



Generating a Hypothesis

- What is a hypothesis?
 - A hypothesis is a tentative statement that proposes a possible explanation to some phenomenon or event.
 - Typically, a good hypothesis is a testable statement, describing the potential relationship between two (or more) variables.



Hypothesis Generation Activity

- Begin by asking a research question:
 - Example: Does music influence the amount of work completed by men differently than it does women?
- Then, craft a testable hypothesis:
 - Men work faster when there is music playing while women work slower when there is music playing. However, when there is no music, men work slower and women work faster.
- Identify the independent and dependent variables:
 - Dependent variable: amount of work completed
 - Independent variables: gender, music

Source: http://www.class.uidaho.edu/psyc320/lessons/lesson02/lesson02-2-1_activity.htm



From Hypothesis to Constructs

- Next, you have to operationalize the constructs, meaning you have to figure out a way to measure the independent and dependent variables
 - Gender: Male or female
 - Music: Beatles' One (greatest hits album)
 - Work: Number of widgets made in one hour
- You have to decide how you will select your participants.
 - Random sample of employees at a local widget factory

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Alternative Explanations

- Finally, you have to consider what alternative explanations might exist for a finding consistent with your prediction.
- In other words, suppose your results confirm your hypothesis; Other than gender, what might explain the differences in the amount of work completed?
 - Perhaps the men in the sample are all of a substantially higher age than the women. Since the women are younger, they may be more physically fit, and therefore able to work faster.
 - However, when the old Beatles music is playing, perhaps the young women are turned off by it, and they work slowly. On the other hand, the Beatles music makes the men feel young again, and so they work faster.



What are the Hypotheses?

- Do the poor pay more?
 - Low income neighborhoods have higher numbers of businesses that charge more for goods and services than high income neighborhoods.
 - This is testable.
 - How?



What are the Hypotheses?

- Is something you have more valuable than something you want?
 - People who have a ticket to see Duke play in the final four will report that it is more valuable than people who don't have a ticket.
 - This is testable.
 - How?



Exercise

- Think of your research question or idea.
- What is your hypothesis?
 - What are the variables you are examining
 - How are they related
 - The best hypothesis predicts direction
