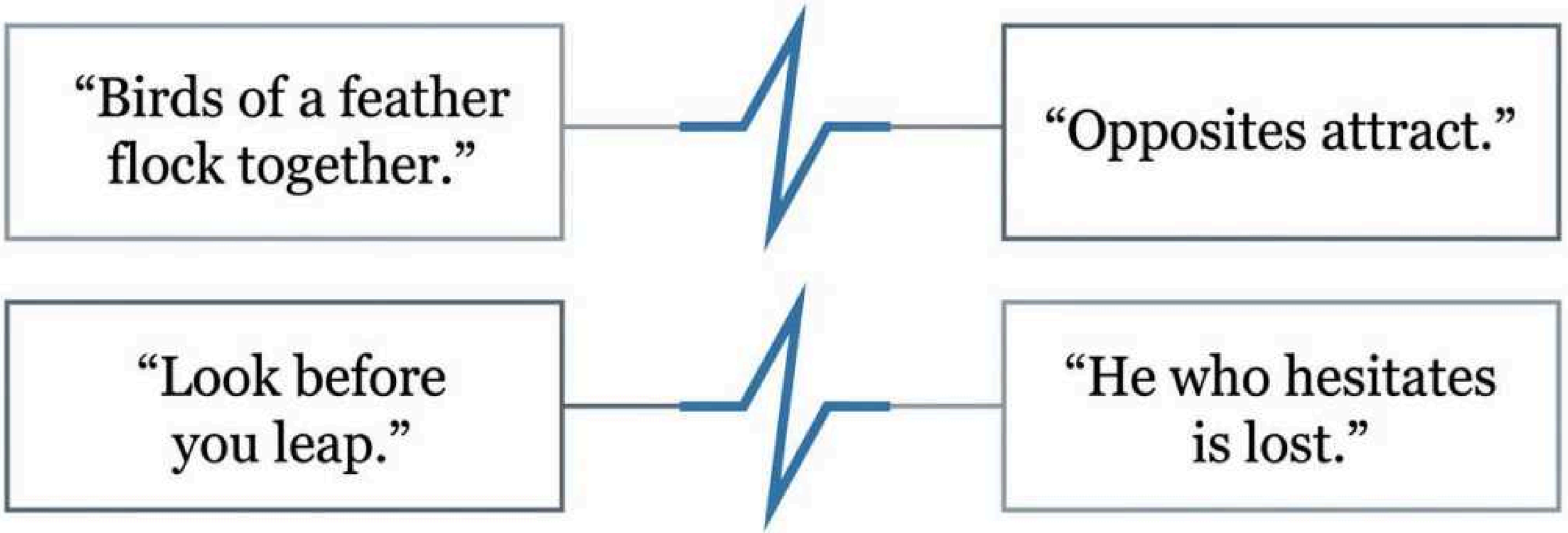
# 1.1

| Everyday Judgement | | Scientific Correctives | |
|---|---|---|---|
| | | Habits | Vocabulary |
| The biases that make common sense unreliable. | → | The practices that correct bias. | Theories, Hypotheses, Variables, Operational Definitions |

Psychology requires formal research methods because common sense misleads. Science provides the habits and vocabulary to correct everyday biases.

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# 1.2

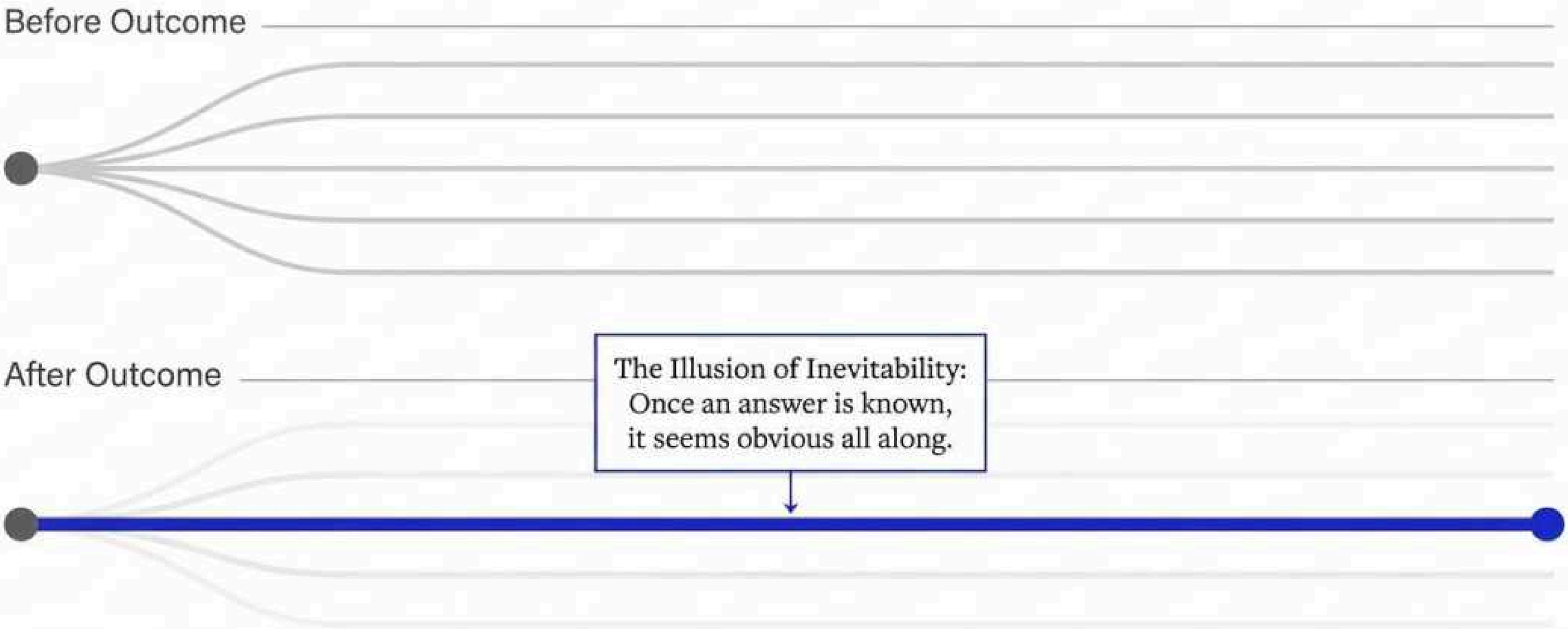



Everyone is an amateur psychologist, but common sense often contradicts itself. Whatever happens, a proverb can be found to explain it afterward.

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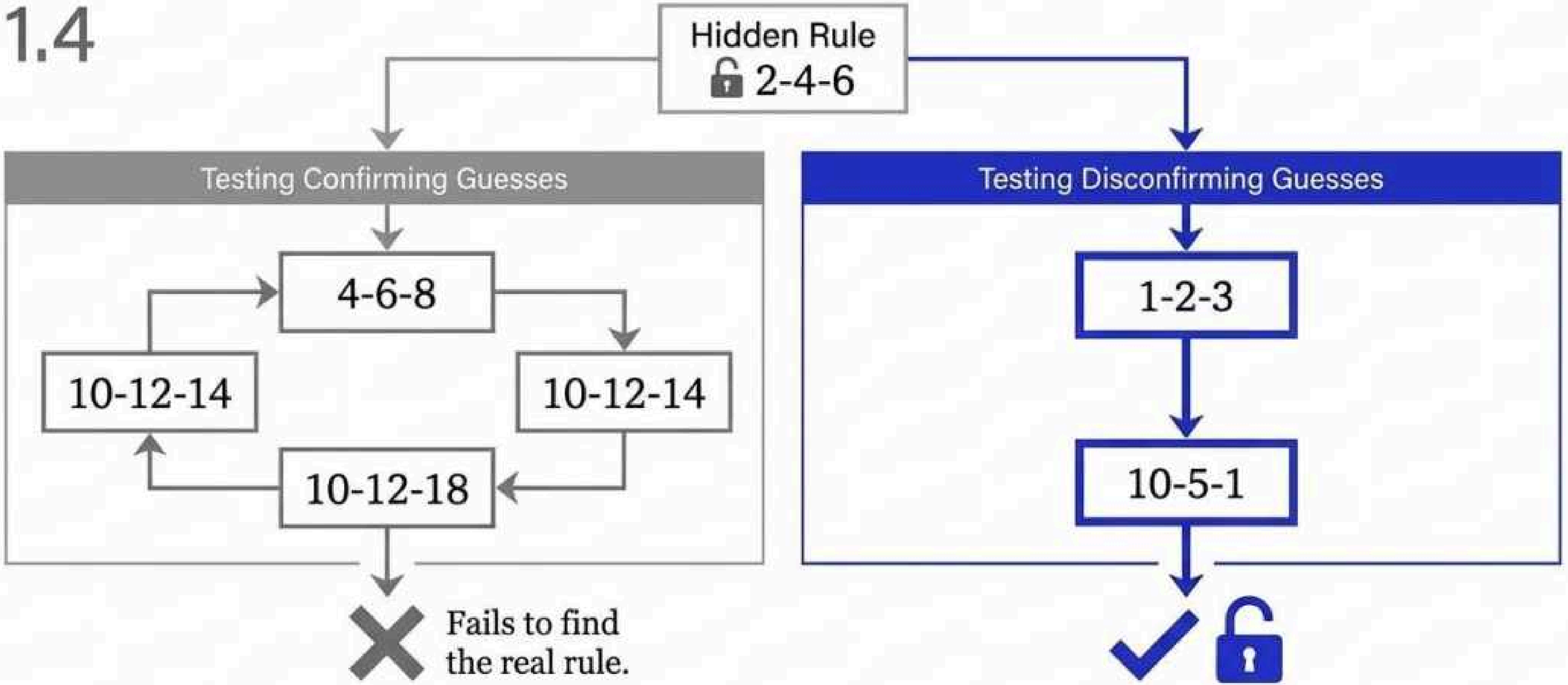
# 1.3

Referenced Study: 1975 predictability experiment. People told how an event turned out judged it far more predictable than those kept in the dark.




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# 1.4



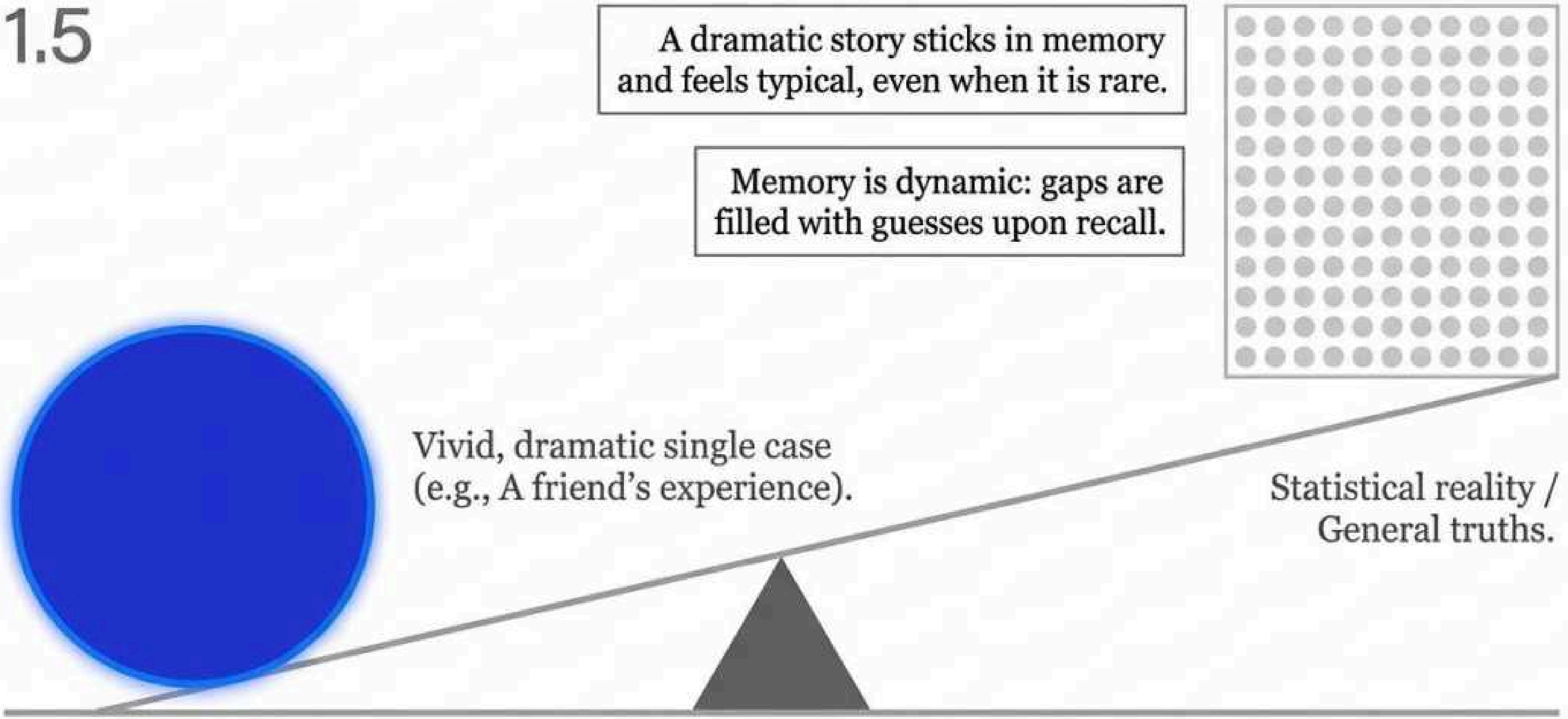

Confirmation bias is our habit of looking only for evidence that supports what we already believe. The actual hidden rule was simply any increasing numbers.

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# 1.5

A dramatic story sticks in memory and feels typical, even when it is rare.

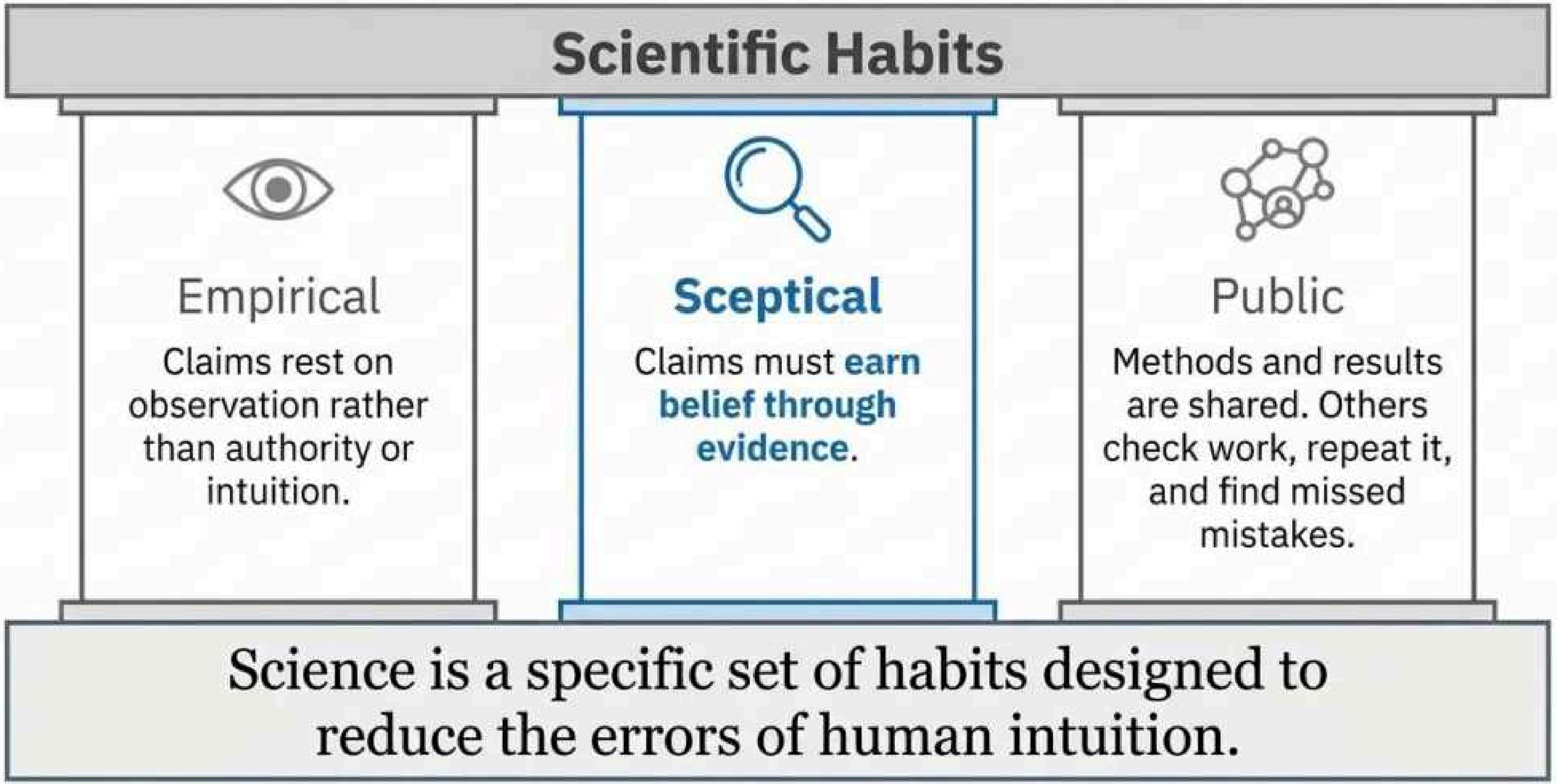
Memory is dynamic: gaps are filled with guesses upon recall.




## A single case cannot tell us what is generally true.

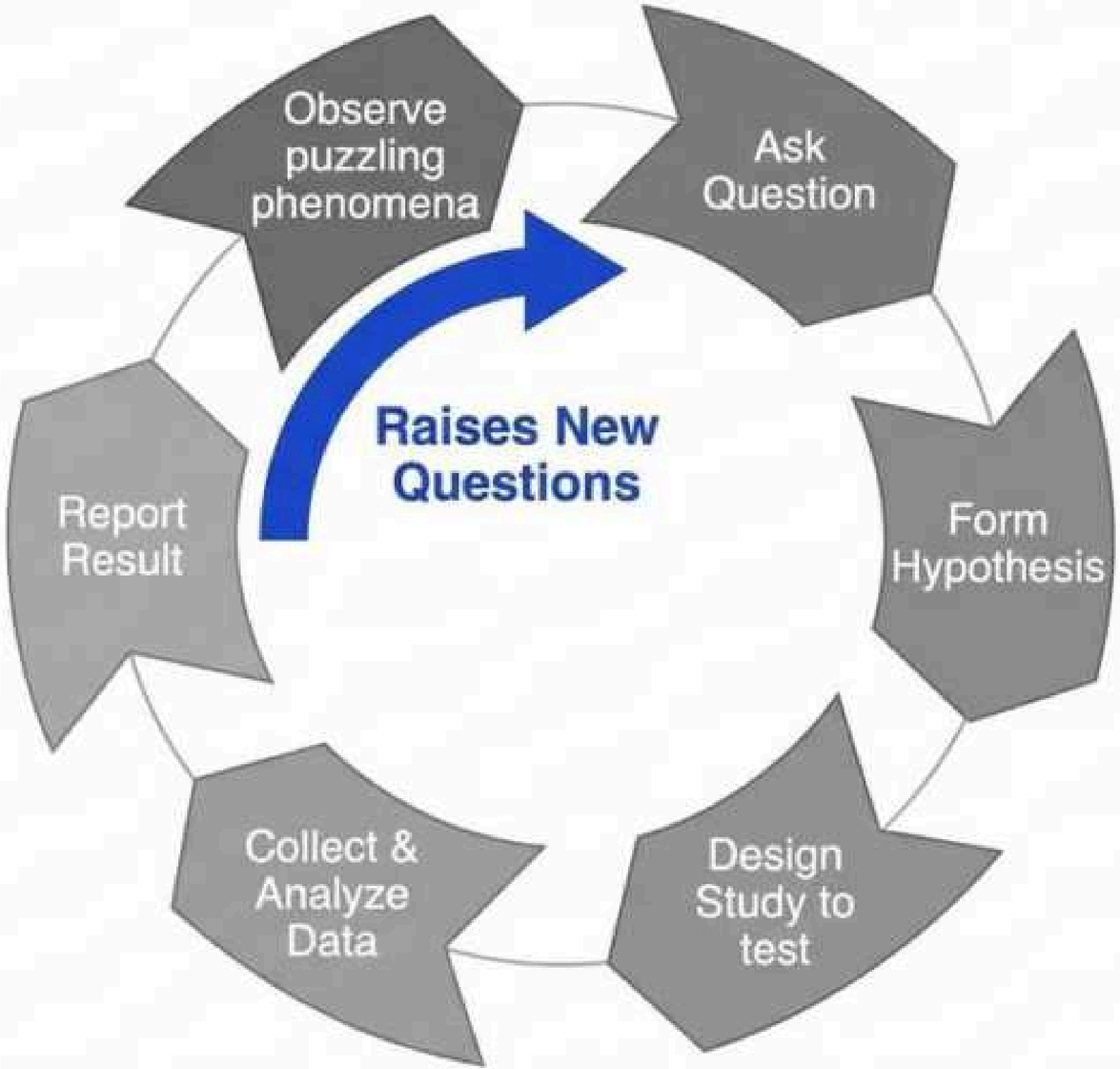
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# 1.6




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# 1.7




Knowledge builds up in steps rather than arriving all at once. The scientific method is an endless cycle.

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# 1.8

## Theory

A broad explanation organizing many findings.

Example: A theory of how memory works.

Hypothesis

**Hypothesis**

A specific prediction that follows from a theory.

Example: People who sleep after studying will recall more.

Hypothesis

Theories are tested by testing the specific hypotheses they imply.

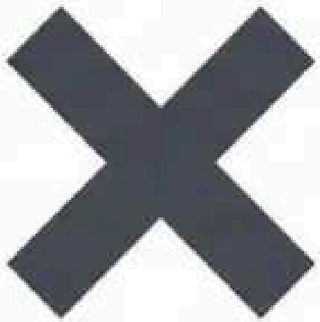
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# 1.9 To be scientific, a claim must be falsifiable: **some possible observation** must be able to show it is wrong.

## Untestable

**Claim:**
Everything happens for a reason.

**Mechanism:**
Can absorb any result.



## Testable

**Claim:**
Sleep-deprived students recall fewer words.

**Mechanism:**
A specific observation could clearly fail.



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# 1.10

| Pseudoscience | Science |
| --- | --- |
| Offers claims that sound scientific but cannot be tested or are never revised.<br><br>Relies on vague claims that feel uncannily personal (e.g., astrology columns). | Insists on strict, objective conditions.<br><br>Always tests predictions strictly against random chance. |

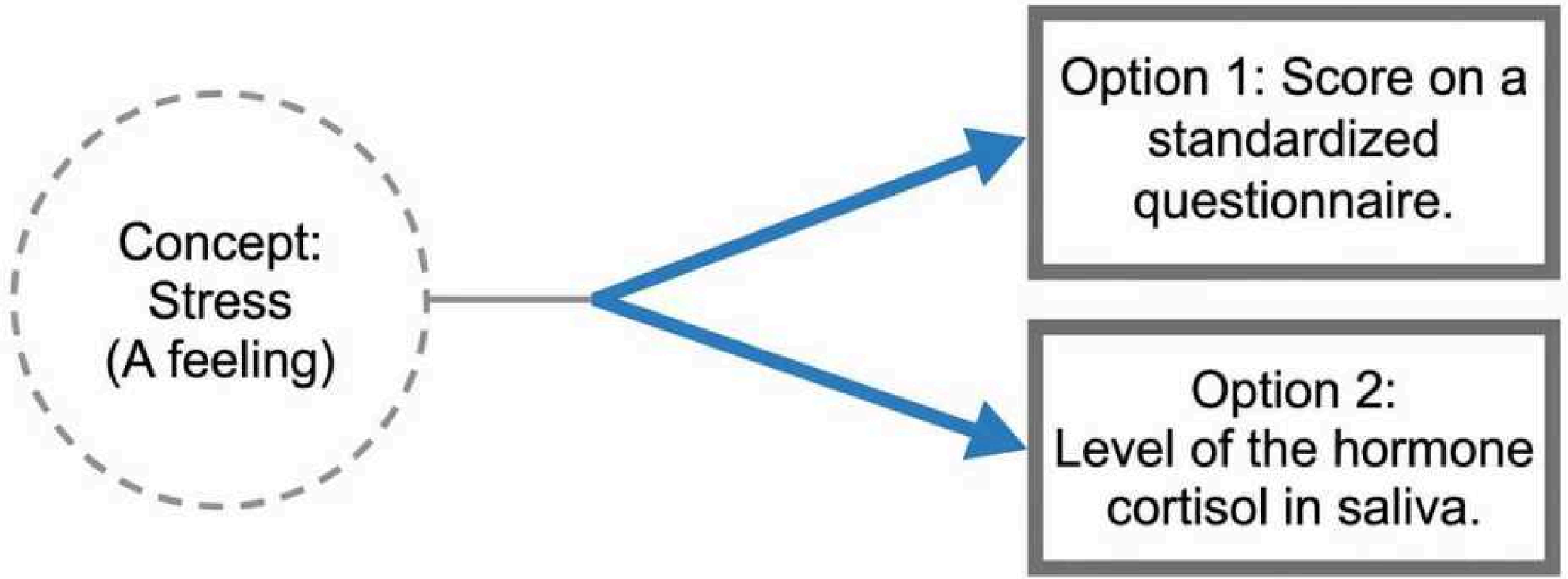
**Evidence**

1948 personality study. Students were given identical, vague text; all rated it highly accurate as written just for them.

**Vague claims feel personal. True science tells the difference by demanding testability and ruling out chance.**

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# 1.11

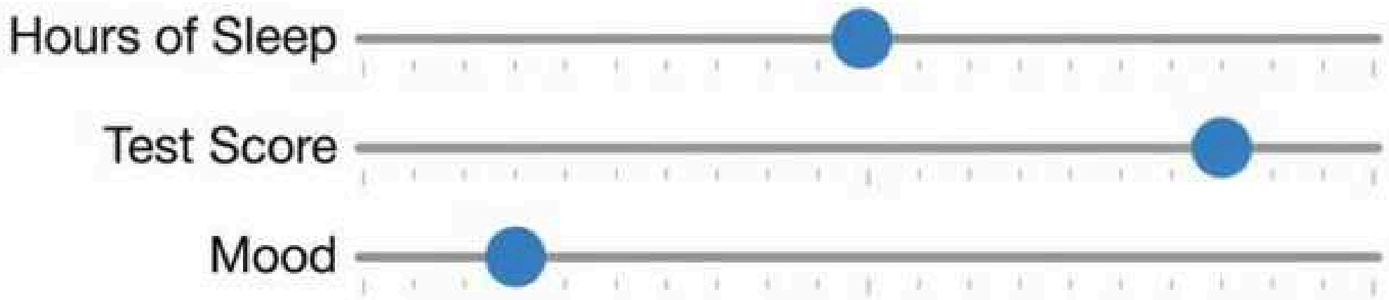



Operational Definition: Defining terms in a way that can be measured. Different definitions yield different answers, so a good researcher must state exactly which one was used.

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# 1.12

## Variables




Definition: Anything that can take different values. Research asks how these relate to one another.

## Constants

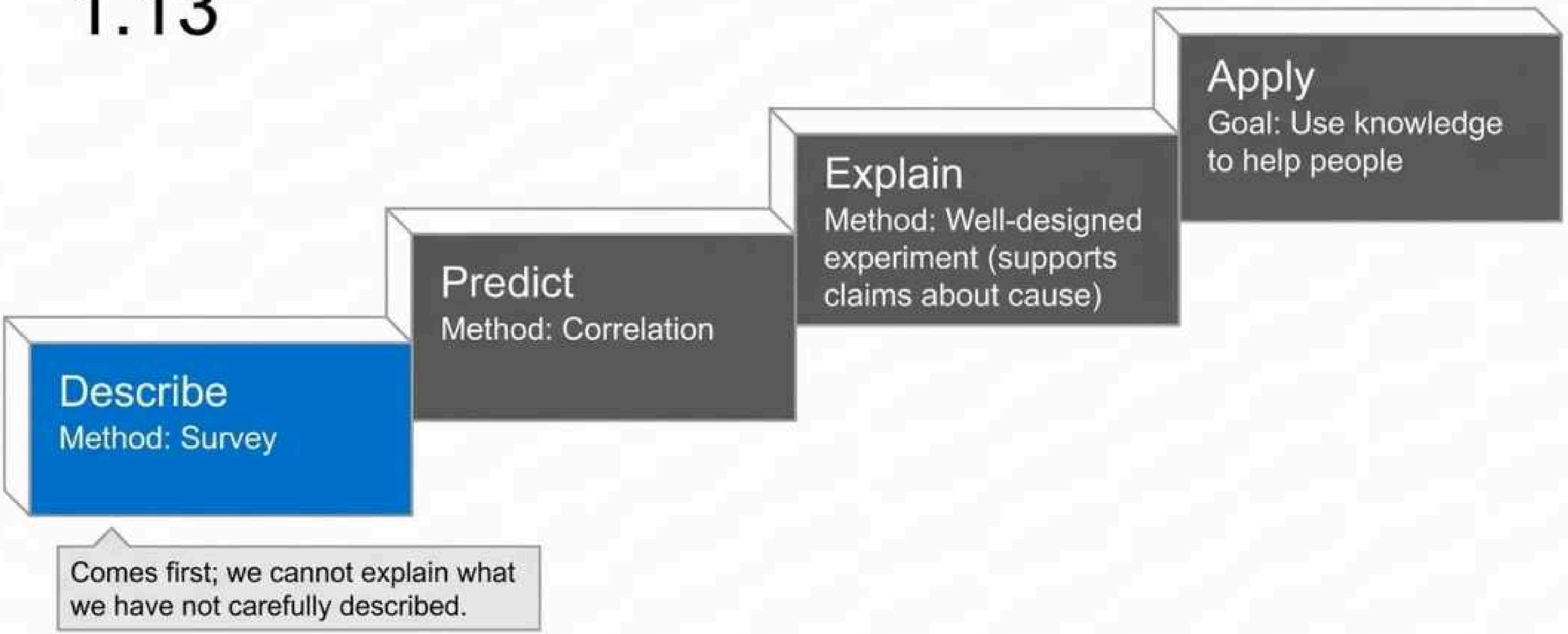


Definition: Something strictly held fixed.

Much of the craft of research is deciding which variables to measure, which to change, and which to hold constant.

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# 1.13



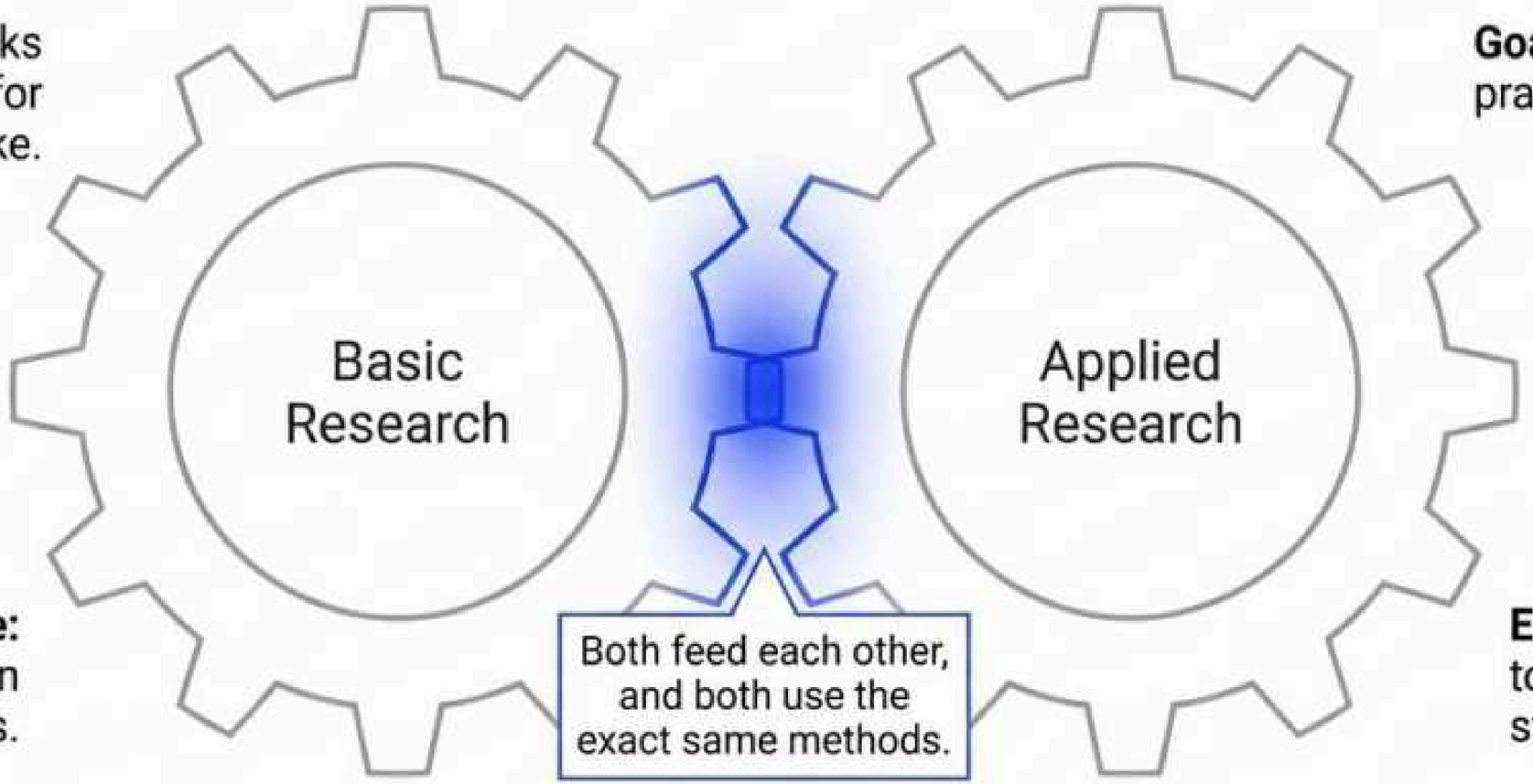

Psychological research has four classic goals. Different methods suit different goals, but Description is always the foundation.

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1.14

**Goal:** Seeks understanding for its own sake.

**Goal:** Tackles a practical problem.



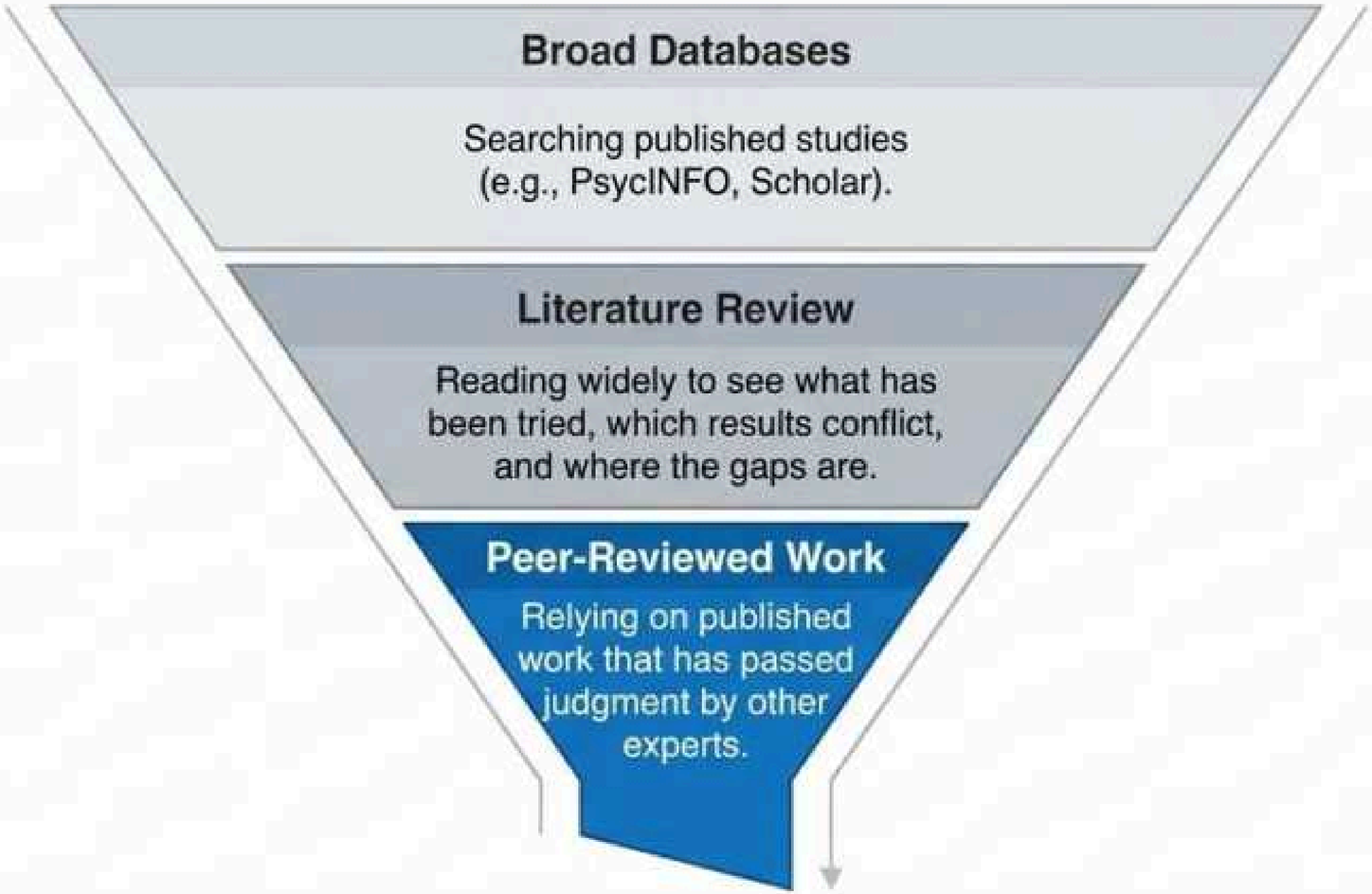

**Example:** How human attention works.

**Example:** How to help people stop smoking.

The structural lessons of research methods apply universally across every area of psychology.

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# 1.15




Good research begins by finding out what is already known. The literature is the starting point for every new scientific question.

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