INTRODUCTION TO SOCIAL SCIENCE RESEARCH

I'M NOT GOING TO DO MY MATH HOMEWORK.

LOOK AT THESE UNSOLVED PROBLEMS. HERE'S A NUMBER IN MORTAL COMBAT WITH ANOTHER. ONE OF THEM IS GOING TO GET SUBTRACTED, BUT WHY? HOW? WHAT WILL BE LEFT OF HIM?

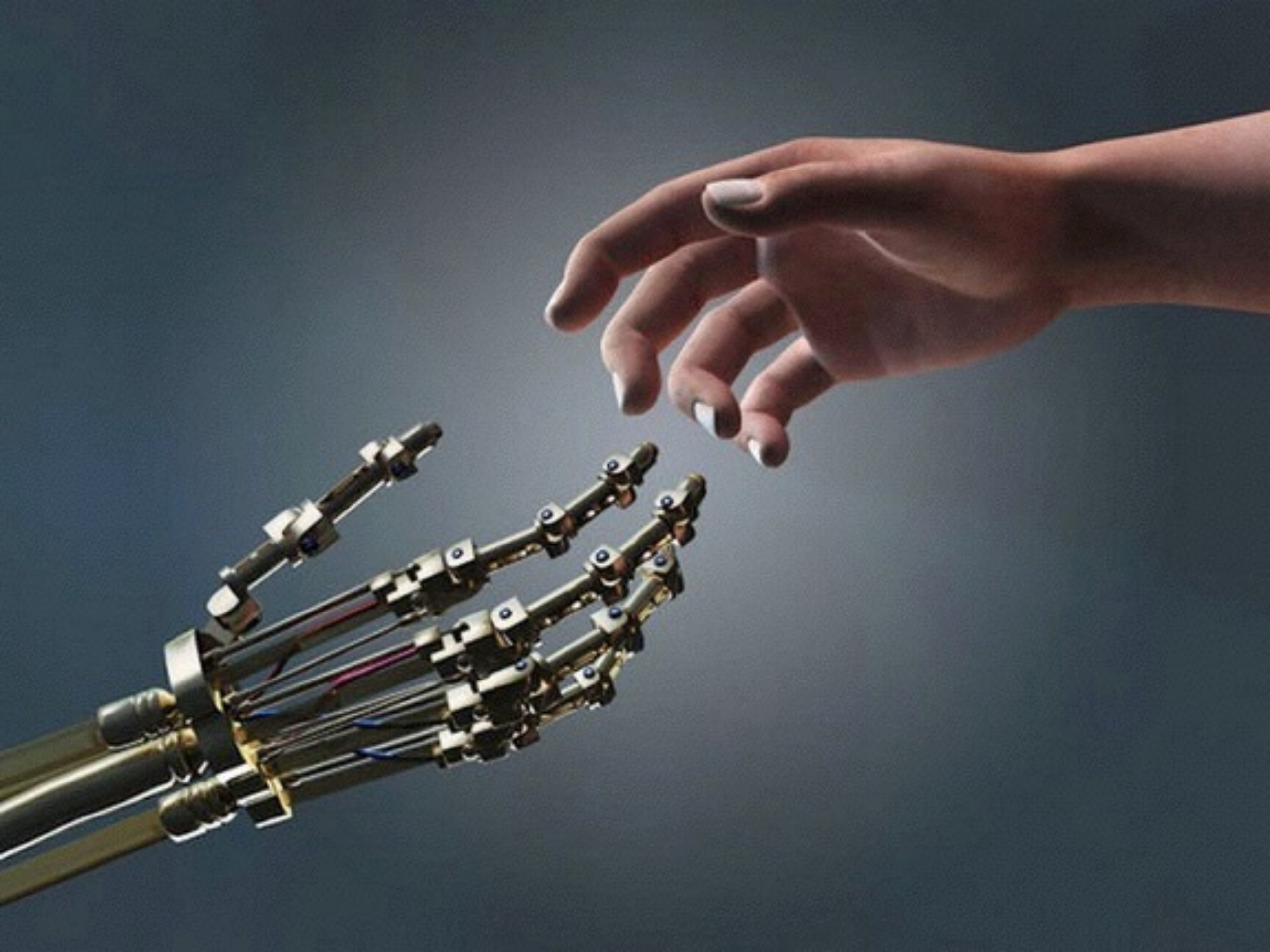
IF I ANSWERED THESE, IT WOULD KILL THE SUSPENSE. IT WOULD RESOLVE THE CONFLICT AND TURN INTRIGUING POSSIBILITIES INTO BORING OL' FACTS.

I NEVER REALLY THOUGHT ABOUT THE LITERARY QUALITIES OF MATH.

I PREFER TO SAVOR THE MYSTERY.

THE SCIENTIFIC STUDY OF HUMAN SOCIETY AND SOCIAL RELATIONSHIPS

social science

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SOCIAL SCIENCE RESEARCH METHODS

- Observational, archival, or case study
- Surveys, interviews
- Experimental research

RESEARCH ETHICS

RESEARCH ETHICS

- Respect for persons: recognition of the personal dignity and autonomy of individuals, special protection of those persons with diminished autonomy.

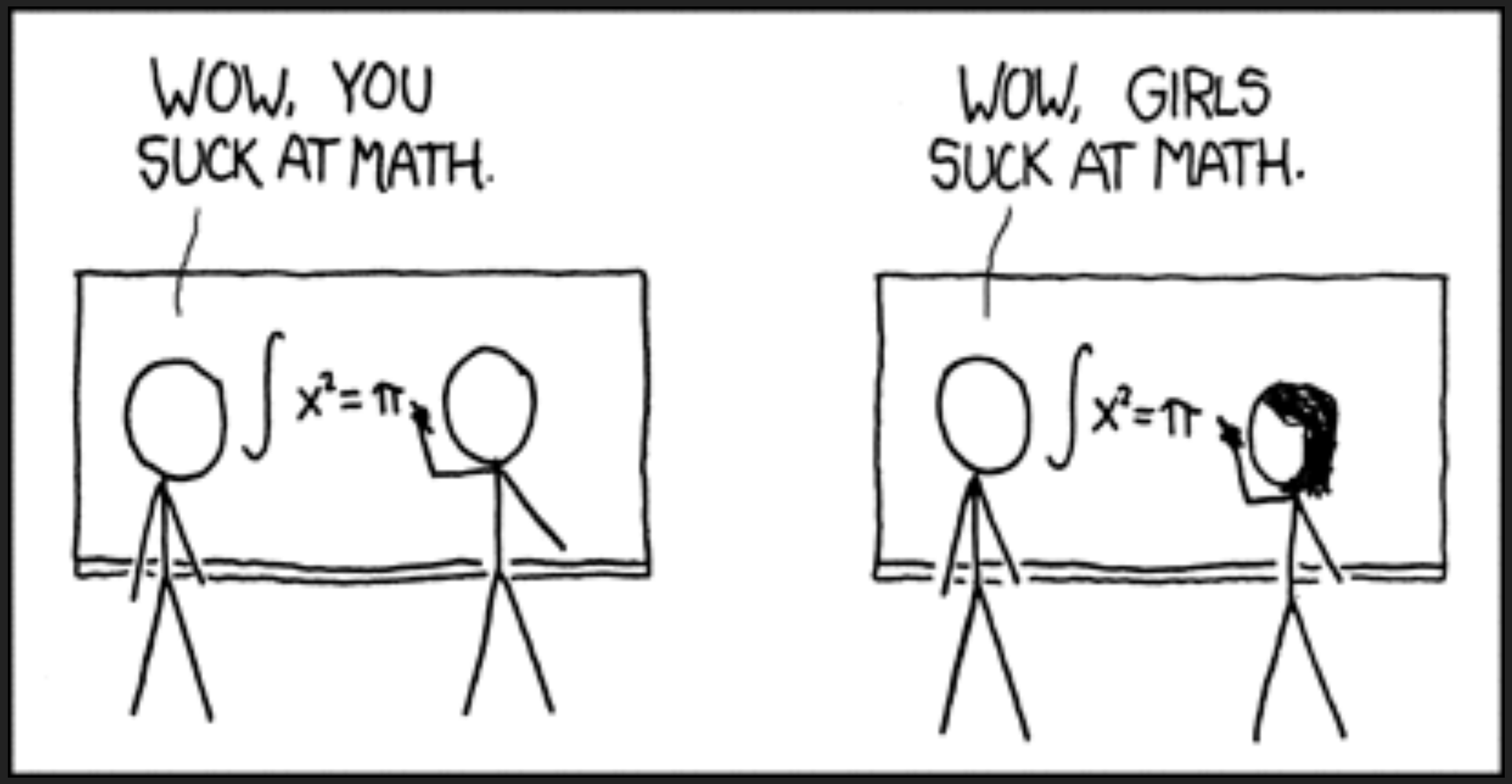
- Beneficence: obligation to protect persons from harm by maximizing anticipated benefits and minimizing possible risks of harm.

- Justice: requires that the benefits and burdens of research be distributed fairly.

RESEARCH ETHICS

- Example:
  - Milgram

BIASES IN SCIENCE



BIASES IN SCIENCE

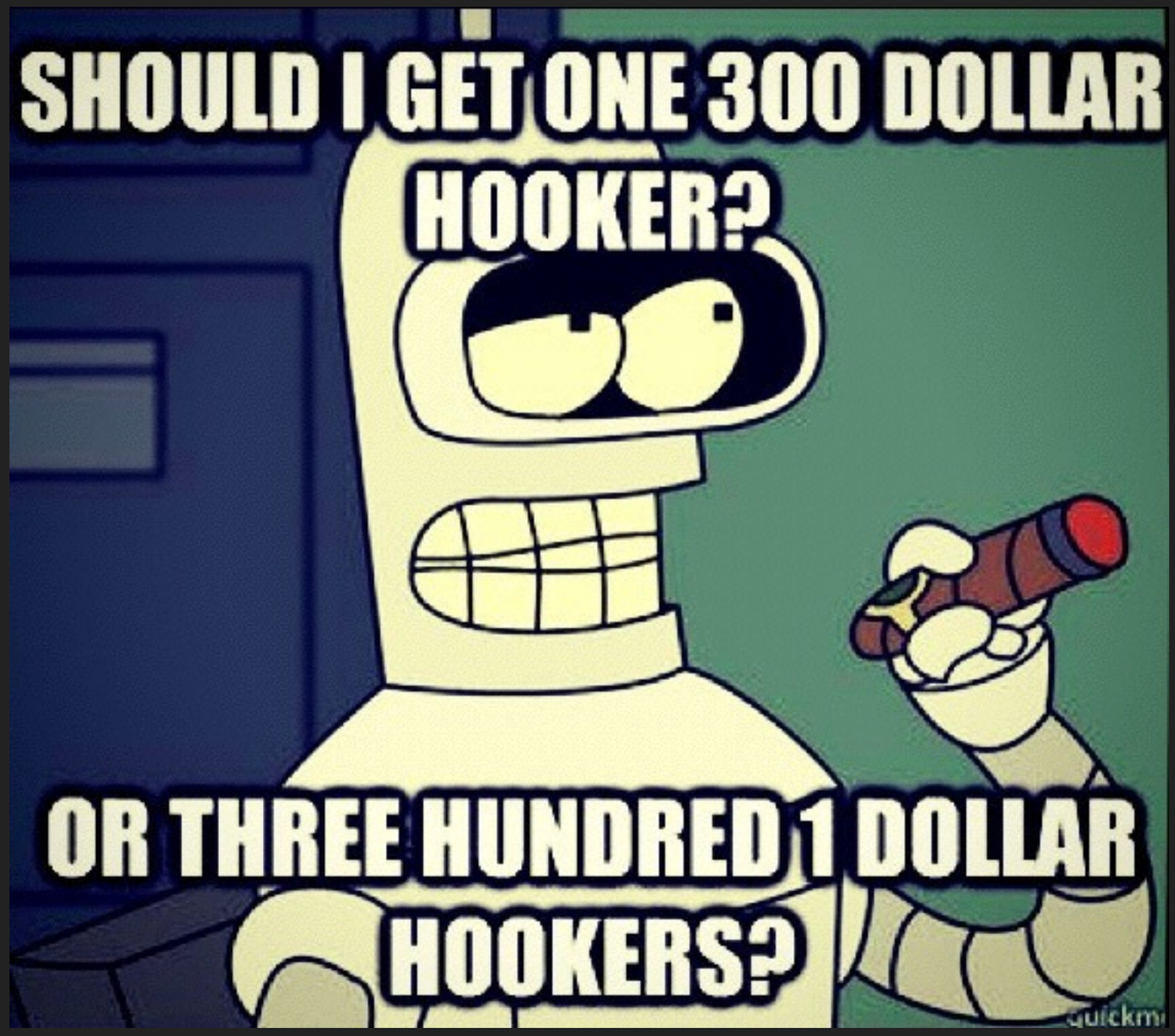
- Confirmation bias
  - Ignoring evidence that contradicts what we believe

BIASES IN SCIENCE

privileged white adults with expertise in robotics

- What robot would ~~people~~ most like to be?

RESEARCH QUESTION



RESEARCH QUESTION

- Thesis statement = answer to the research question.
- “Why do people like robots?”
  - Too broad!
- Better: “Does naming a Roomba make people anthropomorphize it more?”
- Are you biased?

A STATEMENT ASSUMED TO BE TRUE FOR THE PURPOSE OF TESTING ITS VALIDITY.

Hypothesis

HYPOTHESIS

- If we make certain observations under particular conditions, and a particular theory is correct, then we should find the following results.
- Capable of empirical testing
- Capable of empirical confirmation or disconfirmation

HYPOTHESIS EXAMPLE

- If the Roomba is introduced with a name, participants will rate it as more anthropomorphic than when it is not.

ASPECT OF A TESTING CONDITION THAT CAN CHANGE WITH DIFFERENT CONDITIONS

Variable

VARIABLES

- Representative of the concepts you're trying to measure
- Independent/dependent
- Confounded

HOW WELL DOES THE RESEARCH CONCLUSION CORRESPOND WITH REALITY?

Validity

VALIDITY

- Internal Validity
  - Is there really a cause and effect relationship between the independent and dependent variables?
  - Confounded variables

VALIDITY

- Construct Validity
  - Can we generalize from the specific things we're measuring to the research question?
    - "Do people empathize with cute robots?" -> You need solid ways of measuring empathy and cuteness.

VALIDITY

- External Validity
  - Are the findings generalizable?

privileged white adults with expertise in robotics

WHAT TO BE CAREFUL OF WHEN DESIGNING AN EXPERIMENT

- Biases
- Ethics in human subject research
- Focused research question & hypothesis
- Internal validity: Defining your variables and holding other variables constant
- Construct validity: Are you measuring what you intend to measure?
- External validity: Generalizability of results?