

ISS 305:002
Evaluating Evidence:
Becoming a Smart Research Consumer

4. Science as a Method of Evaluation

Reminder: Turn on your I<CLICKER

ISS 305: Mini-quiz Question 1

Justice White says that “of course the death penalty will deter murders; every parent knows that punishment keeps kids in line”. How is Justice White resolving the question of the deterrent effect of the death penalty?

- A. by ignoring the question
- B. by relying on chance
- C. by appeal to common sense
- D. B and C are both correct answers.

ISS 305: Mini-quiz Question 2

Why shouldn't we rely upon our common sense to answer empirical questions?

- A. Our common sense is nearly always wrong.
- B. Common sense is often contradictory, supporting any statement and its opposite.
- C. Because it would mean falling prey to the bandwagon fallacy.
- D. All of the above are correct answers.

ISS 305: Mini-quiz Question 3

Grant was asked about an empirical statement. His response, “Whatever, that is dumb. Let's move on.” He is

- A. relying on a scientific observation.
- B. relying on a authority.
- C. ignoring the statement.

ISS 305: Mini-quiz Question 4

Charlie, the town drunk, says they have proof that pink elephants walk the streets late at night, because they have seen them. This illustrates that some observations can be

- A. incomplete.
- B. distorted.
- C. mistaken due to inherent limitations of our senses to detect the color pink.
- D. extremely accurate.

ISS 305: Mini-quiz Question 5

The study exploring the perceived differences between Black and White basketball players demonstrated the

- A. confirmation bias.
- B. that our observations are usually incorrect.
- C. that our observations are usually correct.
- D. that our observations may be distorted by how tired we are.

ISS 305: Mini-quiz Question 6

Six urine samples Lance Armstrong provided during his first tour win in 1999 tested positive for the red blood cell-booster EPO. The Tour de France director was quoted as saying that Armstrong's use of EPO, a banned substance, was a "...proven scientific fact". Had the Tour director been a scientist, this would mean that the probability that Armstrong used the drug was

- A. greater than 1.0
- B. 1.0
- C. nearly 1.0
- D. nearly 0.0
- E. 0.0

ISS 305: Mini-quiz Question 7

Science is based on probabilities and that nothing is certain. However, this doesn't mean that we should be a _____.

- A. yawning dog
- B. Skeptic
- C. skeptic
- D. Candide

ISS 305: Mini-quiz Question 8

We can be absolutely certain
(100% ; $P = 1.0$) about
empirical statements.

- A. True
- B. False

ISS 305: Mini-quiz Question 9

The APA expelled Dr. James Grigson, AKA Dr.
Death, because

- A. he testified in violent criminal cases.
- B. he was homophobic.
- C. he made claims of absolute certainty about
the future dangerousness of capital
offenders.
- D. they didn't like his nickname.

ISS 305: Mini-quiz Question 10

A statement is only considered
scientific if the probability of the
statement being true is 100%.

- A. True
- B. False

ISS 305: Mini-quiz Question 11

One symptom of pseudo-science is that

- A. no new observations are ever made.
- B. new observations rarely change what's
considered true.
- C. newer observations are trusted more than
older observations.
- D. what is considered as true changes with
every single new observation made.

ISS 305: Mini-quiz Question 12

- All empirical knowledge is uncertain because sensory data is fallible.

A.True
B.False

ISS 305: Mini-quiz Question 13

- Science hates skepticism.

A.True
B.False

ISS 305: Mini-quiz Question 14

A basic aspect of science is that it is public. Which of the following is NOT one of implications of this?

- A. that scientific evidence should be subject to (qualified) peer review
- B. that a truly scientific observation must be replicable
- C. that operational definitions must be provided for scientific observations
- D. that results that are not accepted by the general public are not scientific

ISS 305: Mini-quiz Question 15

The behavior of the workers at the Hawthorne Electric plant is often cited as evidence that

- A. anecdotal evidence is not very informative.
- B. your expectations can be self fulfilling.
- C. the act of observing can strongly alter the behavior of those observed.
- D. chance can sometimes result in effects that are really not there.

ISS 305: Mini-quiz Question 16

ESPN asks viewers to call in to vote for the greatest basketball player of all time. In announcing the results, the announcer says that their poll was “not scientific”. What makes it unscientific?

- A. One can't do science on something frivolous like sports.
- B. No scientists were employed to carry it out.
- C. The observations were not careful or systematic enough.

ISS 305: Mini-quiz Question 17

Our overview of the question “does science reject the idea that people need to be shielded from the truth?” suggests that in the scientific community,

- A. there is 100% agreement that the answer is “Yes”.
- B. there is 100% agreement that the answer is “No”.
- C. there is no agreement on an answer.