

# Structured Observation

## Chapter Summary

### Introduction

This chapter considers applications, advantages and disadvantages of structured observation as an observational technique in sociology. It shows how structured observation can be used to overcome the limitations of survey research and contrasts structured observation with other observational techniques, such as field experiments. The chapter also discusses the process of implementing the structured observation and the issues with reliability and validity that apply to structural observation. It concludes by looking at the criticisms of structured observation.

### Structured Observation as an Alternative to Survey Research

**Structured observation** is an observational technique with explicit rules for observing, categorizing, and recording behaviour. Its main strength is in the researcher's direct observation of the situation of interest, because direct observation eliminates the discrepancy that is common in surveys between what people report they do and what they actually do.

Some problems with survey research that are overcome by the use of *structured*, or *systematic*, *observation* are the problems of meaning, problems of memory, social desirability bias, and the gap between stated and actual behaviour.

- By observing the action, the researcher will achieve a more uniform interpretation of it, because he or she will apply concepts from the study in the same way between different participants, whereas in surveys each respondent interprets the concepts in their own way.
- The direct observation will also eliminate the problem of memory, because the action will be observed directly rather than recalled from the participant's memory as in surveys.
- Overcoming the social desirability bias is one of the main advantages of the structured observation over survey, because the participants will not be answering a series of uniform questions where they can react to the fact of being studied and present themselves in a better light while discussing certain controversial behaviours.
- Finally, the direct observation eliminates the gap between the stated and actual behaviour present in surveys, because the observed action is recorded and is the main focus of analysis, compared to the respondent-reported action analysed in the surveys.

In structured observation, the researcher uses an **observation schedule** to formulate explicit rules for what is to be observed and recorded, and also how it is to be recorded. Each person is observed for a specified length of time following the written prescribed rules. The data are rec-

orded by the researcher, and, much like in the survey process, can be treated as variables for analysis.

Therefore the structured observation is a logical alternative to survey research. However, it has some disadvantages compared to surveys in that the structured observation can be used only in limited research settings (such as hospitals, classrooms, courts) and there are limits to sample size that inhibit the extrapolation of results to the larger population.

### Other Types of Observational Research

Structured observation can be contrasted with other observational techniques used in sociology:

- **Participant observation:** A qualitative method that entails being immersed in a particular social setting for an extended period of time. The main goal is usually to determine the meaning that people give to their environment and their behaviour, the researcher can participate in the activities of participants, and the observation is not guided by the strict observation schedule as in structured observation. Most participant observation is unstructured. (This is the topic of chapter 10).
- **Non-participant or “unobtrusive” observation:** The observer does not take part in the activities of the observed group. Members of the observed group may or may not know that they are being observed. The process may be structured or unstructured.
- **Unstructured observation:** There are no rules for observing or recording the observations. The observer attempts to gather as much detail as possible, make thorough notes and develop a narrative account of the behaviour at a later time.

Another type of observational technique is a **field experiment**, where in addition to *observation*, the researcher *engages* in social interaction in its natural environment and watches to see what happens. The participants are not aware that they are being studied. In the past and extreme examples of such research, researchers have adopted a social role and used deception to gain entry into social spaces where they would not otherwise be allowed. In contemporary social research the use of deception is considered quite controversial, as was discussed in chapter 3, and field experiments in this form can hardly be allowed in the present. Another caveat is that the field experiment has limited opportunity for recording data, and at best a limited coding system can be implemented. Therefore it tends to collect a limited amount of structured information and opens much to interpretation.

### The Observation Schedule

Developing the observation schedule for structured observation is a crucial part of the process, just as creating the interview schedule is for structured interviews. The observation schedule requires the following:

- A **clear statement** of the research problem in order to focus the observation schedule. It has to specify who is to be observed and which specific behaviours are recorded.
- The categories of recorded observation must be **mutually exclusive** and **exhaustive**. Pilot studies help to identify the appropriate categories. An “other” or “interruption” category may be required for activities that were not accounted for in the original design.
- **Classification** of observed situations and behaviour must be easy to do. Too many options can overwhelm even a trained observer.
- **Minimal interpretation** necessary to categorize observed activity is a significant issue. This concern is reduced somewhat through clear guidelines, sufficient training, and experience.

The chapter provides Bales’s observation schedule as an example. It identifies 12 coded activities differentiating interaction styles that are oriented toward tasks versus socioemotional issues. The scale allows for a positive and a negative activity dealing with six different aspects of interaction. Each subset of two activities (one positive and one negative) is coded to balance

against the other, adding up to a score of 13. The observer would keep a running total score each time one of the activities is observed during a specified period of time. At the conclusion of the observation period the totals can be added up and the numerical value translated back into a conclusion on social interaction.

### Strategies for Observing Behaviour

There are different ways to observe and record behaviours:

- **Recording incidents** is the process of waiting for a specific incidence of the behaviour of interest and recording what happens when it occurs.
- **Time period** is the process of observing a group and recording what occurs within a designated period of time (e.g., every day at lunchtime for two weeks).
- **Time sampling** involves designating the time periods for observations, either systemically or randomly, and carrying out the observation as dictated by that schedule (e.g., observe and record every 15 seconds for 3 minutes).

### Issues of Reliability and Validity

Structured observations have some issues with reliability and validity that are shared with other social research methods. However, compared to interviews and questionnaires, structured observations provide:

- More reliable information about events;
- More precision for timing, duration, and frequency of events;
- More accurate for the time-ordering of variables;
- More accurate and cheaper reconstruction of large-scale social activities.

#### **Reliability**

*Inter-observer consistency* is a significant concern for researchers who use structured observations. How is each observer consistent with other observers in their assessment and categorization of what they see? One measure to assess inter-observer consistency is Cohen's kappa, which assesses the degree to which the coding decisions between two people agree, even if that agreement can occur by chance. Kappa ranges between 0 and 1, and a score of 0.75 and higher usually indicates a very good agreement between coders. *Intra-observer consistency* also remains a concern because behaviour of the observed parties will change over time and the observer may experience fatigue or lapses in attention while recording the observation. Training of observers tends to be seen as the answer to this problem. The procedures for assessing intra- and inter-observer reliability are similar.

#### **Validity**

Measurement, face, and concurrent validity are all concerns with structured observation. For the reasons stated in the preceding section on reliability, measurement validity (ensuring that an indicator is measuring what it is supposed to measure) is a particular concern for structured observation. First, is the observation schedule being used properly? If the recorded observation is unreliable, it will also be invalid, in the sense that there will be disagreements over what exactly was observed. Further, the reactive effect of the participants from being observed will adversely impact the validity of the data. If the reactive effect is present, the recorded behaviour may not be authentic and may not reflect the participant's usual conduct. There is research to suggest that in structured observations, over time the observed get used to the presence of the researcher and to being observed, and that researchers become less intrusive the longer they are in the field. However, reactive effects are more likely to persist if the observed behaviour involves sensitive issues (e.g., sexuality or deviance).

## Reactive Effects in Social Research

Structured observations share the problem of the participant's reactivity to being studied with other methods of social research. **Reactive effects** occur in any research where participants are aware of being studied and they change their behaviour accordingly, thus biasing the received results. These effects are usually manifested in response sets, in social desirability bias or in political correctness. They may be overcome by **using unobtrusive measures**, or non-reactive methods where the researcher does not observe the participants directly but studies information about them from the official records, documents, and other sources. Below is the list of several reactive effects and their descriptions from various research situations where they are encountered.

- **Hawthorne effect:** participants intentionally adjust their behaviour to conform to what they believe is the purpose of the study.
- **Role selection:** participants adopt a role of a knowledgeable expert when asked questions, whereas others may adopt a more passive role than usual.
- **Researcher's presence as a change agent:** The physical environment is changed when a new person enters, and this will also bring some degree of change to the social environment. Thus the mere researcher's presence can introduce change to the studied situation.
- **Trying to be helpful to the researcher:** A respondent may become an active and engaged participant in the study and want to please the researcher. This matters only if the respondent's eagerness impacts the actual phenomenon being studied.
- **Varied reaction according to who the researcher is:** Researchers may communicate the goals of the study, even unconsciously, through their expectations, and the research subjects respond to these cues. In experiments, this problem is overcome by making the experiments *double-blind*, where neither the person administering the instrument nor the participant know crucial information about the experiment, such as who was administered treatment and who was not.

## Field Experiments as a Form of Structured Observation

A **field experiment** is a study in which a researcher directly intervenes in a natural setting to observe the consequences of that intervention. In a field experiment—unlike most types of structured observation—participants do not know that they are being studied. Deception is a problem in field experiments.

## Criticisms of Structured Observations

Criticisms of structured observations beyond the reliability, validity, and generalizability of the method extend to the following:

- The observation schedule may not fit the social environment. Applying inappropriate observation schedule on a setting that is not known will produce a problem similar to that in the questionnaire, when the answer categories for the closed-ended question do not fit the question format. This may be overcome by conducting a period of unstructured observations to establish appropriate variables and categories.
- The research is confined to observing behaviour in localized settings. It doesn't explore the *intentions* that underlie those behaviours. The meanings that people attach to their behaviours can, at best, be inferred. Because the observations are localized, the impact of wider social forces that may influence the behaviours is left out.
- Structured observation has a tendency to gather small bits of data that may be difficult to integrate into broader social narratives of wider significance. The implications of the limited sets of observed behaviour for the social conditions of participants or for wider issues may be difficult to infer.

Despite these limitations, structured observations remain a much better way to study overt behaviour than the survey methods, particularly in situations where the underlying reasons for that behaviour are less important. In these situations, structured observation of behaviour can work best in conjunction with another method focused on understanding the underlying reasons for people's actions.

## Learning Objectives

In this chapter, you should learn to do the following:

- Differentiate the structured observation from other types of observational techniques: participant observation, non-participant observation, unstructured observation, or field experiments
- Understand the advantages of structured observation over the survey technique
- Appreciate the structure of the observation schedule and strategies of observing behaviour in a structured observation: by incident, by time period, or by time sampling.
- List and describe the main reliability and validity concerns in structured observation: inter- and intra-observer reliability and the reactive effects on the part of participants
- List and differentiate the disadvantages of structured observation: difficulty developing a good schedule; missing the meaning and intentions of actions; missing on the larger social context of observation; and difficulty integrating the details of structured observation into a fuller account of social action

## Media Resources

Jane Elliott, *A Class Divided* (1985)

<http://www.pbs.org/wgbh/frontline/film/class-divided/>

- Was this experiment aimed at specifically at gathering data?
- How was the experiment structured?
- How does it meet the criteria for reliable and valid observation data?
- What are the weaknesses in relying on this experiment as actual research?
- What were the short-term reactive effects on the students/teacher?
- What were the long-term reactive effects on the students/teacher?

Charlton *et al.* (2000) TV Study

<https://www.youtube.com/watch?v=hY0OTckPNdY>

- What period of time elapsed between Charlton's study on television at St Helena and when this video was made?
- Does Charlton's presence during the research produce any reactive effects?
- What is the after effect of bringing "world" attention to a remote setting?
- Are there political ramifications to reporting observation data?

Toddler Observation Video 3

[http://www.youtube.com/watch?v=7nQxWCn\\_dBg&feature=related](http://www.youtube.com/watch?v=7nQxWCn_dBg&feature=related)

- Is there a difference conducting structured observations with children versus adults?
- What is there a reactive effect?
- Does current technology help the researcher overcome concern for reactive effect?