

Naturalistic Observation

Three goals of research:

Description → Collecting systematic observations

Prediction → Establish relationships among variables – Correlational research

Explanation → Establishing cause and effect relationships – Experiments

Observation

- Distinction between observation without intervention and observation with intervention
- Would the actions taking place be any different if the observation were not taking place?

Observation without intervention

Naturalistic observation: Observation of behavior in a more or less natural setting, without any attempt to intervene.

- the situation is not manipulated or controlled by the investigator.
- The situation has not been initiated or created by the investigator.

Advantages of naturalistic observation

1. Allows observation of behavior exactly as it occurs in the real world. Said to retain an element of ecological validity. The situation being studied exists in the natural ecology of the species.
2. Helps to establish the external validity of the research findings. If you see the behavior occurring in real life, it's easier to say that the results from your study extend to the general population. Easier to say that the things that you learn from your sampling of behavior describe the way things work for people outside of your sample.
3. Ethical considerations may prevent the manipulation of a certain variable, but it may be possible to observe this condition when it naturally occurs. Ex. Reactions to traumatic stress. Psychologists who study reactions to school shootings. You obviously can't cause these events to occur, but you can observe the results from events when they do occur.

Threats to observational research

Many of them fall under the heading of reactivity.

- Reactivity refers to situations where a subject's behavior is different when the person knows they are being observed, or that their behavior is being studied, than it would otherwise be.
- The subject's expectations about what the experiment is about can change their responses to the demands of the situation.

Example. The Hawthorne Effect (Homans, 1965)

- Women at a Western Electric factory took part in a study of worker productivity. What working conditions result in the highest levels of productivity.
- The measure of productivity was the number of telephone relays that were assembled per day.
- The investigators obtained a baseline measure of productivity, then they changed the working conditions and measured the change in performance.
- Every time the working conditions were changed, performance increased.
- Why? Because the workers knew they were in a study and they knew that the investigators were looking for ways to increase productivity.
- So, the workers did the best they could to give the experimenters the results they were looking for.
- A classic study in the social psychology of compliance.

[Not covered Spring 2006] Weber and Cook (1972) identified four different social roles of subjects in experiments.

1. The Good Subject role: The subject tries to validate the anticipated result. Give the experimenter the result they want.
2. The Faithful Subject role: The subject attempts to be honest and faithful, even when they can anticipate the expected result.
3. The Negativistic Subject role: The subject produces responses or behavior that is in the opposite direction as the anticipated result.
4. The Apprehensive Subject role: The subject feels uncomfortable about being evaluated. Because of evaluation apprehension, the subject tries to behave in a socially desirable way. They don't want to look bad. They may give the socially desirable response, even if it's not what they really think, or if it's not what the investigator expects to see.

How to avoid reactivity?

1. Don't let people know that they're being observed. Unobtrusive observation.
2. Don't tell the subject the real reason for conducting the study. Deception.
 - Directing the subject's attention and their expectations in a false direction. Make them think the experiment is about something different.

The experimenter can conduct the study so that the subject is blind as to their role in the study.

A step further. Don't set up a situation where the experimenter could consciously or unconsciously give away their expectations about what the subject should say or do. Make sure that the person collecting the data is blind as to the true purpose of the experiment. Both the subject and the experimenter are blind as to the true role of the subject. This is referred to as a double-blind study.

Data collection in observational studies

Narrative record: As best as one can, recording the behavior of the persons or animals being observed exactly as it originally occurred. One can go back later to try to organize those observations.

Videotape and audio recordings, where ethical, are very helpful in doing this. These methods are not subject to bias in terms of what behavior gets recorded and what does not. These methods also have the advantage that another researcher can go back later to see if they can verify the observations that the original researcher had made.

If videotape or audiotape is not being used, the researcher must decide ahead of time exactly what the rules will be for recording their observations. Must constitute an example of the behavior of interest. Ex. Use of tools by primates.

Quantitative measures of behavior

One way to make sense out of a tremendous number of separate observations is to apply numbers that capture information about the behaviors being observed.

In order to do this the research needs to decide on a measurement scale for the aspect of behavior to be measured. The researcher needs to decide when and how they're going to collect their measurements.

When to collect data

Sampling – You probably can't record everything that every person does and expect to make sense out of that much information. The researcher has to make decisions about how to limit the information they get to something that is manageable.

The key thing about the observations collected is that they are **representative** of the behaviors that are actually being performed by the person.

Three methods of sampling:

1. **Time sampling:** Record what the person is doing at regular intervals of time.

2. **Event sampling:** It may be that the behavior you're interested in doesn't occur very often. So you record every instance of the behavior or the event. And you record how often these events occurred.
3. **Situation sampling:** Observe the behavior in more than one situation. This allows the researcher to generalize their findings to more than just one situation. It enhances the **external validity** of the study.

How to record the data

Researchers often develop a set of rules for how to categorize the different behaviors they're observing. **Coding** data refers to the process of assigning a different number to each category of the behavior being observed.

Ex. Emotions. Once a minute you record a numerical value that represents the emotion that a person is displaying (event sampling).

- 1 = laughing
- 2 = happy
- 3 = sad
- 4 = embarrassed

The sequence of numbers you record is said to "code" the pattern of change in a person's emotional behavior.

Observation with intervention

Reasons for doing this

1. To capture an event that occurs infrequently in nature or that occurs under conditions that make it difficult to observe.

Ex. Bystander intervention. Someone drops their books. How many people help.

2. To investigate the limits of a response by varying the stimulus conditions.

Ex. Marketing. How far do you put the billboard for a new restaurant from the exit from a highway. Too far and people will forget about it – or stop somewhere else first. Too close and people don't have time to think about it.

3. To arrange conditions so that important antecedent conditions are controlled and consequent behaviors can be readily observed.

Ex. In the bystander intervention study – How many other people are around when the person drops their books. The investigator could wait until there are two people in a group walking by, or three or four.

Three types of observation with intervention

1. Participant observation.

- person is interacting with the people being observed.

Ex. Dr. Mullis and the snake handling church.

Ex. A reporter going undercover

- Participant observation can be disguised or undisguised.

Potential problems with participant observation

- Is the observer unduly influencing the behavior of the people being observed. We want to know what the behavior would be like if the observer weren't there.
- Is the observer objective – Does the observer record events exactly as they occur, or is their data collection influenced by their feelings about the person or persons being observed. Ex. If a participant observer lives with a group for many months, are they more likely to underreport negative behaviors if they have come to like the people they've been living with.

Structured observation

- A method of observation where the researcher creates a situation where a behavior can occur. They set up a situation where they might be able to see the behavior they're interested in. Put people in a specific situation, then see what happens.
- Structured observation provides a middle ground between passive observation – like in naturalistic observation—and actively manipulating the conditions and then seeing what happens – like in a field experiment. The conditions are as controlled as in a field experiment.
- It's observation with intervention, because the behavior wouldn't have occurred at that time and in that place if it weren't for the experimenter.

Ex. Friendship development in five year olds. Bring six five year olds into a room with a bunch of toys and books. Record what each child does and who they interact with. What sorts of events lead to friendship development? What could the researcher observe so that they conclude that a friendship has developed.

- One potential problem in using structured observation is that there might be a lot of variability in the situations being observed. Or different observers might use different procedures.

Field Experiment

- One or more aspects of the situation are manipulated in a systematic way.
- It's an experiment because at least one variable is manipulated (that's the independent variable) and then the researcher records the behavior on a second variable (the dependent variable).
- There is control over other variables that might also have an effect on the behavior of interest.
- Often, one or people act to create a certain situation. These are referred to as **confederates**.
- The experiment is carried out in the subject's natural environment rather than in a laboratory.

Ex. Bystander intervention. When are people more likely to help each other? Helping someone pick up their books after they've dropped them.

The behavior: do they help to pick up the books or not?

The gender of the person who dropped the books

The gender of the bystander

Control for: the number of people walking by: Only drop the books when there is one other person walking by on the sidewalk.

Ex. Holding the door for someone else.

Dependent variable: Do they hold the door or not.

Independent variable: There are two people ahead of them going into the door. Did the lead person hold the door for the other person or not?

Are people more likely to hold the door open for someone else when that behavior had just occurred in front of them?