Post-lecture Notes III.2 – Observational Studies

Study Questions

What are the two ways to conduct an observational study, including their names?

What are the key threats for each of the two ways of conducting an observational study?

What (non-standard) type of experimenter bias can occur in all observational studies? What are the standard ways to fight this threat? And what kind(s) of validity is a threat to, anyway?

What is the general rule that limits when and where you can conduct observational studies without the consent of the subjects? What implications does this rule have for each of the two ways of conducting observational studies?

What three questions should you ask yourself when trying to decide which approach to take – surveys vs observation – for a given correlational project? How do the answers to these question "push" you towards surveys or observation?

1. The key threat to the overall validity of a naturalistic observation study is _____ . (Note: "key threat" here means the one that you worry about the most.)
   (A) experimenter bias
   (B) observer bias
   (C) demand characteristics
   (D) reactivity

2. The general rule with regard to how closely two or more observers must agree on what happened is that inter-coder reliability must be _____ .
   (A) at least .50
   (B) at least .70
   (C) at least .90
   (D) perfect (i.e., 1.00)

Answers to Study Questions

You either observe people without getting involved, which is called "naturalistic observation," or you join them and observe them from inside their group, which is called "participant observation."

The key threat to naturalistic observation is reactivity which can be very strong if the subjects suddenly notice that the observers are watching; in other words, it is absolutely crucial that the observers not be caught. The key threat to participant observation is the above-mentioned reactivity (if the observers are caught) plus the standard form of experimenter bias which is hard to avoid when the observers are forced to interact with the subjects.

The (non-standard) type of experimenter bias that can occur in any and all observational studies is "observer bias" – when the beliefs and/or expectancies of the observer end up influencing what data the observer records. (Note: this is different from standard experimenter bias, because standard experimenter bias works by changing the behavior of the subjects. In this case, the subjects' behavior doesn't change; rather, what changes is the data that are being recorded.) The first thing that we do to fight this is to always use multiple observers and make sure that they agree very strongly about what happened; we require an inter-coder reliability of .90 or better (which is the highest required correlation in psych methods). We also use tricks to limit the options of the observers and prevent overload, such as checklists, time-window sampling, and event-triggered sampling. Observer bias is a threat to both construct and internal validity. It threatens construct validity in that you aren't just measuring something about the subject, you are now also measuring the beliefs of the observer, as well. It can be a threat to internal validity is that things may become correlated in the data for non-causal reasons … at least, not caused by anything that happens only inside the subject. Thus, while observer bias is usually considered to be a "secondary threat" for both types of observational method, it can be devastating when it occurs.

The general rule on conducting observational studies without consent is that it may only occur when and where there is no expectation of privacy. Therefore, naturalistic observation can only be done in public places and participant observation can't be done at all (without prior consent).

First ask yourself what you're trying to measure. Surveys are good for unobservable things, such as attitudes, while observation is good for behavior. Then ask yourself whether reactivity is a serious threat and whether realism is very important. A "Yes" to either question would push you away from surveys and towards observation (if you weren't there already). Finally, consider the amount of work that's involved. This might push you back towards surveys, since observational work is much harder and time-consuming.

1: answer D: The key threat to the overall validity of a naturalistic observation study is reactivity. It is crucial that the observers not be "caught" watching the subject(s). Standard experimenter bias should not be a problem, because the observers don't interact with the subject(s). Observer bias is a threat, but it's not as big of a problem as the reactivity that would be triggered if the observers are caught. Demand shouldn't be a problem at all, since, without a manipulation or obvious measure, the subjects won't be able to figure out what the researchers are studying.

2: answer C: The general rule with regard to how closely two or more observers must agree on what happened is that inter-coder reliability must be at least .90. We are so worried about observer bias that we require this very, very high level of agreement between observers. Remember the rule: "we can argue about theory and/or why something happened, but we must agree on what happened."