Heuristics & Biases

1

What's the difference between a Heuristic & a Bias?

- Bias = the phenomenon
  - Systematic deviation from a normative standard

- Heuristic = the descriptive theory
  - Simple strategy that usually gives the normative answer, but which leads to systematic bias in some circumstances

3

Example

- Bill is 34 years old. He is intelligent, but unimaginative, compulsive, and generally lifeless. In school, he was strong in mathematics but weak in social studies and humanities.

4

How probable are each of the following statements?
- Bill is a physician who plays poker for a hobby.
- Bill is an architect.
- Bill is an accountant.
- Bill plays jazz for a hobby.
- Bill surfs for a hobby.
- Bill is a reporter.
- Bill is an accountant who plays jazz for a hobby.
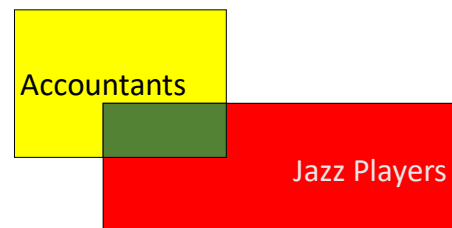- Bill climbs mountains for a hobby.

5

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- **Bill is an accountant who plays jazz for a hobby**.
- Bill climbs mountains for a hobby.

6

Conjunction Rule = normative

Accountants

Jazz Players

7

What's the Heuristic & Bias?

- Bias = conjunction fallacy
  - Saying $p(J\&A) > p(J)$

- Heuristic = representativeness heuristic
  - Judge probability that Bill belongs to a given category according to how representative Bill is of that category

8