Post-lecture Notes III.1 – Correlational Data: Surveys

Note: the Wikipedia entries on the four main scale types are quite good.

Start here: http://en.wikipedia.org/wiki/Rating_scale and then click some of the options under **See also** at bottom. At the bottom of the Likert scale page, there are links to many other scale types.

Study Questions

What are the two general approaches to collecting correlational data?

In what way do surveys vary?

Assume that you must choose between a face-to-face survey and a web-based survey. What is the trade-off between threats that you are dealing with and how would that influence your decision as to which method to use?

What are the advantages and disadvantages of using open-ended questions? In general, do the advantages or disadvantages predominate?

What are the four standard scale types and what are each used for (most often)?

1. In comparison to face-to-face interviews, anonymous web-based surveys usually have _____ .
    (A) more realism and less reactivity
    (B) more realism and more reactivity
    (C) less realism and less reactivity
    (D) less realism and more reactivity

2. A set of items where subjects "check all that apply" (but the items have different values as determined by pre-testing) is a _____ .
    (A) Guttman scale
    (B) Likert scale
    (C) Thurstone scale
    (D) semantic differential

Answers to Study Questions

You either ask questions and write down the answers or you watch the subjects and write down what they do. The key difference, however, is not whether you interact or not, since, as you'll see on Thursday, there's a type of observation that involves talking to the subjects; rather, the key difference is whether the subject knows that they are in a psychological study. In all forms of survey, the subject knows that they are in a study; in both types of observation, it's critical that the subjects not know that they are in a study.

Surveys vary along a continuum that goes from face-to-face interviews to web-based questionnaires. This means that they vary in how "personal" the data-collection feels to the subject, from very personal to almost impersonal. The continuum can be called the "personalness continuum" if you wish.

A face-to-face survey will probably have higher experimenter realism (i.e., the subject will take the questions more seriously) but it will also evoke higher levels of reactivity (mostly evaluation apprehension) in the subject. So, if the issue(s) being studied is/are "touchy" (such that subjects would have more reason to give inaccurate/dishonest answers, then go with the web-based study. If it is crucial that the subjects really think about their answers, then go with the face-to-face survey. It's hard to impossible to have both high realism and low reactivity; this is an example of "no such thing as the perfect survey."

The main advantage of open-ended question (and the interview method in general) is that they can follow-up on things that arise during the interview that the researcher didn't think of in advance. The main disadvantage is that open-ended questions are very difficult to codify (i.e., boil down to simple data during pre-processing), plus open-ended questions are often more influenced by reactivity than closed questions. These disadvantages are so great that open-ended questions are almost always avoided (unless you're planning to write a pop-psych book, instead of publish in a journal).

1. Likert scales have sets of agree/disagree items (usually an odd number of options with a neutral center); a summary (e.g., the mean) of all items is the subject's score. Very reliable, so good for small effects and/or small numbers of subjects. Most popular scale-type.
2. Guttman scales have sets of ascending items for (yes/no) agreement; the score for the subject is the highest item that he or she agreed to. Adaptive in a way to reduce demand for "average" behavior, so good for situations with strong "norms" for behavior or "touchy" subjects where continuing to ask questions after the subject says "no" would be bad. Rare these days.
3. Thurstone scales are sets of items to (yes/no) check off; the items are pre-rated for value and the subject's score is the sum of values. These often have the best construct validity, so good for situations where a fine distinction (and, therefore, discriminant validity) is needed. Second most popular scale.
4. Semantic differentials are sets of pairs of opposites where the subject indicates where they are between extremes on each pair. These are much harder to analyze, but work best for overlapping constructs. Also rare, but on the rise.

1: answer is C: Anonymous web-based surveys have less realism and less reactivity than face-to-face interviews. Note that realism and reactivity almost always go up and down together.
2: answer is C: A set of items where subjects "check all that apply" (but the items have different values as determined by pre-testing) is a Thurstone scale. A Guttman is a set of ascending questions where you stop when the subject says "no"; a Likert scale is a set of agree/disagree items (with 5, 7, or 9 options); a semantic differential is a set of metaphorical items, like sweet-sour, light-dark