

**TOPIC 9: SCIENTIFIC REASONING**  
mercoledì 13 ottobre 2021 18:11  
**Introduction** video: Bob Proctor philosopher  
Attraction and Thoughts

Example:

the Secret: Law of Attraction

"Like attracts like"

implies people and their thoughts are both made from pure energy; through the power of ATTRACTIVE LIKE ENERGY, a person can improve his own health, wealth and personal relationship.

law of nature that presents a scientific looking research using methods like IC, suggesting that the idea is indeed scientific.

If you don't believe it (consciously or unconsciously), then the universe realizes that it does not work for you.

⊕ A lot of money is earned: people broadcasting this message may have like many other causes

purposes other than just informing other people.

the message in The Secret sounds positive and appears to be scientific

But no scientific justification to believe in these ideas.

why not?

**FIXATION OF BELIEF**

**BELIEF**: An attitude of some person toward a particular claim.

**CLAIM** true: when it corresponds to reality → THERE IS NO DIRECT CONNECTION BETWEEN BELIEF AND TRUTH

false: does not Believing that a given claim is true does not provide information about the truth or falsity of the claim itself.

distinction between /

scientist-justified claims / unjustified claims

being scientifically justified = renders a claim more valid

L-the claim is based on the proper use of the scientific method

thus another as it presents a view more close to the truth.

Unjustified claim = the claim is not based on the proper use of the scientific method.

so why people believe in them?

Believers may base for different reasons

**METHODS TO FIX BELIEFS**

**I) PERSONAL EXPERIENCE**

"Global warming is not real bc I was cold today."

**II) INTUITION, instinctive feeling**

**III) AUTHORITY**

**CONSENSUS AMONG SCIENTISTS**

L supportive scientific evidence

CCS = climate change scientists

CCC are less than CCS } CCC = climate change contrarians

in reality, but they have more visibility through the media

**SCIENTIFIC METHOD FIXES BELIEF ON THE BASIS OF EMPIRICAL RESEARCH**

It combines proper reasoning (logic arguments) and systematic empiricism (use of verifiable evidence based on experience with the world) to reach conclusions.

scientists self-correct their findings as results are often published in peer-reviewed journals.

the journal editor send the submission to three or four experts on the subject.

once they give the editor the work's merits and flaws, he decides whether the paper deserves to be published in the journal.

**EMPIRICAL CYCLE or theory-data cycle**

**THEORY** = set of statements that describe general principles about how variables relate to one another.

**HYPOTHESIS** = one specific statement that describes (H) general principles about how variables relate to one another.

statement relating theory to reality?

From general (theory/hypothesis) to specific (data)

on the basis of this you will experience the

DEDUCTION of a PREDICTION (P)

one specific statement of outcome or prediction that researcher expects to observe in a study if the theory is accurate.

DATA set of observations

L observe if they are consistent with hypothesis based on theory

support challenge

theory's hypothesis

**INDUCTION:**

① Specifying a general rule based on specific observations

② Conclusion often plausible but not escapable

Observing a large number of events that support our hypothesis → our statement is true

the inference based under induction is likely but not logically inevitable.

**Example:** All swans in the park are white.

A swan is swimming in the park and

→ this swan is white

**DEDUCTION**

① Specifying a conclusion about something specific on the basis of a general rule.

② the conclusion follows inevitably from the assumption premises

**SCIENTIFIC METHOD**

A method to provide good justification for the belief that a claim or statement

that a claim or statement (hypothesis) is true or false.

**Goal of Science**

To find good justification for the belief that a claim or statement,

the hypothesis, is true or false.

L you do it by using the

Conditional Argument

**CONDITIONAL CLAIM**

IF A then B

Example:

① If I eat too much, then my stomach will hurt

② If you study, then you'll pass the exam

where:

A = antecedent

premises

B = consequent

conclusion

L the truth of the premises logically guarantees the truth of the conclusion

non scientific methods

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not A (invalid) } conclusion

L the truth of the premises logically guarantees the truth of the conclusion

thus not B (valid) } conclusion