the Definitive Difference

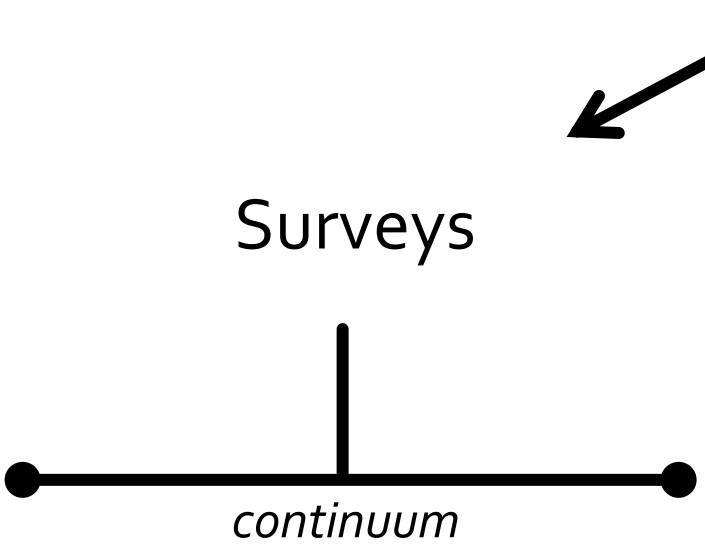
between experiments and correlational studies

- Experiment (strict)
  *must have at least one **manipulated** variable (IV)*
- Correlational Study
  *all of the variables are **measured***
  - although one is treated as the "predicted" variable
  - the others are treated as the "predictor" variables
- the difference is important for two reasons
  - different methods of analysis
  - different issues for interpretation

Recap on correlations

- can be calculated between any two variables
- vary between -1.00 and +1.00 and use symbol ***r***
- have no units, so can always be compared
- provide a measure of the **linear** relationship (only)
- also provide a measure of "explained" variance r^2
- are greatly affected by the range of values
- cannot be applied outside the range

Collecting Correlational Data



Surveys

continuum

face-to-face interview

anonymous, web-based questionnaire

high reactivity

medium realism

high exptr bias

medium reactivity

low realism

low exptr bias

Observation

naturalistic

participant

no reactivity

high realism

low exptr bias

high exptr bias

Surveys

- *a structured set of items* designed to measure attitudes, beliefs, values, or behavioral tendencies*

  * "items" include

  direct questions
  agree/disagree statements
  fill-in-the-blanks & scales
  etc

  note: the items do not have to concern the person taking the survey

(Major) Survey Types

- face-to-face interview
- face-to-face survey
- phone survey

(Major) Survey Types

- written (often mailed) questionnaire

  – can also suffer from "biased attrition"
  when the probability of a given subject completing a survey depends on (what would have been) the subject's responses

- electronic (i.e., web-based) questionnaire

(Major) Item Types

- open-ended questions
  e.g., "what did you do this morning?"

- closed questions (in general)
  e.g., "did you have breakfast this morning?" (yes/no)
  e.g., "on a scale of 0-10, where 0=not at all & 10=completely, how much do you like bagels for breakfast?"

(Major) Item Types

- Likert scales

  sets of 5-, 7-, or 9-point agree/disagree items

  e.g.,
  1. strongly disagree
  2. disagree
  3. neither agree nor disagree
  4. agree
  5. strongly agree

  (center [neutral] option can be omitted, but prob. shouldn't)

  use a summary score across all items to create scale score

(Major) Item Types

- Guttman scales

  a set of "ascending" questions – *how far will the S go?*

  e.g., "I am willing to talk about dogs"
  "I am willing to be near caged dogs"
  "I am willing to be near uncaged dogs"
  "I am willing to pet dogs"
  "I am willing to own a dog"

  note that the format is usually repeated for all options

  stop asking the series of questions when S says No

(Major) Item Types

- Thurstone scales

  check-lists – subjects indicate "all that apply"

  e.g., I like dogs
  I enjoy playing with dogs
  I have owned at least one dog
  etc

  each item is pre-rated (by other subjects) for positivity
  and is, therefore, worth a certain number of points

(Major) Item Types

- semantic differentials

  pairs of opposites – indicate position between extremes

  e.g., sweet ..... sour

  warm ..... cold

  bright ..... dark

  etc.

Survey Types x Reactivity

- the so-called Bradley Effect (aka Wilder Effect) is the difference in how people say they behave [e.g., vote] vs. how they actually behave [vote] in private

  it's an example of reactivity (usually based in evaluation apprehension)

  how can you avoid it?
- you ask yourself: *how do researchers reduce this kind of reactivity in general?*

  by keeping the experimenter away from the subject

  therefore, use automated data-collection for this situation