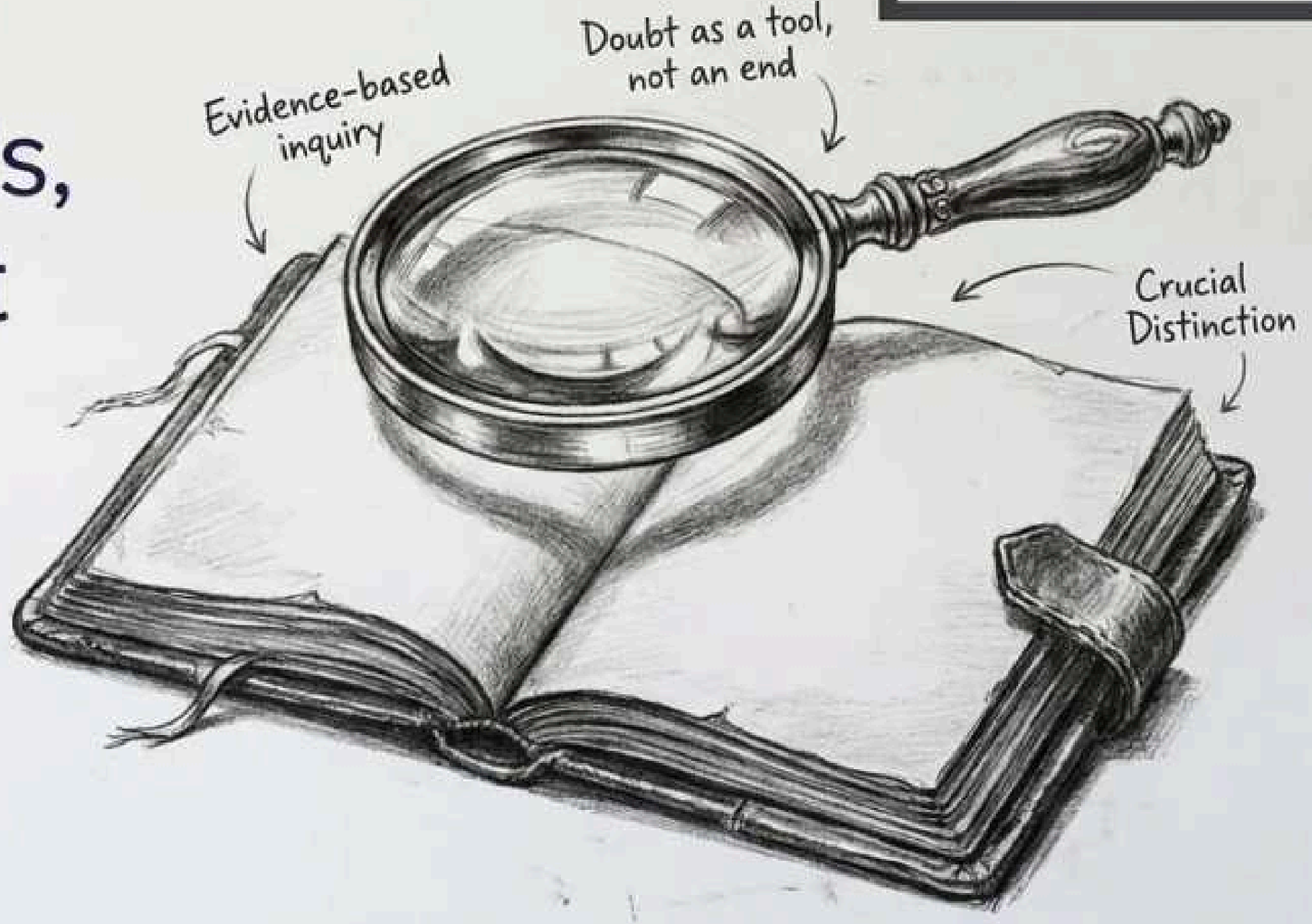
$$Belief \propto \sum (Evidence)$$

¶ 1.1

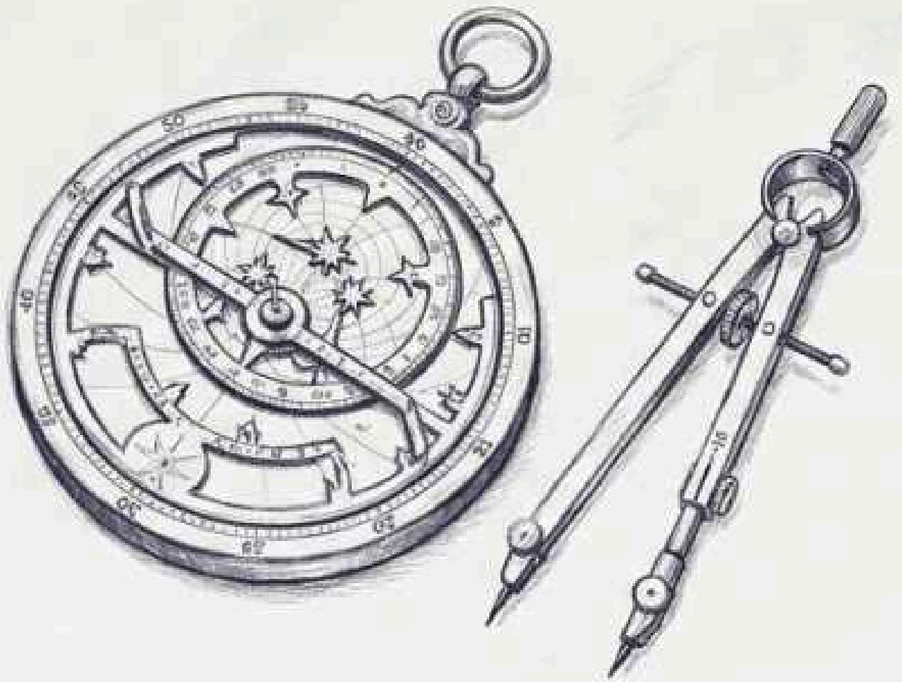
What Skepticism Is, and What It Is Not

Lecture 1 – Matching Belief to Evidence



Habits of Mind Precede the Tools of Inquiry

¶ 1.2



The tools of science are useless without the right attitude.

Skepticism vs. Errors

↓

Classic Rules of Thumb

↓

The Skeptic's Questions

↓

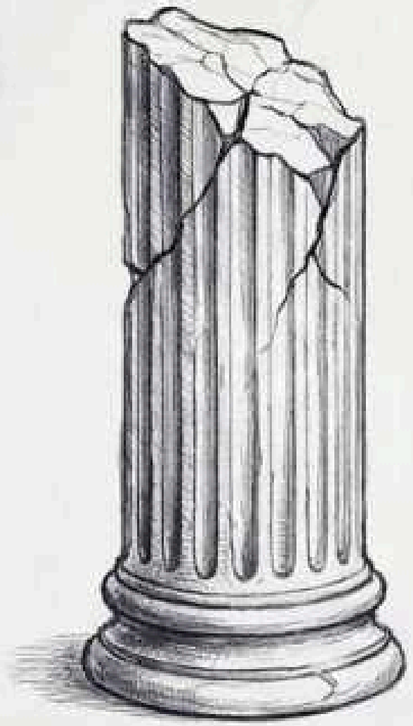
Humility & Kindness

Skeptikos: The Inquirer

¶ 1.3

Modern Skepticism ≠ Void

Ancient
(Followers of Pyrrho)

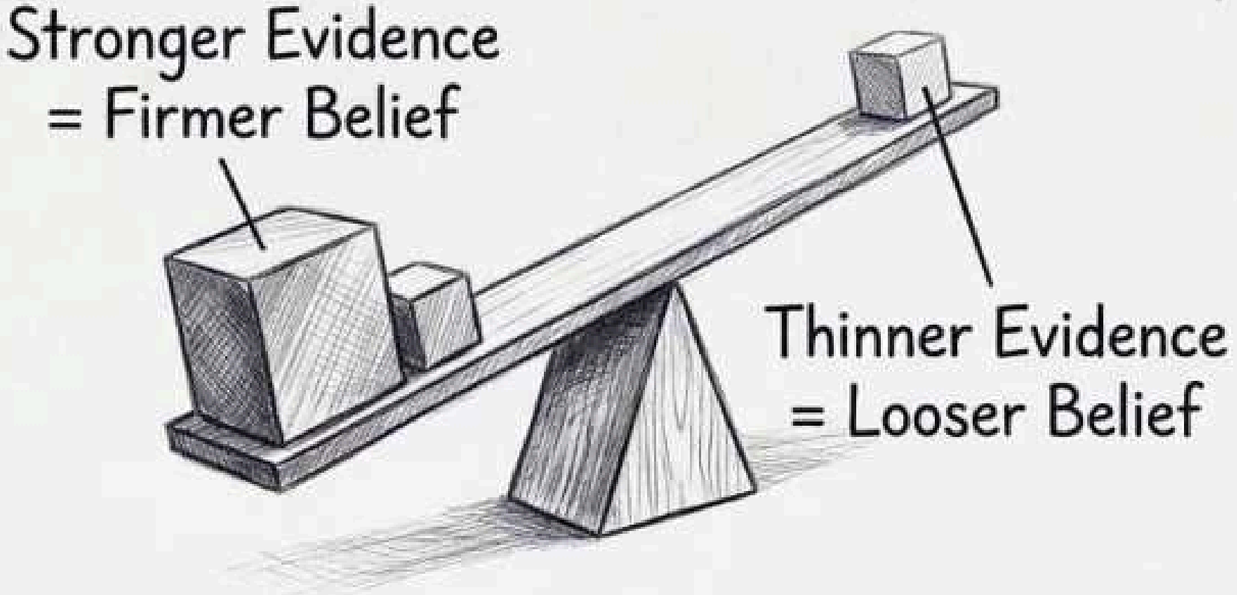


Suspended judgment about almost everything.

Refused to decide.

Modern
(Scientific Skepticism)

Modern Skepticism = Proportionality



The Twin Errors of Evidence

	Gullibility	Scientific Skepticism	Cynicism
Default Stance	Says YES to everything	Varies by data	Says NO to everything
Evidence Work Required	None (Believes too easily)	High (Weighs the evidence)	None (Rejects too quickly)
Core Flaw	Skips the work of weighing evidence	N/A	Skips the work of weighing evidence

They look like opposites, but they share the exact same flaw: avoiding the work of inquiry.

Confidence is a Dial, Not a Switch

¶ 1.5



"A wise person proportions belief to the evidence."

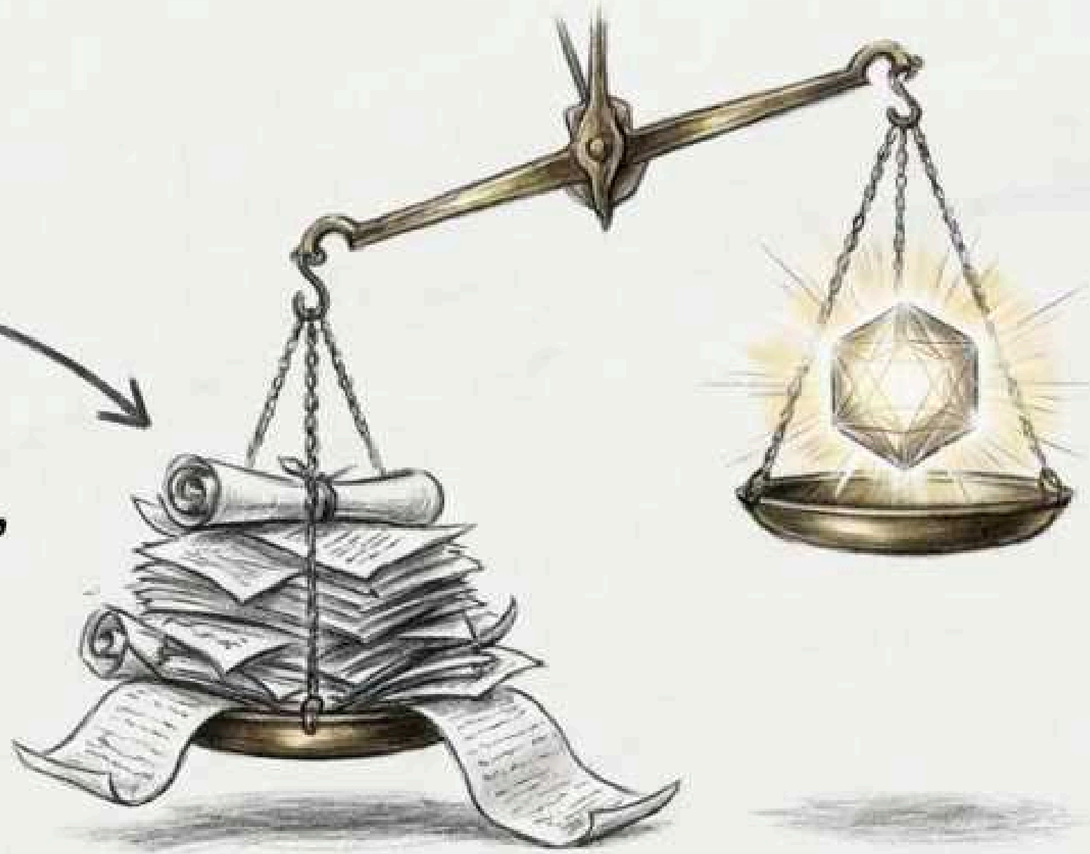
— David Hume (1748)

A good thinker keeps track of exactly where this dial sits.

Hume's Probability of Miracles

$P(T_{false})$

Likelihood the witness is mistaken, joking, or lying.



$P(E)$

Likelihood the extraordinary event actually happened.

We should accept testimony about an extraordinary event only if the testimony being false would be even more extraordinary than the event itself.

Extraordinary Claims Require Extraordinary Evidence

¶ 1.7

Claim A



Conflicts with nothing.
Ordinary evidence accepted.

Claim B

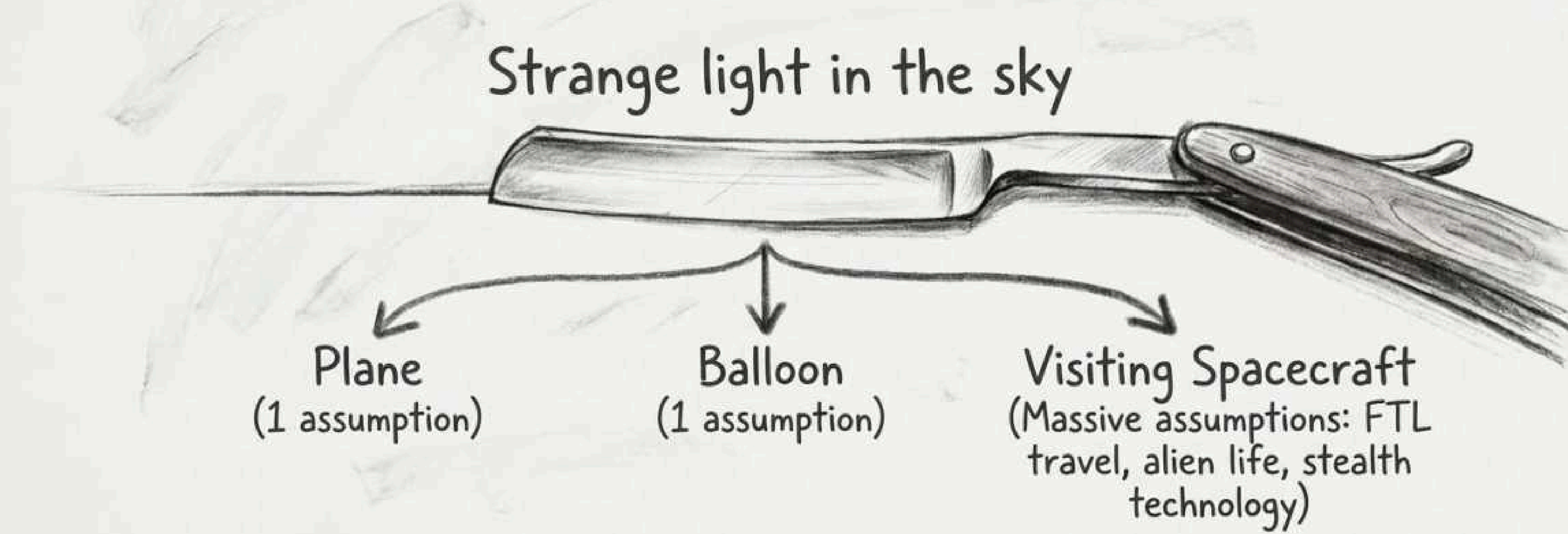


Conflicts with repeatedly tested reality.
Demands to see the dragon.

This is reasonable, not stubborn. The more a claim conflicts with established, tested reality, the heavier the evidence burden.

Occam's Razor: Minimizing Assumptions

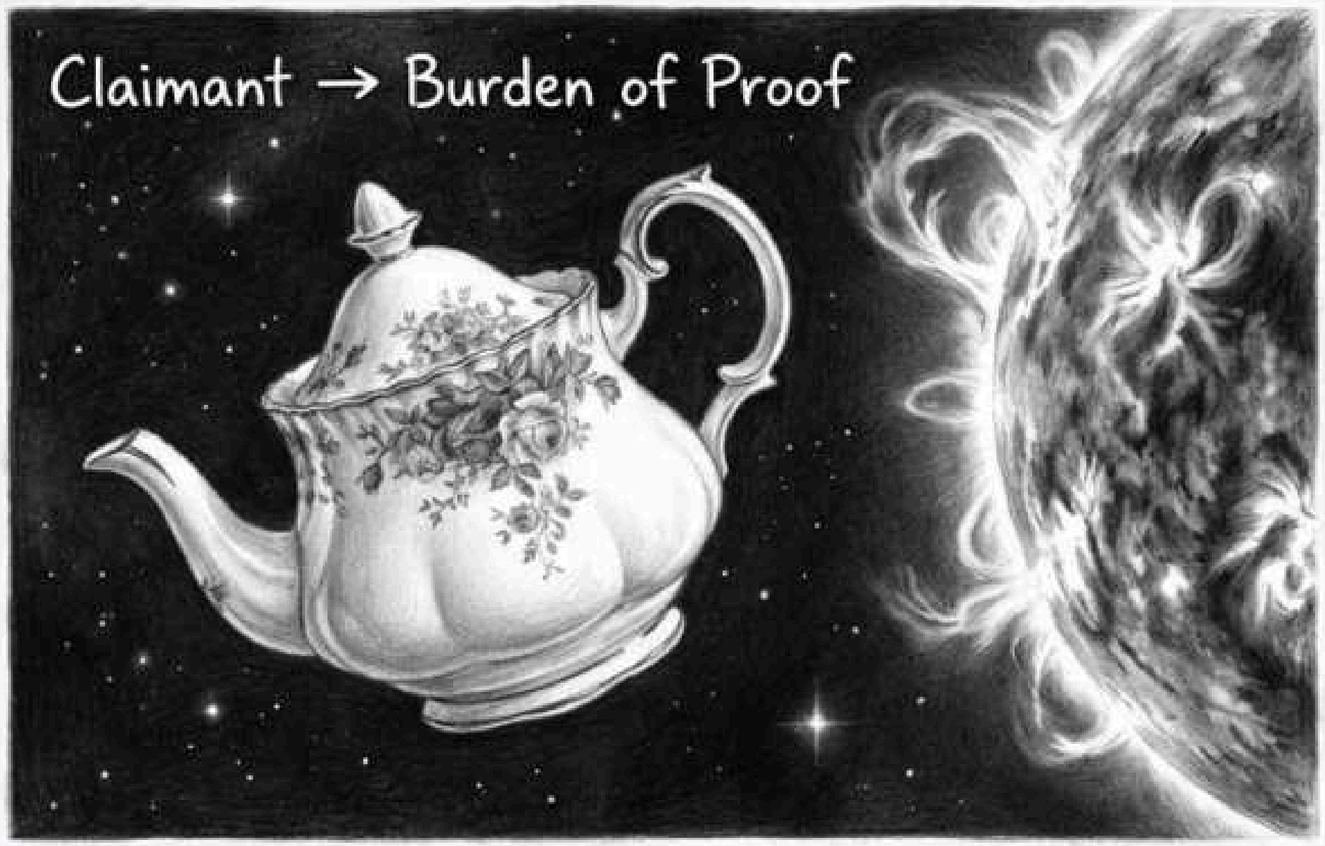
¶ 1.8



Among explanations that fit the facts equally well, prefer the one with fewer assumptions. Caveat: It is a guide, not a law. Sometimes the simple answer is wrong.

The Burden of Proof: Russell's Teapot

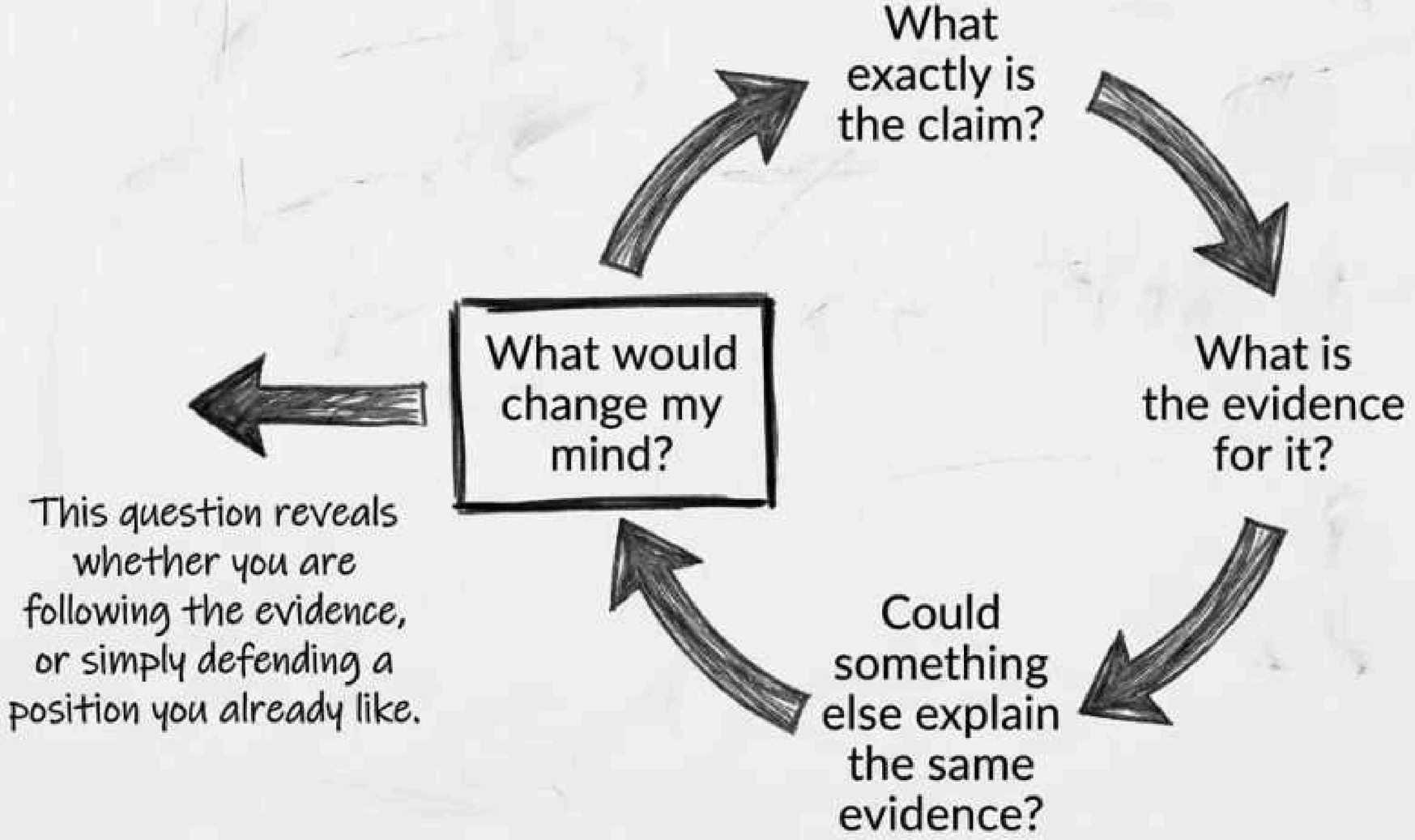
¶ 1.9



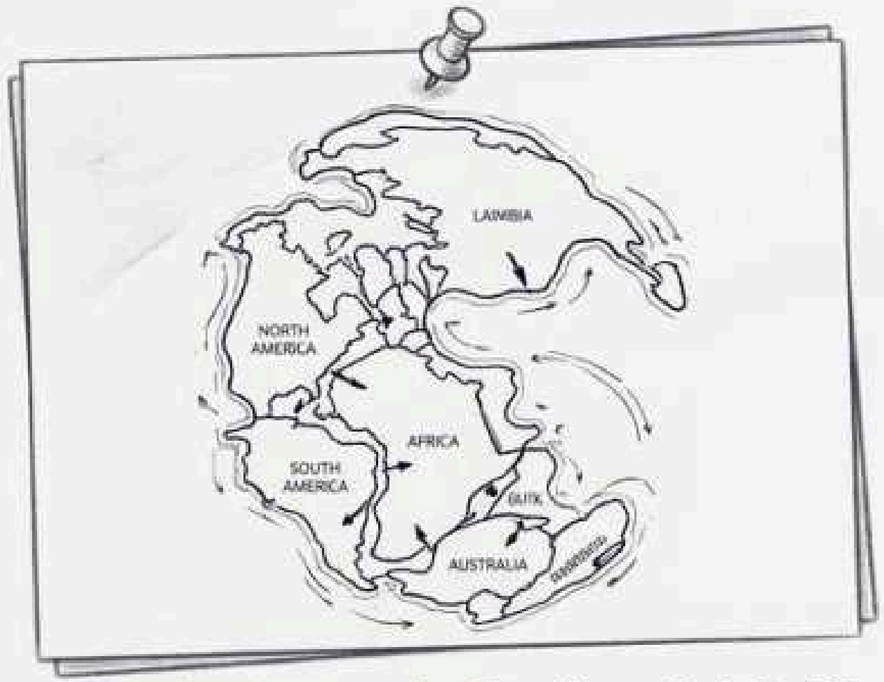
Inability to disprove a claim gives you zero reason to believe it.
Whoever makes the claim carries the job of supporting it.

The Four Questions of Practice

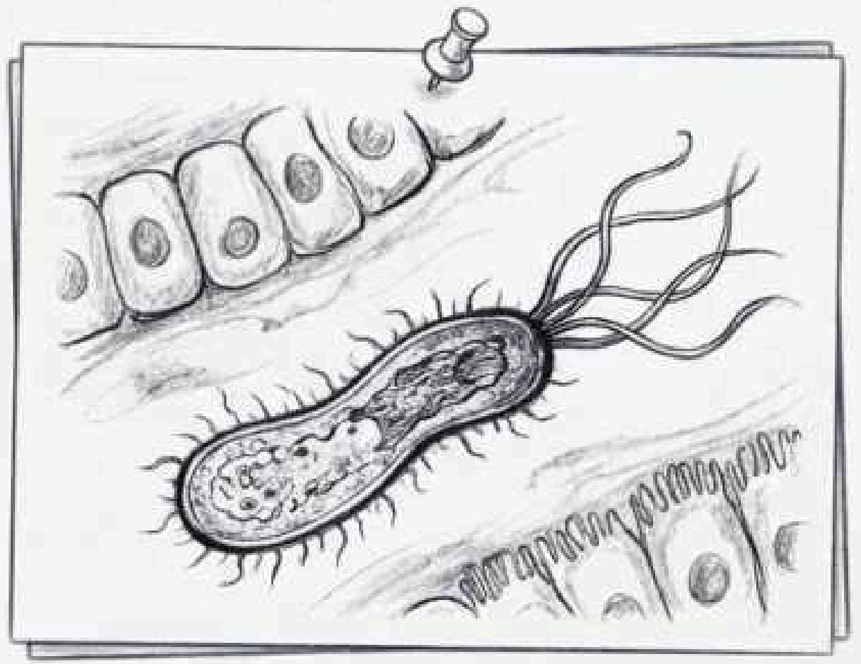
¶ 1.10



Following the Evidence: Two Case Studies



Alfred Wegener's Continental Drift. Laughed at by geologists, later proven by sea-floor evidence.

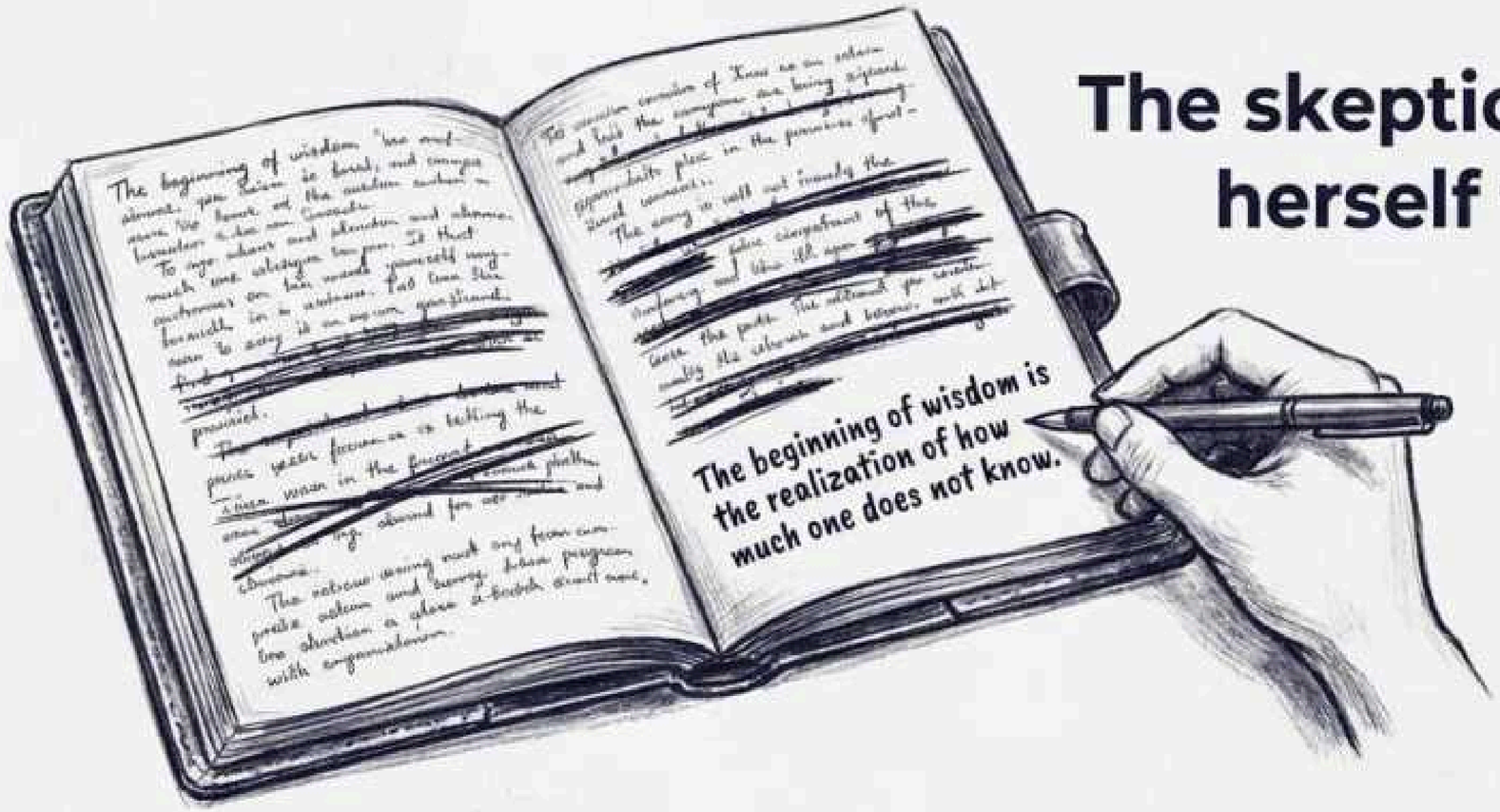


Marshall & Warren's Ulcer Bacterium. Overturned consensus, won a Nobel Prize.

Skepticism is not closed-mindedness. A good skeptic stays open to surprising claims and follows the evidence wherever it leads.

Intellectual Humility

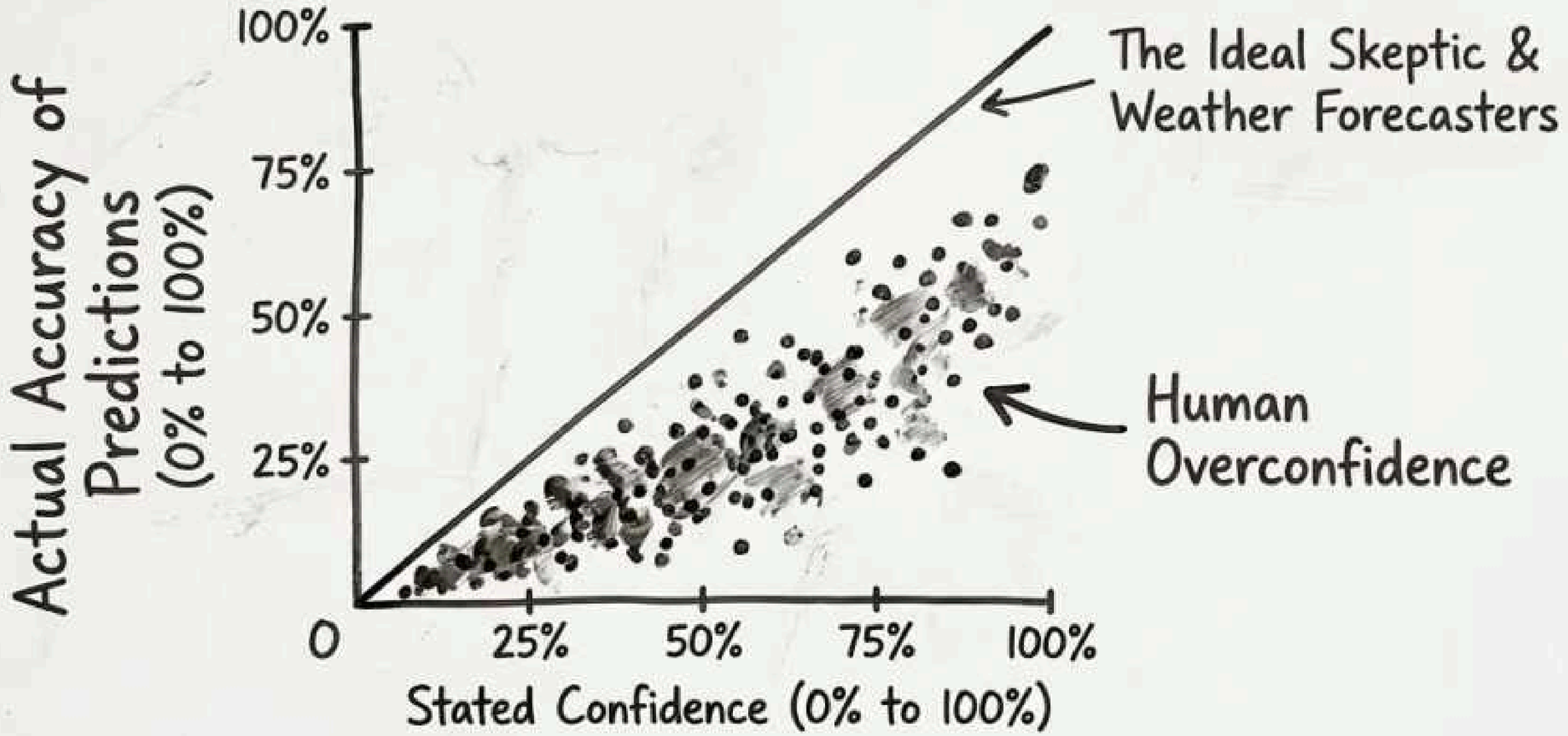
¶ 1.12



The skeptic doubts herself first.

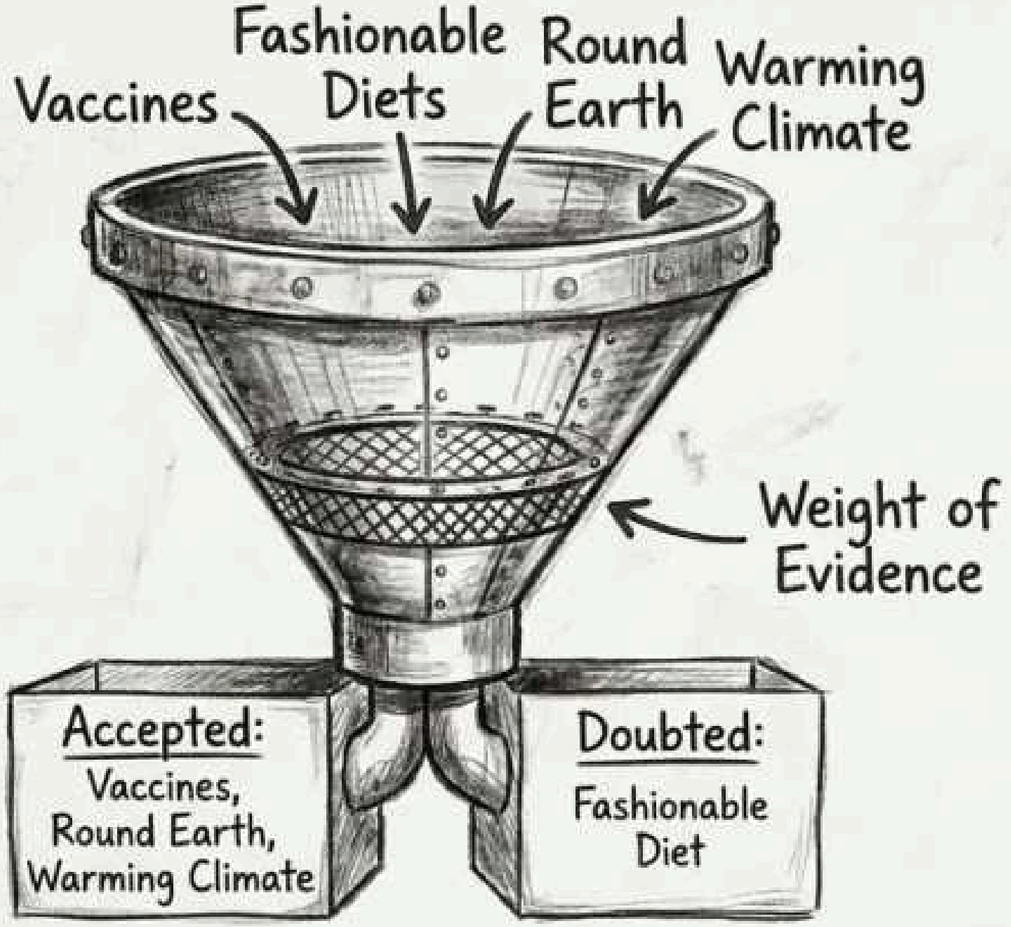
Being willing to say I might be wrong is not weakness; it is the prerequisite for correction. A person who can never be wrong can never improve.

The Skill of Calibration



Most of us are overconfident. Practicing with real predictions is a vital habit to align your internal dial with external reality.

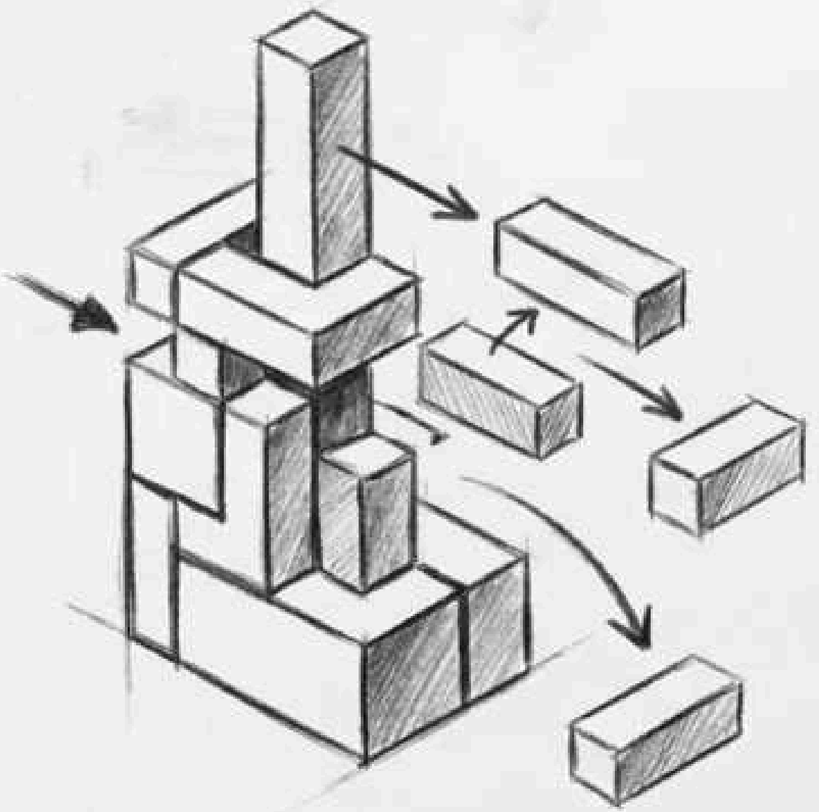
A Method, Not a List of Conclusions



You cannot tell from a topic alone whether a skeptic will accept or reject it. It depends entirely on the evidence.

Test the Claim, Respect the Person





If you treat people with contempt, they stop listening. By respecting the person while testing the claim, both parties learn more.

The Limits of Individual Inquiry

¶ 1.16



You cannot check everything yourself. Nobody can build their own telescope, run their own clinical trial, or read every law.

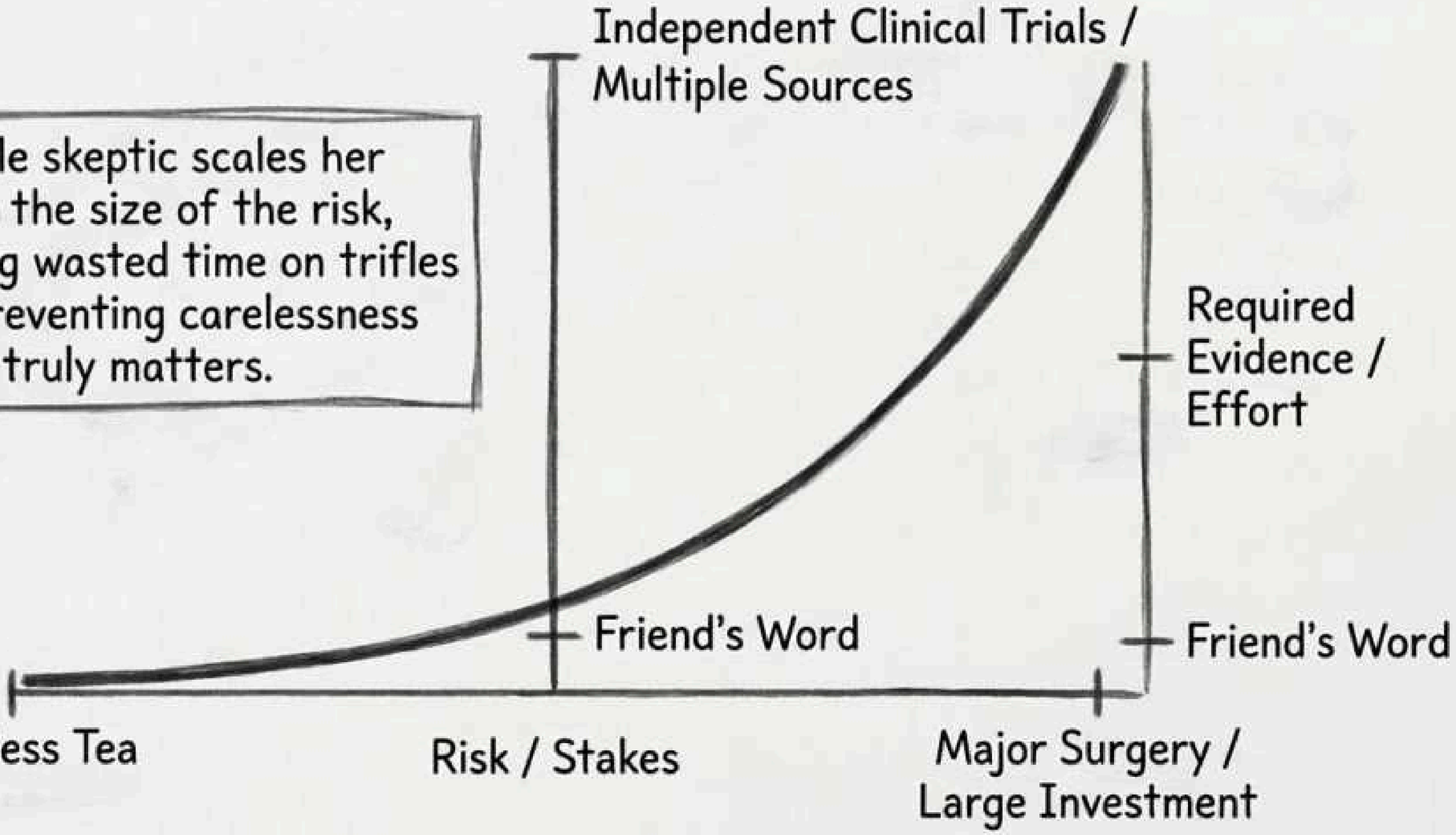
We all must rely on trusted sources. The true modern skill is knowing whom to trust and why.

Everyday Application: The Tea Test



Scaling Effort to Risk

A sensible skeptic scales her effort to the size of the risk, preventing wasted time on trifles and preventing carelessness where it truly matters.



The Skeptic's Mirror

¶ 1.19

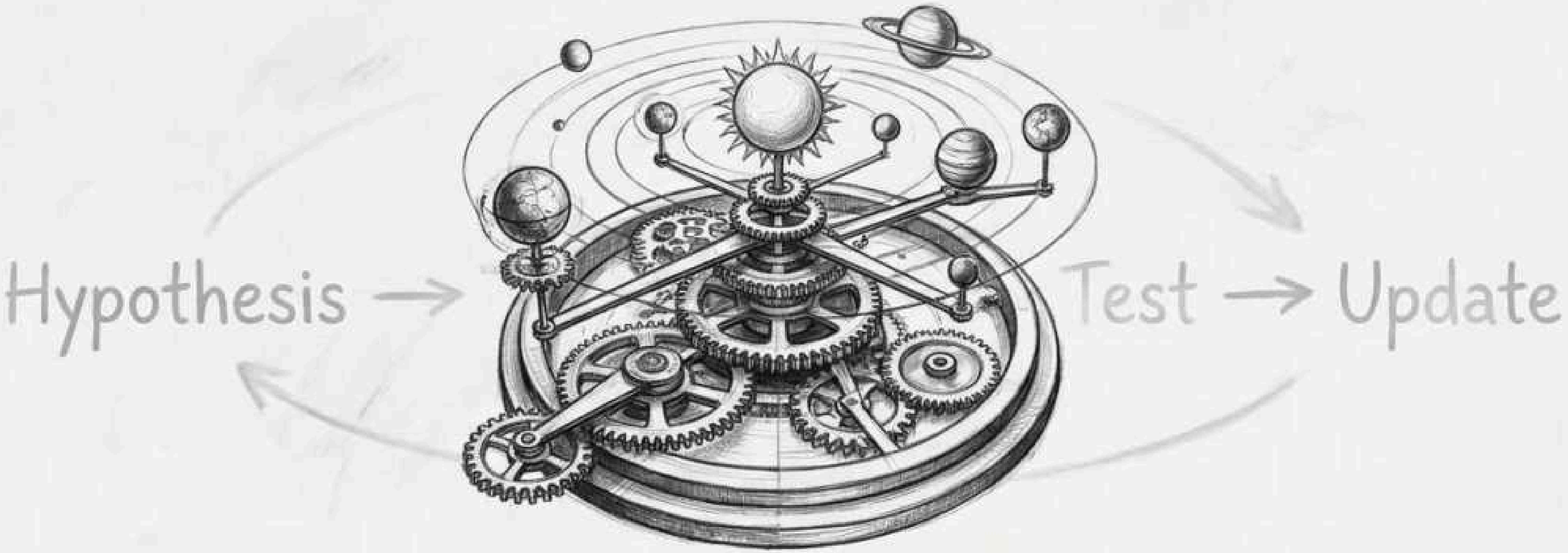


1. Think of a belief you hold with high confidence.
2. What exact evidence led you to it?
3. What would you need to see in order to change your mind?

If you cannot answer the third question, ask yourself why not.

Looking Ahead: The Engine of Discovery

¶ 1.20



Next in Lecture 2: We look at how science works, and why its method is so extraordinarily successful at uncovering reality.