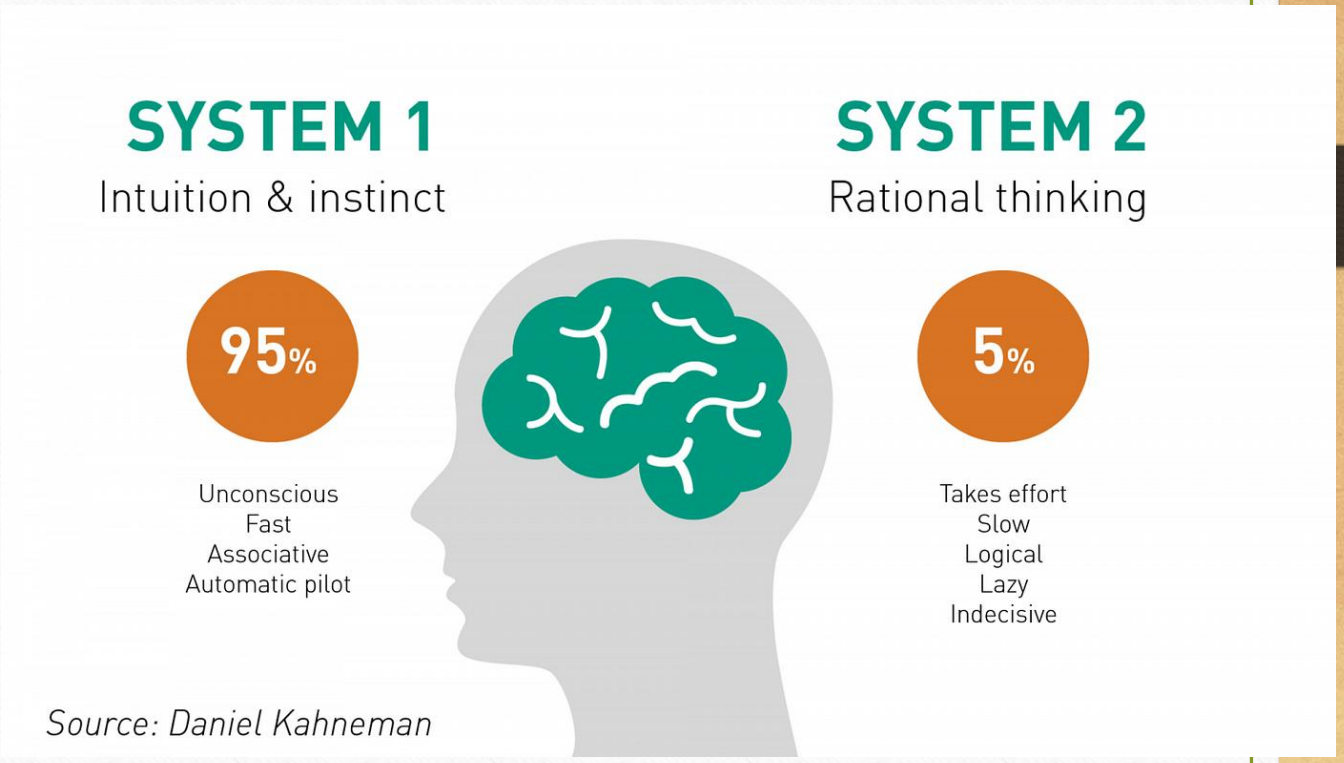


Figure 3.2. Atheists (United States) attribute their disbelief to rationality, rather than upbringing.

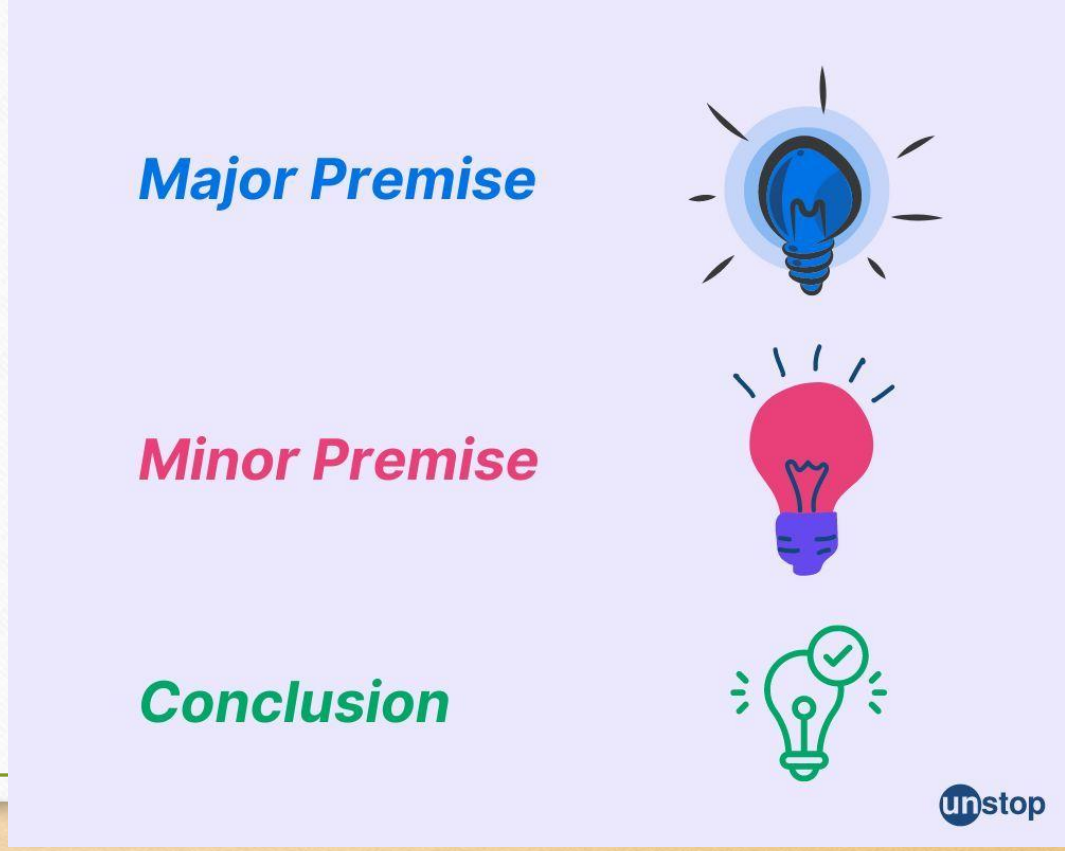
Rational vs. intuitive thinking

- William James and Jung
- System 1 and system 2
- Head vs. heart
- Analytic vs. intuitive thinking



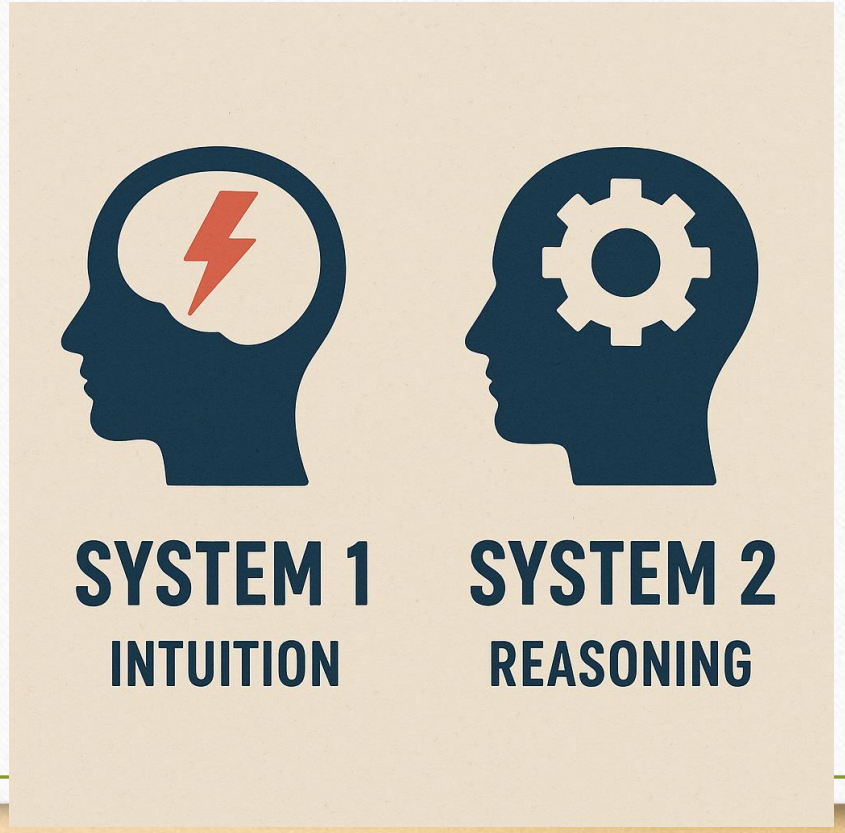
System 1 and System 2 Examples:

- Premise 1: All plants are healthy.
- Premise 2: Cocaine is a plant.
- Conclusion: Cocaine is healthy!



About system 1

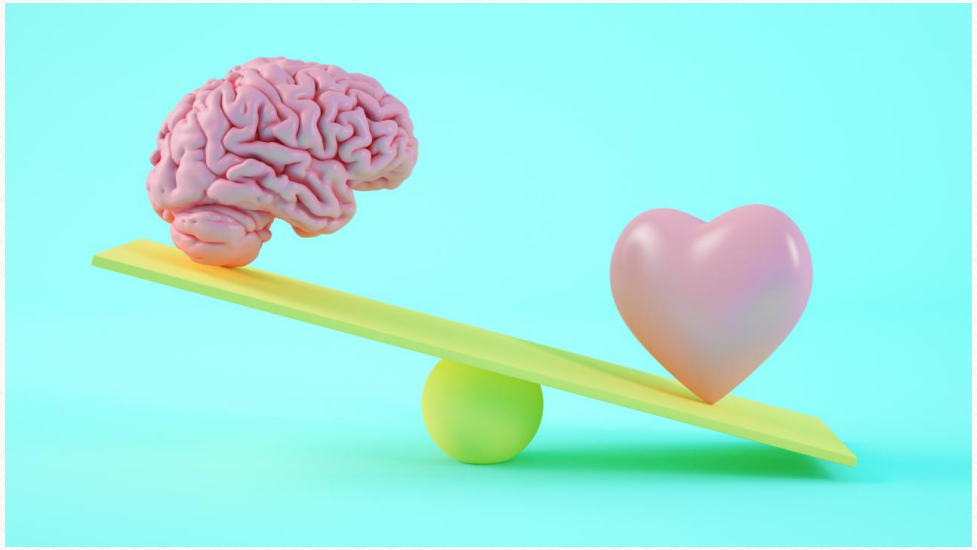
- It is true (fluency and assumptions)
  - Gravity
- Value judgment
  - Damage to limbic system
- Performance vs. Imagery




IAIN MCGILCHRIST
VOLUME I:
THE WAYS TO TR
THE MATTER WITH THINGS
IAIN MCGILCHRIST
VOLUME II:
WHAT THEN IS TR
THE MATTER WITH THINGS
SALTER
ZERO
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TARE
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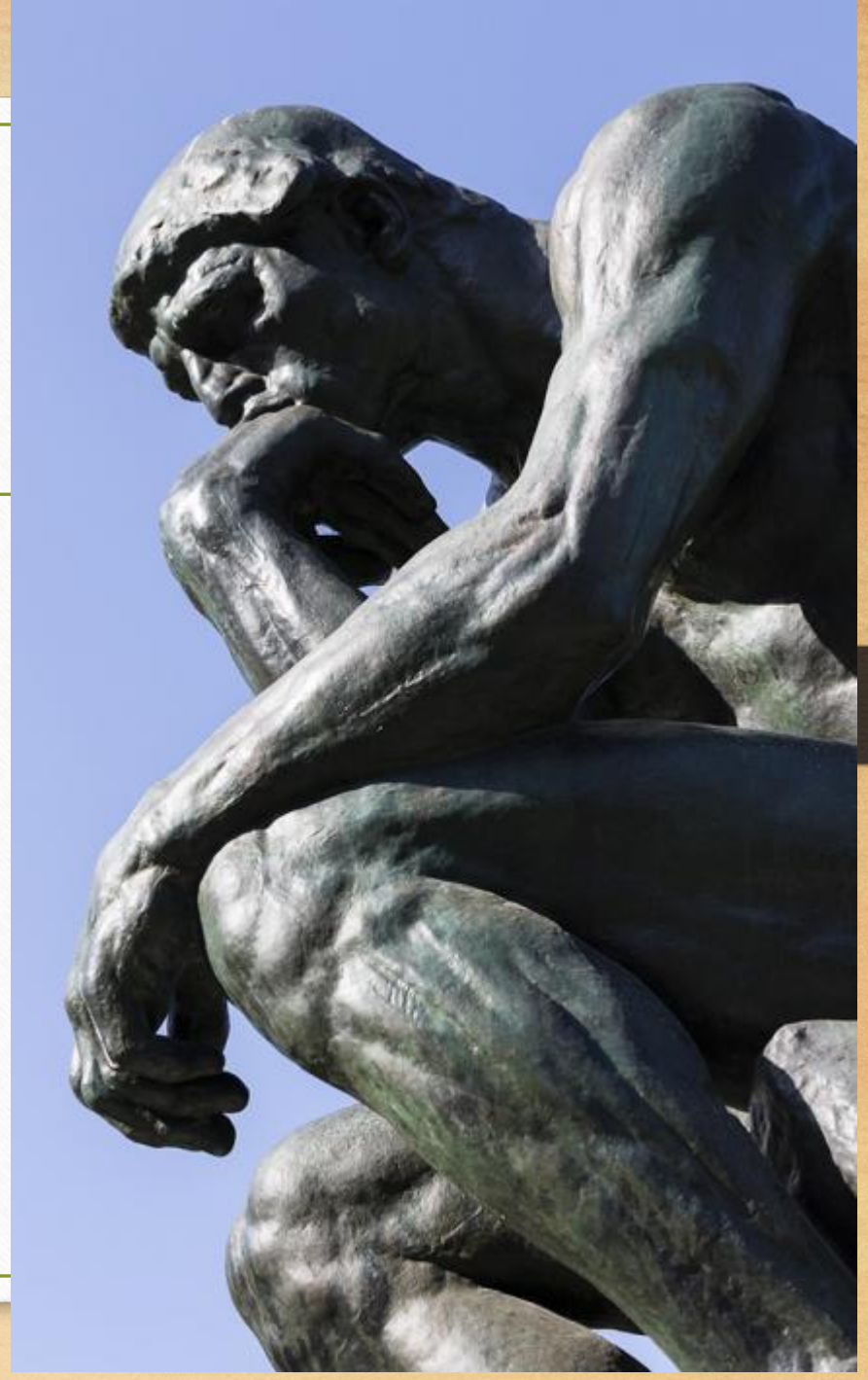
Cognitive styles

- Individual differences
  - In both engagement and aptitude with both systems
  - Intuitive thinkers to rational reflective thinkers.



Experiments

- Think about times they'd relied on either intuitions or rationality
  - Pushed toward rationality: lower levels of religious belief
- Rodin's The Thinker
  - looked at The Thinker for a bit: lower levels of religious belief
- Published in Science
  - Main or even an especially major contributor to atheism?
  - The media ran with it



- A Manual for Creating Atheists



Figure 3.3. Headline sensationalizing the results of Gervais and Norenzayan (2012). *Source:* Screenshot from https://abcnews.go.com/blogs/health/2012/04/26/logic-linked-to-religious-disbelief-study-implies.

Painfully, Science Self-Corrects!

- The results also attracted attention within academia!
- Small sample sizes!
  - Pattern that does not exist in the population
  - Pattern that does exist in the population
- Attempt to replicate the Thinker study with larger sample
  - Author helped them with methodology
  - The Thinker did exactly nothing to people's religious beliefs
  - His personal feelings while in his first job
    - Similar to the Ted talk about gestures



More studies!

- Three more studies failing to support the analytic atheism thesis
- On his personal blog
  - "Our study, in hindsight, was outright silly."



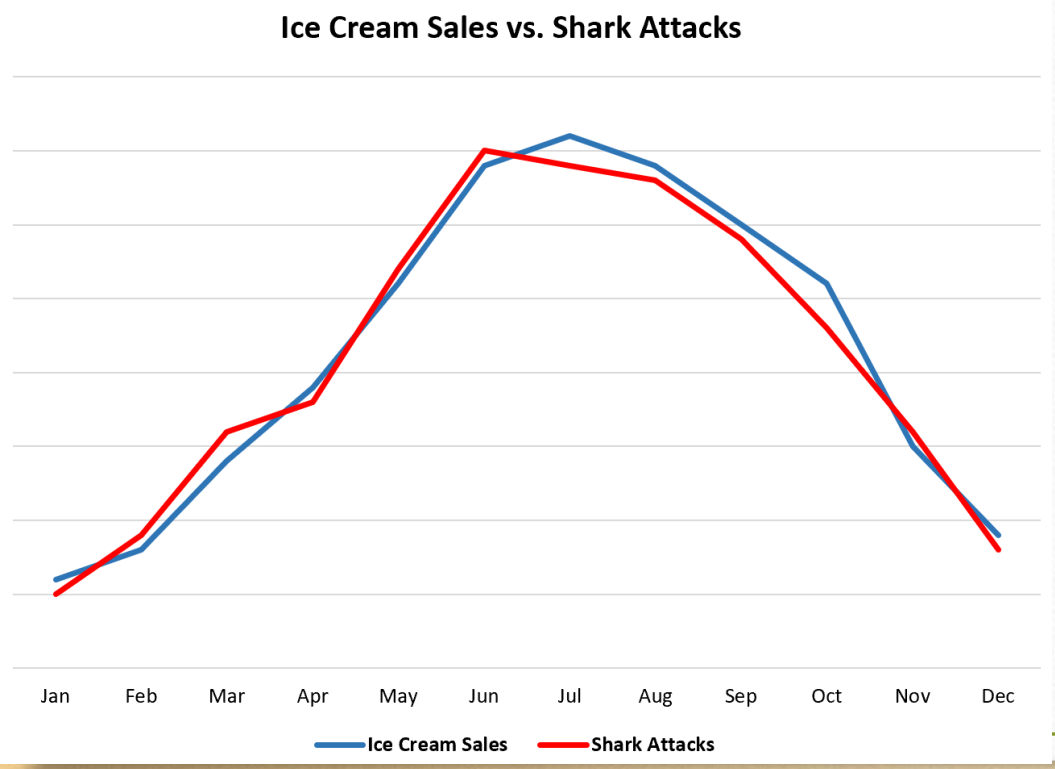
Replication Crisis

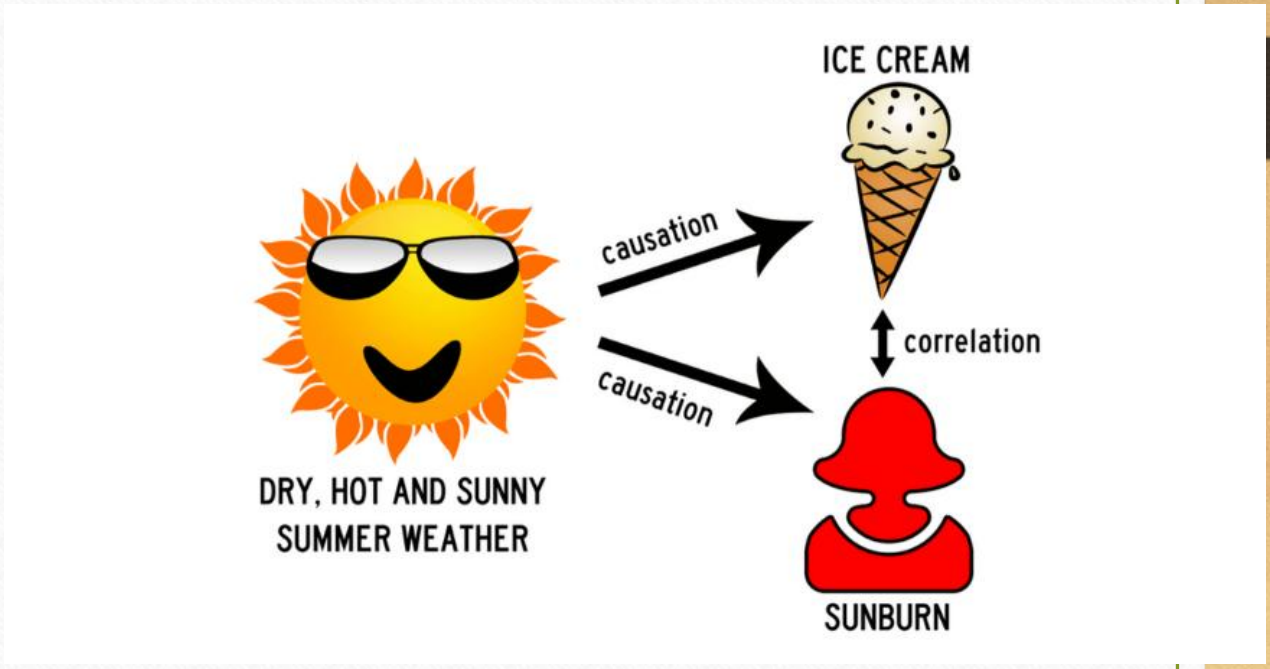
- **Replication Crisis in Psychology (OSC, 2015)**
- Nosek et al. (Open Science Collaboration, 2015) conducted a large-scale replication effort
- 100 studies selected from flagship psychology journals
- Independent researchers attempted direct replications
- Results:
  - ~⅓ replicated well
  - ~⅓ showed mixed results
  - ~⅓ largely failed to replicate (some showed opposite effects)

•Response focused on methodological fixes:

- Better designs
- Larger samples
- More replications
- Greater humility in claims

A little about correlation





How about correlation?

- Conducted meta-analysis
  - A correlation of -0.18
  - 3 percent of shared variability
- It is not giving us much information about people's religious beliefs
- Not very impressive



Cross-cultural Study

- r = -0.05
- 0.2 percent of shared variability
- US, Singapore and Australia
- Most strongly evident in the more religious countries
- One more study!
  - No results even among people with a strong religious upbringing

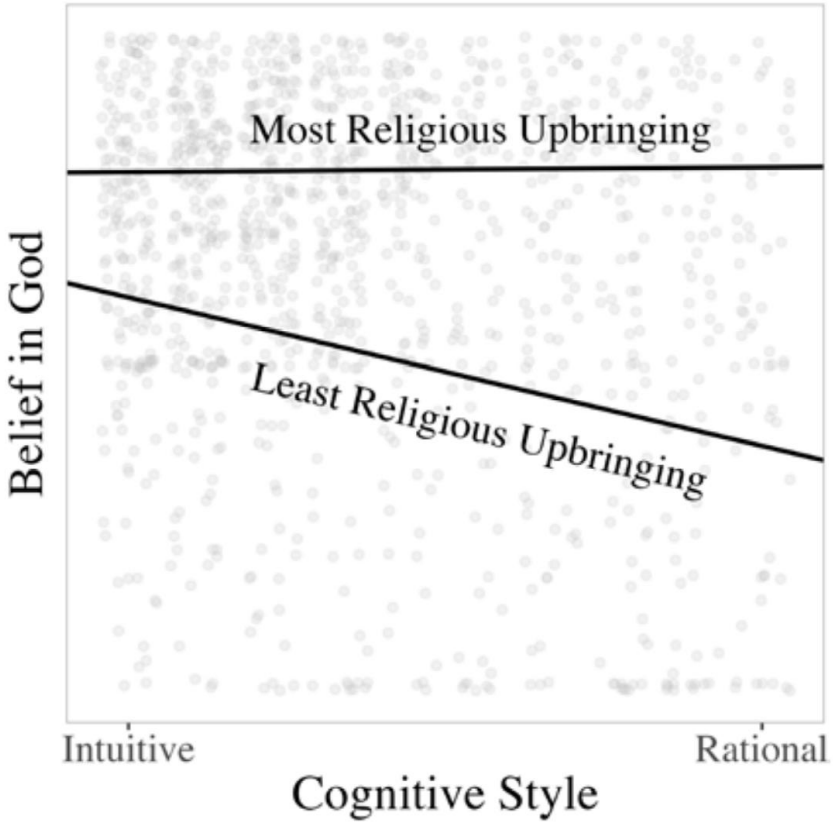


Figure 3.4. Rational cognitive style is entirely unassociated with religious disbelief among people with strong religious upbringings. *Source:* W. M. Gervais, M. B. Najle, and N. Caluori, "The Origins of Religious Disbelief: A Dual Inheritance Approach," *Social Psychological and Personality Science*, 12, no. 7 (2021): 1369–79.