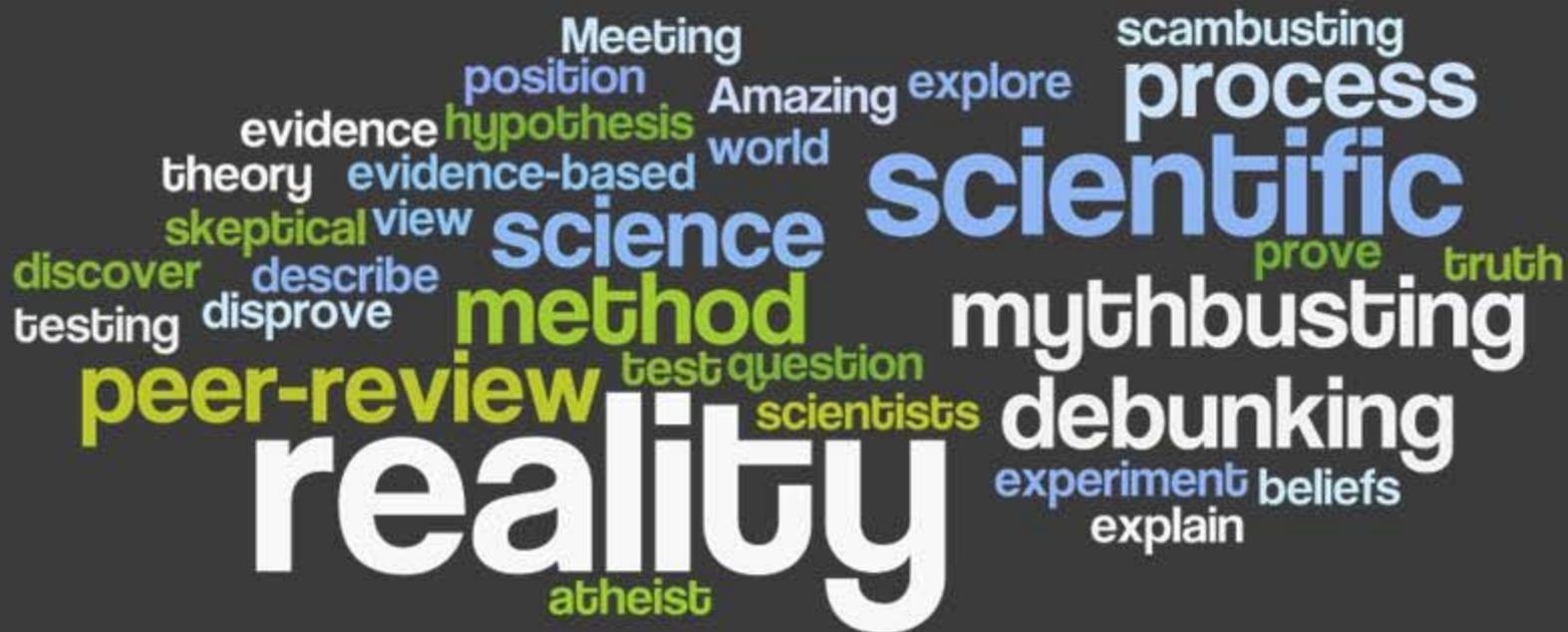


What's that skepticism thing
you're always going on about?



Scientific vs Philosophical Skepticism

by Tim Harding



1. Why is the difference important?
2. Ancient Greek skepticism
3. Modern philosophical skepticism
4. Scientific skepticism

skep·ti·cism

/ˈskeptəˌsɪzəm/ 

noun

1. a skeptical attitude; doubt as to the truth of something.
"these claims were treated with skepticism"
synonyms: [doubt](#), doubtfulness, a pinch of salt; [More](#)
2. **PHILOSOPHY**
the theory that certain knowledge is impossible.

“The skeptic

does not mean he who doubts,

but he who **investigates or**

researches, as opposed to

he who asserts and thinks that

he has found.”

- Miguel de Unamuno

Skepticism vs Denialism



- **Denialism** is a person's choice to deny certain particular facts. It is an essentially irrational belief where the person substitutes his or her personal opinion for established knowledge.
- **Science denialism** is the rejection of basic facts and concepts that are undisputed, well-supported parts of the scientific consensus on a subject, in favour of radical and controversial opinions of an unscientific nature.

Scientific conspiracy fallacy



Premise 1: I hold a certain belief.

Premise 2: The scientific evidence is inconsistent with my belief.

Conclusion: Therefore, the scientists are conspiring with the Big Bad Government/CIA/NASA/Big Pharma (choose whichever is convenient) to fake the evidence and undermine my belief.

Hellenistic philosophy schools



- Stoics
- Epicureans
- Cynics
- Sceptics

Ancient Greek Skepticism



- Academic skepticism
- Pyrronhism

Academic skepticism

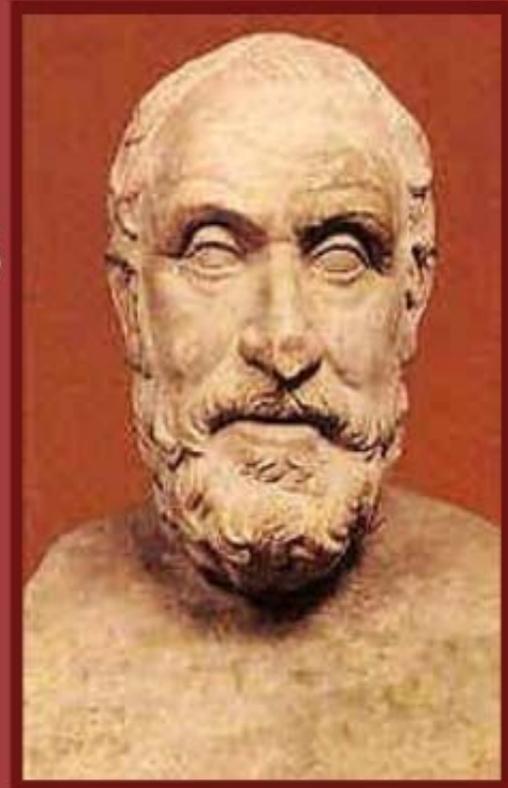


- In 266BCE, Arcesilaus became head of Platonic Academy.
- did not doubt the existence of truth in itself, only our capacities for obtaining it.
- ‘knowledge is impossible - nothing can be known at all’.
- later Carneades: ‘ideas or notions are never true, but only probable’.
- there are degrees of probability, hence degrees of belief, leading to degrees of justification for action.
- Academic skepticism died out in 1st century CE.

Skeptic Philosophy

Pyrrho of Elis

The Father of
Skepticism



Pyrrho of Elis (c.365-c.275BCE)



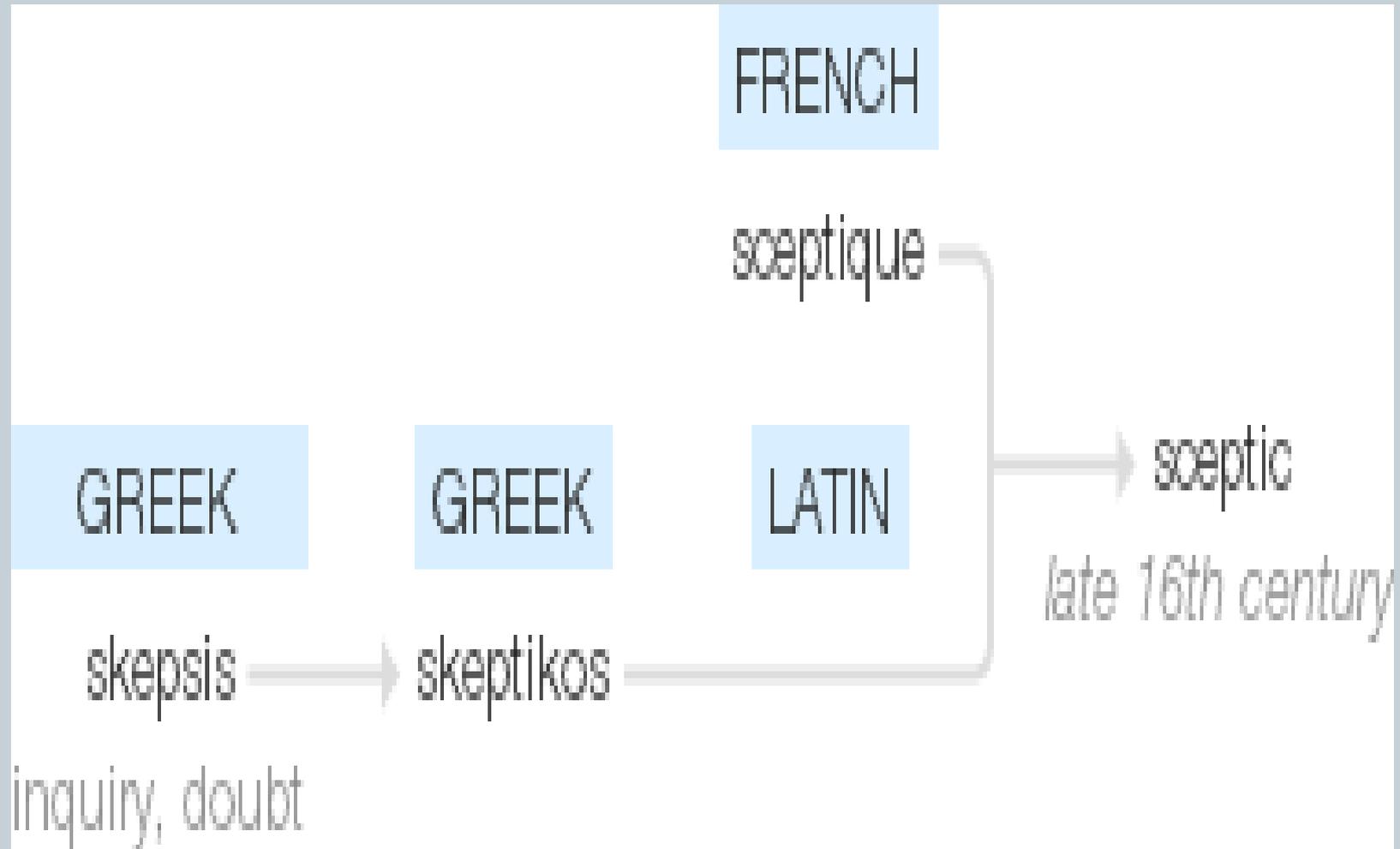
- born in Elis on west side of Peloponnese.
- travelled with Alexander the Great on his exploration of the East,
- he even went as far as the *Magi* in Persia and the *Gymnosophists* in India.

Pyrrhonian skepticism



- nothing can be known for certain.
- ‘nothing can be known at all’ is dogmatic.
- the senses are easily fooled, and reason follows too easily our desires.
- withhold assent from non-evident propositions and remain in a state of perpetual inquiry.
- Sextus Empiricus (c. 160 – c. 210 CE) promoted Pyrrhonian skepticism.
- Pyrrhonism became a synonym for skepticism in 17th C.

Sceptic or Skeptic?



The benefits of cabbage



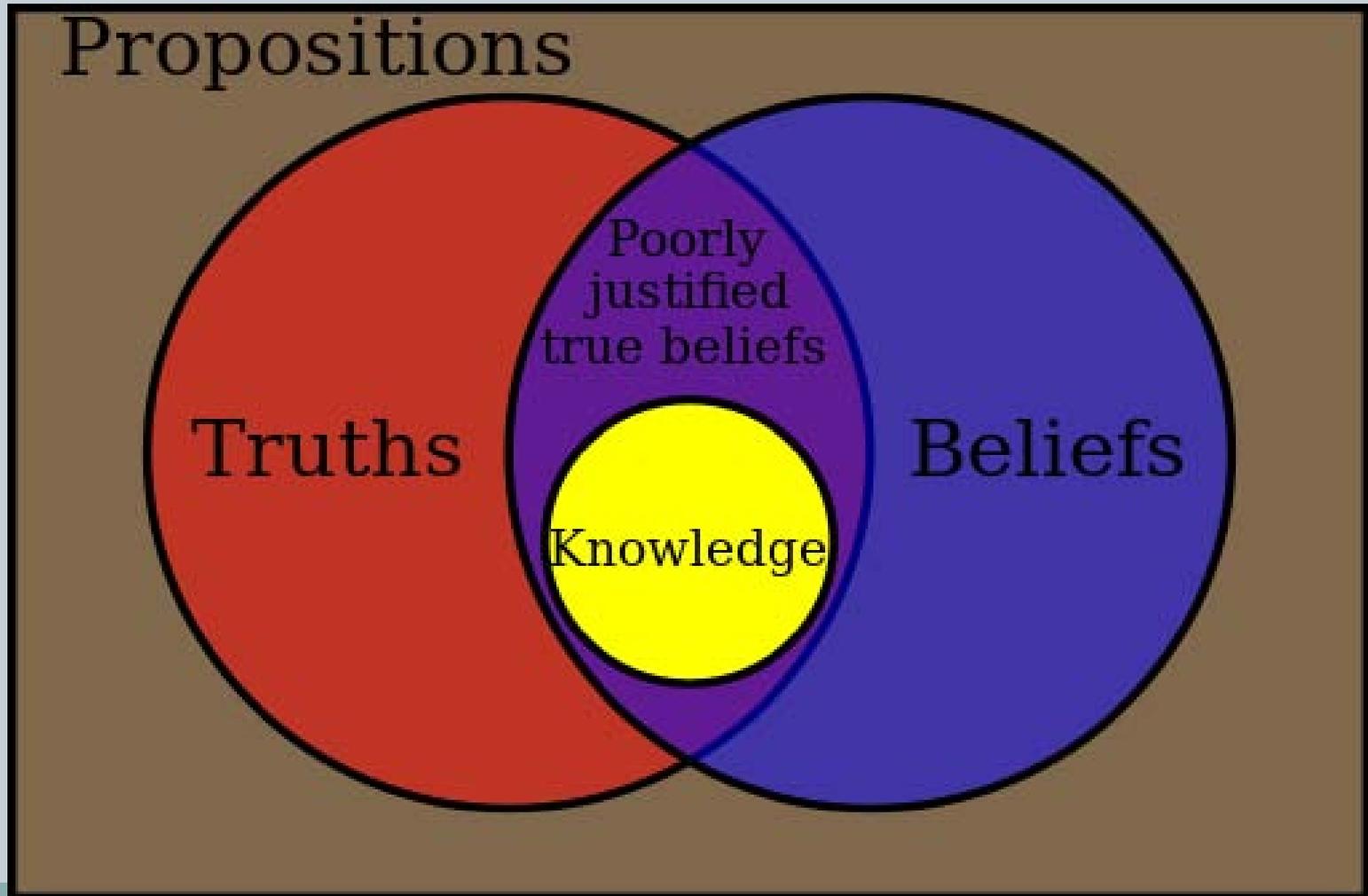
- For those who are troubled by colic, **cabbage** should be steeped in water....
 - Now as to patients for whom urination is painful or dribbling. Take **cabbage**, put in boiling water, boil briefly till half cooked....
 - If any sore or cancer develops in the breasts, apply ground **cabbage** ...
 - In case of dislocation, foment with hot water twice a day and apply ground **cabbage**: it will soon cure it...
- Cato the Elder: *On Agriculture* c. 160 BCE

Veterinary treatments



- Medicine for oxen: If you expect sickness, administer while still healthy: **3** crystals salt, **3** bay leaves, **3** stems leek, **3** cloves Levant garlic, **3** cloves garlic, **3** grains incense, **3** whole plants savin, **3** leaves rue, **3** shoots white bryony, **3** white beans, **3** live coals, **3** pints wine, all to be gathered, chopped together and administered in the open air, and the person administering it should not yet have eaten. Administer this potion to each beast daily for **three** days, and apportion it so that, with the **three** doses to each beast, all is used. Ensure that the beast and the person administering are both standing up in the open air. Use a wooden dish.

Knowledge



Types of knowledge



- *A priori* knowledge is knowledge that is known independently of experience e.g. ‘all crows are birds’.
- *A posteriori* knowledge is knowledge that is known by experience e.g. ‘all crows are black’.

Modern philosophical skepticism



Questions the validity of some or all types of knowledge.

- **Rene Descartes** (1596-1650): only kind of knowledge is that of which we can be certain.
- **David Hume** (1711-1776): all human knowledge is ultimately founded solely in 'experience'.
- **Immanuel Kant** (1724-1804): only knowledge gained from empirical science is legitimate.

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Skeptics movement



- 1976 formation of the Committee for Skeptical Inquiry (CSI) in the United States focusing on testable paranormal and pseudoscientific claims and leaving religious questions to others.
- There are now hundreds of skeptics groups around the world, and dozens in Australia.
- Australian Skeptics Inc. formed in 1980 by Dick Smith, Phillip Adams et al during a visit to Australia by James Randi.
- Annual Skepticon conference. \$100,000 challenge.

Scientific skepticism



- Different from philosophical skepticism, although inspired by it.
- ‘the practice or project of studying paranormal and pseudoscientific claims through the lens of science and critical scholarship, and then sharing the results with the public.’ – Daniel Loxton
- ‘Scientific skeptics maintain that empirical investigation of reality leads to the truth, and that the scientific method is best suited to this purpose.’ – Steven Novella

Skeptics in Australia group

For the purpose of this group, skepticism is not defined as a simple rejection of an idea but rather as **scientific skepticism**...; the practice of questioning whether claims are supported by empirical research and have reproducibility, as part of a methodological norm pursuing 'the extension of certified knowledge'. This is based on the idea that **empirical investigation of reality leads to the truth**, and that the scientific method is best suited to this purpose.

Any questions or comments?

