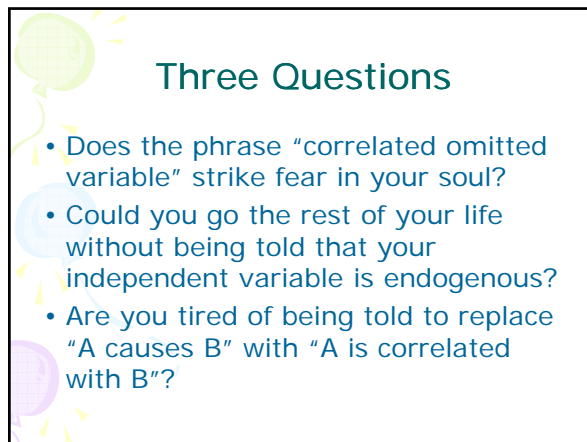


Experiments!

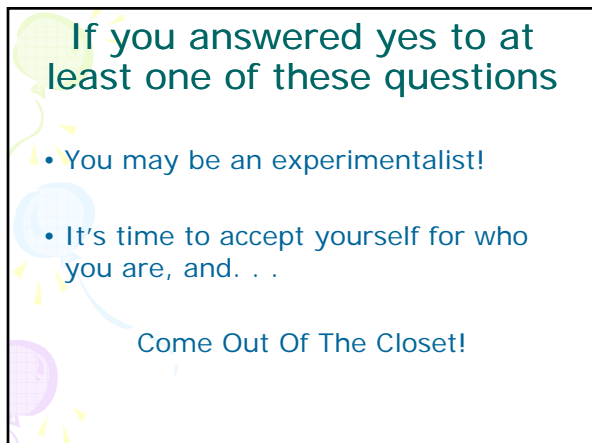
For the Control Freak in All of Us

Kristy L. Towry
Emory University



Three Questions

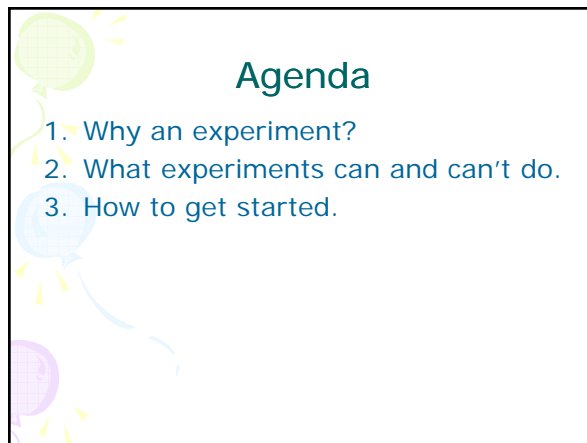
- Does the phrase “correlated omitted variable” strike fear in your soul?
- Could you go the rest of your life without being told that your independent variable is endogenous?
- Are you tired of being told to replace “A causes B” with “A is correlated with B”?



If you answered yes to at least one of these questions

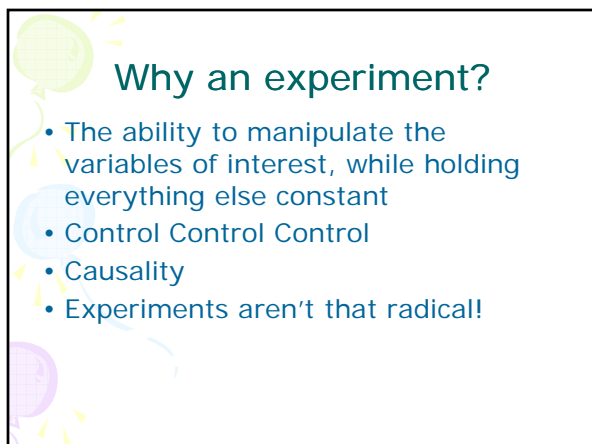
- You may be an experimentalist!
- It’s time to accept yourself for who you are, and. . .

Come Out Of The Closet!



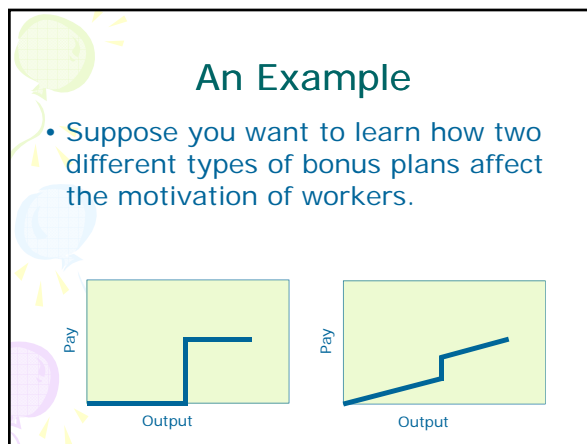
Agenda

1. Why an experiment?
2. What experiments can and can’t do.
3. How to get started.



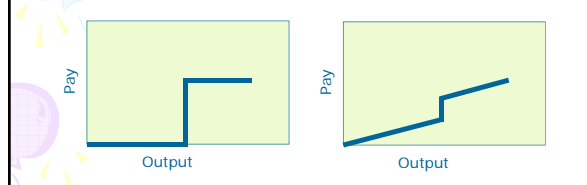
Why an experiment?

- The ability to manipulate the variables of interest, while holding everything else constant
- Control Control Control
- Causality
- Experiments aren’t that radical!



An Example

- Suppose you want to learn how two different types of bonus plans affect the motivation of workers.



How would you answer this question with archival data?

- Find as many firms as possible who had each type of bonus system.
- See if performance is different for the two sets of firms.
- What is the strength of this approach?
- What is the weakness?

How would you answer this question with an experiment?

- Bring people into the laboratory and have them perform some task for money.
- Randomly assign them to the two bonus types.
- See if performance is different for the two groups.
- What is the strength of this approach?
- What is the weakness?

What an experiment

<p><u>Can Do</u></p> <ul style="list-style-type: none"> • Determine the direction of an effect • Test a theory that explains a real-world phenomenon • Unravel multiple effects 	<p><u>Can't Do</u></p> <ul style="list-style-type: none"> • Determine the size of an effect • Quantify the economic significance of that phenomenon • Determine the net result of multiple effects
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Tradeoffs

- External Validity
- Internal Validity
- Construct Validity
- Statistical Conclusion Validity

The "student subject" question

Two Approaches

- Typical psychology-based experiment
- Typical economics-based experiment

