

# 5

# Research Design

Hlade's Law

If you have a difficult task, give it to a lazy man - he will find an easier way to do it.



## Learning objectives

- To understand what a research design is and the purpose that it serves.
- To learn how to identify, conceptualize and construct a research topic.
- To understand and control its pre-assumptions.
- To gain confidence in constructing operational definitions.

## 5.1 Introduction

Reality has many facets, not all of which can be studied by research study alone. For this reason, the research questions that ethnographers tackle should not, and cannot, cover every aspect.

When ethnographers design their research, they need to define the meaning of some phenomenon for the practical purposes of their study. They do so by:

- connecting different concepts
- interacting with and observing social actors
- selecting information-gathering strategies
- deciding what aspects to explore and what to ignore.

Research design deals with making these decisions. To put it in a more technical way, as they proceed with their research, ethnographers must define the:

- operational definitions through which to collect and record information about concepts
- empirical dimensions and indicators of these concepts
- attributes relative to each of these indicators
- units of analysis
- sampling strategies.

Not all of these decisions are deliberate. However, there is no doubt that these decisions are taken and discussed multiple times during the research.

The research design is therefore a crucial phase in any inquiry. The quality and conceptual rigor of the research depend on it. Nevertheless, it is not a feature of every ethnographic research. The main criticism of ethnography, that it is imprecise and lacks rigor, is usually the result of bad research design.

## 5.2 The interactional work of interpreting actions

Look at the following photograph.



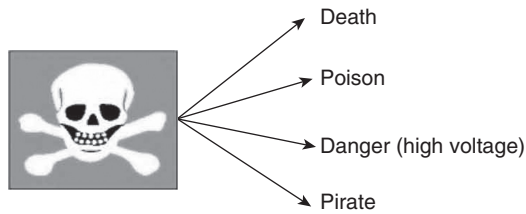
**Photograph 5.1**

What does it show? A human being? A man? A face? A white man? A person with dark hair? A young man? A son? A citizen? A customer or user? A resource for the country? A sexual object (why not)? Something else entirely? The answer is: all these things (or none of them) simultaneously. It all depends on what we want to emphasize at this precise moment.

By the same token, when talking about his dog, the Viennese philosopher Alfred Schutz said:

I look at him as my friend and companion Rover ... without a special motive, not induced to look at Rover as a mammal, an animal, an object of the outer world, although I know that he is all this too. (1953: 8)

What does this tell us in a nutshell? In this example Schutz shows the ‘conventionalist’ thesis. Conventionalism argues that the relationship between an object and its name is not absolute but arbitrary. Consider the symbol below (Figure 5.1). It can be assigned at least four different meanings, and you may certainly be able to think of many others.



**Figure 5.1** One sign for four meanings; therefore four different symbols

If you recall the approaches discussed in previous chapters, ethnomethodology and post-modernism would have no hesitation in embracing Schutz’s position. Consequently, when ethnographers observe and take notes on events they are not recording a reality that exists ‘out there’ independently of themselves as observers because:

strictly speaking, there are no such things as facts, pure and simple ... They are, therefore, always interpreted facts ... This does not mean that, in daily life or in science, we are unable to grasp the reality of the world. It just means that we grasp merely certain aspects of it, namely those which are relevant to us either for carrying on our business of living or from the point of view of a body of accepted rules of procedure of thinking called the method of science. (Schutz, 1953: 5)

If the bare facts do not exist, the ethnographer is not meant to simply record the facts that he or she observes but also to interpret them. In other words, the classifications that ethnographers draw up by observing the actions of actors are essentially constructions due in large part to their mental schemes and practical needs. Do you remain skeptical? Read the following case study.



## Case study

### Science in action

Between October 1975 and August 1977 the French philosopher and sociologist Bruno Latour, a leading figure in science studies, conducted ethnographic research at the Salk Institute, a Californian university research center situated at La Jolla, San Diego.

Latour entered the community of Salk scientists and stayed with them for 21 months, just as anthropologists used to live among African tribes or clans. He adopted the same attitude of surprise as well. But above all he used a 'gaze' that was ingenuous and naturalistic; the same gaze with which students in a statistics class would perceive the mathematical formulas written on the board by the professor, seeing only signs and, 'ultimately ... chalk on the board. On adopting this radically materialist stance, a laboratory seems an environment made up essentially of signs, or better, *inscriptions*: traces, spots, points, histograms, recorded numbers, spectra, peaks, and so on' (Latour and Woolgar, 1979: 88, note 2). These inscriptions are produced by 'inscription devices' (scientists, technicians, machines and laboratory equipment constantly connected to a computer or a printer, which produce outputs).

In Latour and Woolgar's theory, a laboratory is a system of statements (words, assertions, affirmations) and inscriptions. According to Latour and Woolgar, there are five types of statements. They lie at a higher level than inscriptions and are arrayed in a hierarchy according to the degree of arbitrariness attributed to them by the community of scientists (see Figure 5.2). In other words, the lower levels of the scale are made up of (what scientists consider to be) facts, while the higher levels are populated by opinions (Latour and Woolgar, 1979: 76–80).

STATEMENTS TYPE 1 ( <i>conjectures or speculations</i> )
STATEMENTS TYPE 2 (descriptions)
STATEMENTS TYPE 3 ( <i>non-definitive assertions</i> )
STATEMENTS TYPE 4 (specialized facts)
STATEMENTS TYPE 5 (taken for granted facts)
INSCRIPTIONS

**Figure 5.2** The stratification of statements

Latour and Woolgar would probably not find even a single scientist willing to admit that their findings correspond to the reality of a laboratory, or that their classifications are real – not because they are not – but because classifications are always the constructions of those who produce them; they are inventions.

Nor could it be otherwise, for, as cognitive psychology and neuroscience have shown, the process of understanding, remembering and recalling information is a

mix of recognition and construction. What we codify and store is our interpretation of events, a representation, not the event itself. By inferencing, we add something of ourselves to the event. Hence, because we have performed this act of conglomeration, in time we are no longer able to distinguish what we have seen or heard from what we have inferred; or under the influence of 'scripts' which induce us to reconstruct events in stereotypical form, we invent/remember non-existent details in the remembered events. Consequently, what an ethnographer remembers is a mixture of the event that has actually occurred and items drawn from the standard elements of mental scripts.



## Case study

### The pitfalls of memory

The influence exerted by scripts on the perception, interpretation and memory of an event has been the subject of numerous studies starting in the 1970s. One example is the experiment conducted by Anderson and Pickert (1978). A group of students were told to read a description of a building and to imagine themselves as its potential purchasers while they did so. A second group of students were instead told to read the description while imagining themselves as burglars. Each group was then asked to recall the description. Owing to the influence of the two different scripts (that of purchaser and that of burglar), the first group remembered features from the purchaser's point of view while the second group remembered features from that of the burglar. When reading the results, it appears that the two groups had come up with two different descriptions.

Given that the ethnographer contributes to creating the facts that they are recording it is advisable for them to reflexively monitor this construction activity, which is, incidentally, often unconscious. The research design is one such opportunity because it allows researchers to more consciously decide what to look at – or in other words, include within his or her observational range. Just as Schutz decided to see his dog as a friend, rather than as a mammal, the ethnographer in an organization may decide to look at informal relationships rather than hierarchies, conflicts rather than harmony and consensus, efficient departments rather than chaotic and disorganized ones, irrational aspects rather than rational ones and so on.

## 5.3 Constructing the research topic

Patton's Law

A good plan today is better than a perfect plan tomorrow.

With the exception of when research comes with specific goals or well-defined hypotheses, the research topic is initially nebulous at its best. That is due to several reasons. When the research is commissioned, contrary to what one might expect, the 'customers' often have only a vague idea of what they want to know, and their cognitive interest only becomes clear during the interactions with the researcher. In many other cases, the 'customers', especially if they are individuals, are more interested in solving a problem rather than promoting analytical work. Even in the case of research projects submitted to granting institutions, these projects are unlikely to be what the research will be actually trying to do. Finally, in the rare case of self-sponsored research (such as theses, dissertations and post-doctoral research), the research topic is defined in the course of the research or results from negotiation with several stakeholders. We deliberately use the term research 'topic' (i.e. concepts) rather than the alternative 'object', because it should be clear by now that the world of the social sciences is populated more with concepts than objects. In order to clarify this statement – that at first sight might seem provocative – let's read the following example from Edward Said.

## Case study

### Understanding the Orient

The Palestinian writer Edward Said (1936–2003) has argued that the object that we in the West call 'the Orient' is actually a 'European invention' or a fiction, the product of an imaginative geography. Of course, there are real living cultures in the lands which Europe denotes with the term 'Orient'. However, Said observes, emphasizing the many differences rather than the many similarities between Europe and the so-called Orient, insisting that these conceptual categories are dichotomous and often the opposites of each other, pertains to an imagery which over time has been discursively *constituted* by Western explorers, art dealers, novelists, historians, anthropologists and archaeologists. But there is also a political dimension to the matter, stresses Said. This fictional construct serves to justify the West's position of superiority: 'The relationship between Occident and Orient is a relationship of power, of domination ... Orientalism, therefore, is not an airy European fantasy, but a created body of theory and practice in which ... there has been a considerable material investment' (1978: 5–6).

It should be clear now that what we call 'objects' are in fact concepts (Hayek, 1949; Jarvie, 1972), topics shaped by theoretical assumptions which are mainly based on common-sense knowledge rather than on scientific knowledge, as the following case study will articulate.



## Case study

### Researching family and poverty

Consider two examples: research on the family and studies on poverty. The family is a much less palpable object than is commonly believed. Discuss what constitutes a family with your classmates or professor. Is a group of monks or students living under the same roof a family? Is a same-sex couple a family? Must there be a couple for a family to exist? If you answer 'yes', then you exclude separated or divorced mothers (with children). In the past, 'family' meant the union of two people of opposite sex (i.e. a heterosexual couple) formalized by a religious or secular marriage ceremony. Today the *concept* of family is very different and extends to include many other types of relationship, and social research has adjusted accordingly. That is another example of how society influences science and vice versa.

Take the second example, that of studies on poverty. Try to define a poor person, that is, someone who can be defined as poor by someone above the poverty line. You will see that poverty is equally impalpable – even if this statement may seem ridiculous. But if we set aside images of starving children on television, and concentrate on the poor in America, we realize how difficult it is to define a poor person (i.e. specify the concept). Is poverty only an economic phenomenon? If so, how can we account for elderly people who live in conditions commonly defined as poverty but it is then discovered when they die that they had a large sum of money in the bank or hidden under the mattress? Is poverty not, therefore, a cultural phenomenon as well? And if we cannot define poverty clearly how can we begin to study it?

## 5.4 Outlining the research topic

In light of the previous discussion it seems clear that – unless definitive hypotheses have already been formulated – a research topic is defined with greater precision in the course of the research: the focus narrows, new aspects (ethical, social or political) of the problem emerge and resources are totted up (funding obtained, time available before deadlines or number of collaborators). This is a strength, not a weakness, of qualitative research; an element of its flexibility and adaptive ability diametrically opposed to the rigidity of much quantitative research, which 'bends' the research topic to the requirements and constraints of the method.

The decision to restrict the cognitive field is usually taken after problematizing three levels which recur and become interwoven in ethnographic research:

1. conceptualization of the phenomenon to investigate
2. operational definition
3. sample strategy.

Several authors (among them Spradley, 1980: 34; Hammersley and Atkinson, 1983: 175; Silverman, 1993: 46) have written that the ‘funnel’ is the best metaphor to describe the course of ethnographic research.

When selecting a research topic, it is preferable to avoid overly ambitious projects because they carry high risks of dispersion or may produce only superficial results. Aiming at obtaining a complete picture of a phenomenon with just one research project is the best recipe for inquiry disaster (Silverman and Gubrium, 1994).

A research design should also be flexible enough so that it can be adapted to the irregular flow of decisions required to deal with unexpected events in the field; as exemplified, for instance, by the American organization scholar, Alvin W. Gouldner. While Gouldner was studying the bureaucracy of a small American mining company, a wildcat strike unexpectedly forced him to modify his initial design, and he therefore shifted to study – and then to develop a general theory about – group conflicts. It is therefore important for the research design to be ‘cognitively open’: that is to say, configured so that ‘the unexpected is expected’. Blumer’s (1969: 148) proposal that the concepts and categories of research should be treated as ‘sensitizing concepts’ (guiding concepts) rather than as ‘definitive concepts’ goes in the same direction. The former does not enable:

the user to move directly to the instance and its relevant content [in that they] give the user a general sense of reference and guidance in approaching empirical instances. Whereas definitive concepts provide prescriptions of what to see, sensitizing concepts merely suggest directions along which to look.

Sensitizing concepts help researchers to approach empirical reality by ensuring that they can always correct themselves.

## 5.5 Managing researchers’ pre-assumptions and prejudices: the role of reflexivity

Baruch’s Observation

If all you have is a hammer, everything looks like a nail.

Before we proceed to describe the three main steps of research design, let’s point out an ever-present danger for the researcher in their work of interpretation: that they could be excessively conditioned by assumptions and prejudices.

Prejudices are pre-conceptions that may just as well be positive, negative or a combination of both. We may look favorably at the socially excluded group or hold a negative attitude towards the majority group, or even consider only some groups. Either way, positive or negative, this is a prejudice and any of us make



such pre-assumptions and pre-judgments. It is unavoidable because we need some prejudices such as heuristics, cognitive tools, to understand the world and make decisions. Nevertheless, our overall reasoning capability may be more or less influenced by them and as a result we should be expected to be, to a certain extent, biased. We refer to this process as reflexivity.

Let's start with the observation that the social sciences are filled with culturally bounded theories and prejudices that have become strong theoretical assumptions. Let's see how these operate in the following case study.



## Case study

### Who is deprived?

The American anthropologist James P. Spradley notices that the theory of 'cultural deprivation' came into fashion in the 1960s. This theory was an interesting attempt to explain the educational failure of several children, the majority of whom belonged to particular social groups: Native American, African American, Hispanics. Although this was seemingly a progressive theory critical of the American social system, pointing out how the effect of the persistency of what we now refer to as white privilege, it overlooked the reality that the above social groups had developed sophisticated and adaptive cultures that were simply different from the ones transmitted by the traditional educational system. In other words, 'cultural deprivation is merely a way of saying that people are deprived of "my culture"' (Spradley, 1980: 14).

This is a typical example of distortions produced by the prejudices of the researchers that can be projected to the culture that they study (Cicourel, 1964; Garfinkel, 1967; McHugh, 1968; Zimmerman and Pollner, 1970; Mehan and Wood, 1975). Social scientists are always exposed to the danger of constructing an unrealistic sociological object that contains more of their prejudices than anything and by that token influencing any resulting policy or further research.

Is it possible to escape from this circular process of prejudice reinforcement? The short answer is 'no, from a theoretical point of view it is not'. In a more pragmatic sense, however, it should be kept in mind that this hermeneutic circle is treatable, at least to various extents. As the American cultural anthropologist Clifford Geertz (1926–2006) wisely put it:

I have never been impressed by the argument that, as complete objectivity is impossible in these matters (as, of course it is), one might as well let one's sentiments run loose. As Robert Solow has remarked, that is like saying that as a perfectly aseptic environment is impossible, one might as well conduct surgery in a sewer. (Geertz, 1973: 30)

It is therefore possible to adopt strategies that can help the researcher control the reflexive and avoid major mistakes. The best way to do so is to work on refining your conceptualization.

## 5.6 Conceptualizing the topic

Technically speaking, research aims to determine the status of cases on an attribute related to a particular concept. To the uninitiated this expression may seem incomprehensible. Let's try to clarify it using a very simple example.

Assume for a moment that we want to research customer satisfaction. Let's assume we are measuring the quality of the relationship between insurance companies and their customers. Quality is determined by many things: the speed with which calls are answered, efficiency in handling requests for information, the attention paid to dealing with claims, and so on. These things are 'attributes' of 'quality'. Let's focus on the last attribute: our research might conclude that the five companies in the sample are largely inattentive to customer claims. Using technical language, what we have surveyed is the status (inattentive) of the five cases observed on the attribute 'ability to deal with customer claims' relative to the concept 'quality of the relationship with customers' of our research on 'customer satisfaction' (research topic).

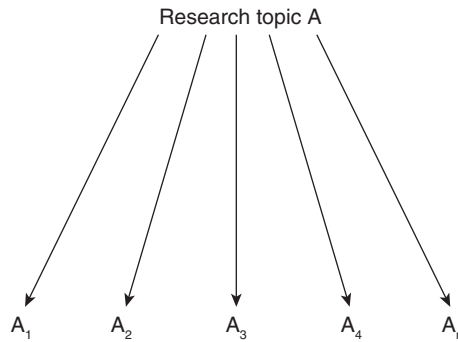
Why have we called it an attribute rather than a characteristic or property of the population? Why have I called the 'ability to deal with customer claims' an attribute rather than a characteristic or aspect of a business organization?

Because calling it a characteristic or aspect implies that the ability to deal with customer claims is a property of the 'organization', that it is an objective component to it, and that the researcher's task is only to observe it and measure it. The idea of an attribute more correctly suggests that these are concepts that the researcher constructively attributes to the research topic; they are not 'things' but rather 'cognitive tools' resulting from a deliberate operation of selection performed by the researcher.

### 5.6.1 Deconstructing the topic

Our goal with these examples is to point out that it is paramount to carefully reflect on the research topic before approaching the field and recording observations. Conceptualization helps clarify what information is necessary for the research and must be collected in the field. At the same time proper conceptualization allows the research to confront and analyze their own prejudice and find appropriate strategies to contain their effects.

The first step in conceptualization consists of reflection on the relationship between the research topic and its possible attributes. For this purpose, the research topic is deconstructed into simpler elements or parts (see Figure 5.3).



**Figure 5.3** The research topic and its attributes

This process suggests which aspects should be carefully observed and which can be omitted from observation as irrelevant or potentially liable to make the research too extensive – bearing in mind that here ‘omit’ does not mean eliminate but ‘leave in the background’. Given that observing everything is cognitively impossible, it is advisable to focus on a few aspects and to study them with much detail. It would also be extremely helpful to try to identify dimensions before attributes. A dimension is a cluster of several attributes, a sub-concept, which can offer the researchers much more control on their inferential process when making important decisions such as omitting one attribute from the research. It must also be noted that, oftentimes, a single attribute can indicate more than one dimension. In order to achieve uni-dimensionality, such that an attribute is indicative of only one particular aspect of our topic, utilizing dimensions as a middle step towards finding our attributes is advisable.

### 5.6.2 Research questions

Actively reflecting on the concepts and breaking them down into attributes also helps the researcher define the units of analysis and, subsequently, better design the sample. If these operations are neglected, information will be collected on cases so disparate that comparative analysis will be difficult if not impossible. As the researcher reflects on the relationship between the attributes and the research topic, a number of questions arise. These are what we call ‘research questions’. It is therefore improper, from our perspective, to ask researchers and students to elaborate on their research questions before having conceptualized their research.

Although Ben’s attitude might seem rude, these questions are in fact extremely useful for Alex because they prompt him to reflect on his research topic and to specify and narrow it down to something feasible. It doesn’t help Alex to have only a vague idea of what he is interested in. Moreover, as the reader will have probably noticed, this kind of exercise is much more fruitful if it is conducted with another person or in a group rather than by one researcher engaged in solitary meditation.



## Case study

### Research questions at work

To fully appreciate this process, consider the following imaginary conversation between two colleague researchers:

Alex I want to study the doctor/patient relationship ...

Ben Why precisely that relationship and not something else, like health policies, hospital bureaucracy, the lobbies of doctors and pharmaceutical companies?

Alex Because I'm interested in interactions.

Ben So you've got a specific theoretical approach in mind, have you?

Alex Yes, I'm interested in interactional approaches.

Ben What do you mean by interaction? What interactions do you want to observe? Those between the doctor and the patient or also those between the patient and the doctor's secretary, those between the doctor and his secretary, or the interactions among the patients in the waiting room?

Alex Er ... I don't know ... I'll have to think about it ...

Ben But what aspect of the doctor-patient interaction do you want to observe? What particular details interest you? Welcome rituals, presentation rituals, the doctor's rhetorical strategies, misunderstandings between the doctor and the patient, the patient's difficulties in describing his symptoms, the power relation and asymmetry between them?

Alex I don't know ... I don't know ... I've still got to think about all that ...

While it is not always necessary for researchers, especially the more experienced and skilled ones, to go over all these questions before entering the field, proper conceptualization is certainly a necessary pre-requisite for accurate research for it breaks a research topic down into empirically observable aspects. In addition, it helps formulate 'clear and testable research questions' (Yin, 1984: 29–35).

### 5.6.3 The role of theory in conceptualization

You might have noticed that the research questions formulated in our imaginary dialogue mentioned a particular theoretical approach, one which concentrates on the participants' actions rather than their inner states. A theoretical foundation is of great importance for it helps the researchers better approach their questions and the readers to identify what debates are connected to and influencing the findings.

In the example, an interactionist approach is presented. As the readers should recall from our previous chapters this approach is concerned with what people do as opposed to what they think and it focuses on relationships rather than individuals. As Sacks (1992) points out, this approach requires the researcher to tackle what is

most directly observable (actions) while giving only secondary importance to motives, attitudes and mental frameworks. The latter are not eliminated outright but may eventually be reconsidered on the basis of actions and conversations:

The question that ethnographers have traditionally asked - 'How do participants see things?' - has meant in practice the presumption that reality lies outside the words spoken in a particular time and space. The [alternative] question - 'How do participants do things?' - suggests that the microsocial order can be appreciated more fully by studying how speech and other face-to-face behaviors constitute reality within actual mundane situations. (Maynard, 1989: 144, quoted in Silverman, 1993: 54).

The meanings described within an ethnographic account cannot coincide with the meanings held by the observed people or with their thoughts because the sociologist's view of their everyday life cannot by definition correspond to the actors' experience of it (Schwartz and Jacobs, 1979: 183). As Silverman critically remarks, 'if ethnography reduces social life to the definitions of the participants, it becomes a purely "subjectivist" sociology which loses sight of social phenomena' (1993: 54).

The same applies to cognitive or psycho-sociological research on social representations that reveal mental models or cognitive schemas that are considered to be stable or recurrent within a social group or an organization. These approaches maintain the idea that culture is located in the minds and hearts of social actors and, according to the famous expression of the American cognitive anthropologist, Ward Goodenough (1957), consists of 'whatever it is one has to know or believe in order to operate in a manner acceptable to its members' in all requisite social situations. According to this view, a culture can be described by reconstructing categories, taxonomies and systematic rules to produce something akin to an ethnographic algorithm whereby the person applying it is mistaken for a competent member of the group. Geertz draws an apt analogy to a Beethoven quartet: 'no one would, I think, identify it with its score, with the skills and knowledge needed to play it, with the understanding of it possessed by its performers or auditors' (1973: 11). Just as the music does not consist of the score, so a society does not consist only of its rules.

The work of the ethnographer consists mainly of trying to make sense of events by classifying and comparing them.



## Exercise 5.1

Consider the way that staff at some daycare centers keep the children active as a group as long as possible rather than working individually with each one of them. Why do you think they do so? Discuss this question in class and try to find an explanation.

This behavior may be a sign or a clue of:

- the staff's concern for the social development of the children
- the existence of practices designed to achieve greater social control
- an organizational response to staff shortage.

The relation between the event and the three different concepts used for the explanations takes the form of a relationship of indication, where the event is evidence for the presence or absence of a particular concept. It is not a prerogative of scientific reasoning. It is a formal property of common-sense reasoning. In other words, when social actors, researchers included, interpret behavior, they constantly connect together concepts and attributes, indicators and variables. Interpretation is nothing but the rapid, tacit and recurring activation of relationships of indication. Garfinkel, explicitly borrowing an expression from the Hungarian sociologist and philosopher Karl Mannheim (1893–1947), has defined this process as the 'documentary method of interpretation':

The method consists of treating an actual appearance as 'the document of', as 'pointing to', as 'standing on behalf of' a presupposed underlying pattern. Not only is the underlying pattern derived from its individual documentary evidences, but the individual documentary evidences, in their turn are interpreted on the basis of 'what is known' about the underlying pattern. Each is used to elaborate the other. (Garfinkel, 1962: 691)

## 5.7 Operational definitions: what they are and why do we need them?

We now focus on something that has far too often been overlooked by qualitative researchers and considered to be a 'mere positivistic worry' for quantitative researchers: the operational definition. Let's see how it works in the following case study.

### Case study

#### What is difficult?

The PhD dissertation of one of the authors of this book consisted in the study of the 'response process' in standardized interviews, that is, interviews using a questionnaire. At the end of the 1980s, there existed numerous behaviorist

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studies on the behavior of the interviewer and on standardized questions (wording, question order, item order, response alternatives and so on). But there were relatively few studies on what happened *during* an interview and on response behavior, or the interactional process between interviewer and respondent that produces such a response. The author felt that analyzing it would require the study of the interview from the respondent's point of view, not just from that of the researcher or interviewer.

His dissertation was based on listening to, and the discourse analysis of, around 100 tape-recorded standardized interviews that four interviewers had kindly shared with him. One of the things that he wanted to focus upon was whether respondents found it relatively easy to reply to closed-ended (or multiple choice) questions, or instead they had difficulties in selecting a response alternative. The first methodological problem that he encountered concerned the concept of 'difficulty'. By simply listening to the tapes, how could he determine when the respondents were finding it difficult to answer? What was difficult for him might not be so for another researcher listening to the same tape. He wanted his interpretations to be well sustained and reliable in order to respond to the potential criticisms of carelessness or arbitrariness that he would expect to be made by both quantitative survey researchers as well as from qualitative researchers critical of the standardized interview in the first place (see Gobo, 2006). To solve this methodological issue, he first established the meaning (the definition) of 'difficulty in selecting a response alternative' and then he considered what might be good indicators of this concept. In short, he came up with a definition of 'difficulty' that was operational, preliminary and subject to change as the research progressed, across the following three indicators:

- 1 the time taken by respondents in selecting a response alternative
- 2 the perplexities/hesitations that they expressed
- 3 their disapproving or critical comments on the multiple-choice format.

Operational definitions consist of a set of conventional understandings that guide the researcher's interpretative activity. It is called operational in order to distinguish it from the kind of lexical definition found in dictionaries and because it tells us what to do without making any claim of being the final exhausting definition of the concept: it has, first and foremost, a practical goal. Through these conventions the status of each case on the attribute X is determined, assigned to one of the designed categories, and recorded so that it can be analyzed with the techniques that the researcher intends to use. Many of these conventions are customary, not having to be redefined over and over again within a research field, and guide the knowledge-gathering process. Among these are the procedures used to gain access to the field, the devices (guarantees, informal contracts, etc.) employed to overcome the actors' diffidence, the way in which the ethnographic notes are collected and the procedures followed to check the validity of what is gathered.

The operational definition helps the ethnographer to discipline the observation, the information-gathering, and the attributes that are connected to the studied topic, within a relationship of indication. In other words, the operational definition gives rigor to the researcher's interpretative activity. Although Glaser and Strauss (1967) and Denzin (1971) recommend that the operational definitions of any concept are to be stated only after the research has begun, when the researcher has reached an initial unbiased understanding of the phenomenon and 'the situated meaning of concepts is discovered' (Denzin, 1971: 268), to avoid them to become biases there is nothing that prevents the researcher from developing them before the research starts if they already have a specific hypothesis to test.

The presence of operational definitions is a cognitive advantage unique to science that distinguishes it from other knowledge-gathering approaches. All other cognitive steps to be found in any science, such as formulating hypotheses, sampling, generalizing, drawing comparisons, making forecasts, checking the veracity of statements, etc. are *mutatis mutandis* also noticeable in any form of common-sense reasoning. But operational definitions are not. The reason is that it is necessary to 'problematize the observation' (Cicourel, 1964: 128), de-naturalize the social world that we are investigating, in contrast to the behavior of the member who observes it as natural, obvious, taken-for-granted and, ultimately, 'normal'. If we consider the example presented in the case study, a non-scientist would probably be unlikely to operationalize the concept of 'difficulty' in the same way. At most, they would stop at the level of the definition: that is, he or she would ask (would problematize) 'what is a difficulty?' A scientist, however, must go further than this.

### 5.7.1 Rescue the variable!

Osborne's Law

Variables won't. Constants aren't.

Qualitative researchers have also been criticized for their casual approach to the use of variables and their deeply rooted belief that research should not be impeded by such restraints. This point of view usually relies on Blumer's article (Blumer, 1956) where he harshly argued against 'variable analysis'. In all fairness, Blumer was not criticizing the use of variables per se, as he thought that 'obviously the study of human groups calls for a wide range of variables' (1956: 683) but their standardization, meaning the use of the same operational definition in different research. As he would put it, 'each of these variables, even though a class term, has substance only in a given historical context. The variables do not stand directly for items of abstract human group life' (1956: 684). Nevertheless, Blumer's article has been superficially quoted as an opposition in principle to the use of variables. As a result, the majority of qualitative researchers nowadays have 'thrown the baby out



with the bathwater', forgetting that the use of variables and indicators is a necessary aspect of scientific reasoning. As we saw previously, indicator-based reasoning is intrinsic to the 'documentary method of interpretation', we shall now see that variables, too, are constantly present in our discourses and thoughts. Consider the following verbal exchange between Amanda and two of her friends who she sees eating slices of cake in the cafeteria:

Amanda: How's the cake?  
 Bernie: So.  
 Carl: For me it's quite good.

What is the difference between this subjective evaluation and a proper five-level response scale (very good/fairly good/half and half/fairly bad/very bad) commonly used in questionnaires? The attributes are obviously different, not covering the entire spectrum of possible evaluations, but apart from that there is no conceptual difference at all.

Now consider weather forecasts and think about the range of possible weather. Aren't heavy, isolated, light, etc. response alternatives for rain? Are these not variables? Of course they are. Hence the controversy on the use of variables in qualitative research is political at best and methodologically groundless. Indeed, if we analyze the work of classic ethnographers without those ideological prejudices we find that they use plenty of indicators and variables. Let's apply what we just learned to a classical ethnographic work in the following study case.



## Case study

### Indicators and variables in Balinese cockfights

In his classical work on Balinese cockfights, Clifford Geertz focused on its clandestine betting system. Geertz chose such a bizarre topic for research because he was convinced he would provide 'a revelation of what being Balinese "is really like"' (1972: 417) as much as more celebrated phenomena such as art, forms of law, educational models and so on. Geertz watched a total of 57 cockfights and reconstructed the meaning of the practice, the logic of betting and other details that are not pertinent to our discussion here. He then classified the clandestine bets across a dichotomous variable with attributes 'deep' and 'shallow'. Deep was usually indicating that:

the amounts of money are great [as opposed to smaller amounts of money wagered in shallow games], much more is at stake than material gain: namely, esteem, honor, dignity, respect – in a word ... status. It is at stake symbolically, for (a few cases of ruined addict gamblers aside) no one's status is actually altered by the outcome of a cockfight. (1972: 433)

But how could we tell the difference between a deep game and a shallow one? How could the observer be aware of one type of game rather than the other? What was the main difference between the two types of game, the *fundamentum divisionis*?

Geertz listed 17 'facts' (1972: 473) – what we can straightforwardly call *indicators* in our discussion – to acknowledge a deep game. The first of these indicators was:

A man virtually never bets against a cock owned by a member of his own kin-group. Usually he will feel obliged to bet for it, the more so the closer the kin tie and the deeper the fight. If he is certain in his mind that it will not win, he may just not bet at all, particularly if it is only a second cousin's bird or if the fight is a shallow one. But as a rule he will feel he must support it and, in deep games, nearly always does. (1972: 437)

To be even more precise, first cousin and second cousin reflect different status for the variable kin-group. Had he so wished, Geertz could also have constructed a grid showing the frequency of each of the 17 indicators. For example, he could have associated the indicator 'kin loyalty' with the variable 'betting against a kinsman's cock', and then added the following alternative responses: 'never', 'sometimes' and 'often'. The systematic observation might have revealed simple yet informative conclusions such as that there was kin loyalty in 95% of cases, or in only 72%. The latter finding would have made a major difference to the assessment of the level of the community's compliance with the kin loyalty convention – which at first sight seemed unwavering.



## Exercise 5.2

Read an ethnography of your choice and try to identify at least two variables and relative attributes. You can choose an article you have worked on for a social science class you have taken or something completely new. Then try to answer the two following questions:

- Is the attribute list exhaustive and complete?
- Are there any overlapping attributes? Any missing attributes?

In summary, the operational definition transforms the indicators relative to the attributes of a concept into variables. A variable is therefore the outcome of the operational definition, its terminal, the device with which the researcher collects information or analyzes their ethnographic notes. Indicators and variables are therefore two sides of the same coin: the indicator is situated at the conceptual

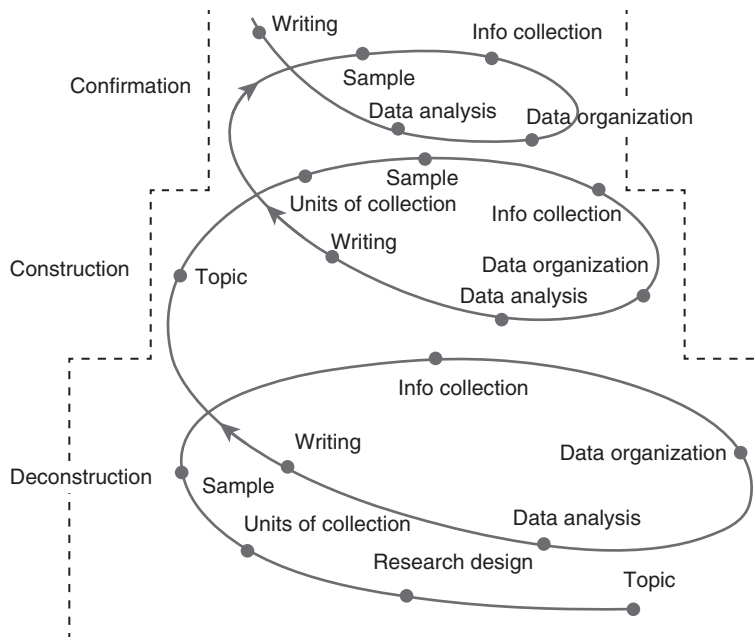
**Table 5.1** Some differences between concepts in quantitative and qualitative research

Terms	Quantitative research	Qualitative research
Operational definition	Something that must be completed before beginning the research	Activity rarely done before beginning research. More frequently it is performed during research at different times and includes a full review of the definitions, when the researcher has gained a better understanding of the phenomenon
Indicator	Standardized conceptual device to design the understanding of a phenomenon	Situational conceptual device to better understand the relationship between evidence and the underlying pattern
Variable	Standardized operative device for measuring a phenomenon	The possibility of measurement is either rejected or limited in scope. Variables are situational operative devices for improving the rigor of the researcher's interpretation
Hypotheses	Assertions to be tested through statistical analysis	Assertions to be verified or documented through rhetorical devices

level; the variable pertains to the practical one. Variables serve to detect differences and to communicate them. The main difference from quantitative research is the standardized use of these devices (see Table 5.1). Unlike survey and experimental researchers, ethnographers do not reify, objectify or standardize their devices, using them in the same way throughout their research. They instead construct their devices situationally, finding ad hoc remedies for every research problem. Our suggestion is that ethnographers should pay more attention to variables and become as competent as their quantitative colleagues in designing variables, paying particular attention to avoiding conceptual overlapping of attributes as well as trying to be as thorough as possible. Given the space limitations of this book we cannot provide a full explanation of the process of construing variables. It is our understanding, however, that it is perfectly fine to adopt the very same strategies implemented by quantitative researchers, although keeping in mind that the problem of reflexivity and the natural flexibility of the methodology might demand adaptation.

### 5.7.2 Conceptualization and operationalization: a reflexive process

Ethnographic research coding of observations is not the final act in the data gathering process but is rather an intermediate stage in the construction of variables. Given the reflexive and spiraling nature of ethnographic research (see Figure 5.4), the operational definition is partially or entirely reviewed at different stages of the research whereas the concepts, hypotheses and indicators change as well. Conceptualization and operationalization interweave in a reflexive process of reciprocal adjustments by virtue of the possible re-specification of the original formulation of a concept,



**Figure 5.4** The (spiral-shaped) model of ethnographic research

or the re-conceptualization of the datum: 'a series of empirical indicators relevant to each data base and hypothesis must be constructed, and, last, research must progress in a formative manner in which hypotheses and data continually interrelate' (Denzin, 1971: 269).

Documenting the operational definition process is of utmost importance in assuring coherence of the researcher's interpretations and in corroborating their results.

## 5.8 Designing hypotheses

Another common prejudice of qualitative research is that it approaches a research topic without any hypotheses and instead simply tries to better understand and describe phenomena (Agar, 1986: 12). We believe that the two are not conflicting issues and having hypotheses does not interfere with this intent. While we advise readers to avoid over-simplifications such as that hypotheses are 'educated guesses', we must stress that such sophisticated research devices, rich in theory and designed to be tested, are grounded on the same logical reasoning that we routinely use, often unconsciously.



## Case study

### Hypothesis derived from common-sense reasoning

Consider the following two examples:

- You are on the way to catch the bus. From a distance you see a large crowd of people at the bus stop. What do you do? Walk faster because such a large number of people means that the bus is about to arrive? Or do you think that there is no point in hurrying because the bus must have had an accident or broken down? Each of the two options that you entertain can be viewed as a (quasi) hypothesis.
- You are driving your car. At a certain point there is a line of vehicles in front of you. What do you think? That the line has formed: (a) because of an accident; (b) because of road works; (c) because of traffic lights ahead? In this case, too, you have unconsciously produced three different (quasi) hypotheses which may have practical consequences according to which of them seems most plausible. If it is the first, you will make a U-turn (watch out for the police!) and look for another route to your destination. If you instead decide to wait until the traffic starts moving again, you may test your hypotheses and discover the cause of the tailback.

All your (quasi) hypotheses are based on previous theoretical knowledge of the phenomenon that allows you to make some inference on what you are observing, or about to observe, and a proper hypothesis must define some testable expectations. From a more formal methodological point of view, a hypothesis is an assertion – conjectural in nature – about the relationship between certain attributes of a research topic. From an operational point of view, a hypothesis is an assertion about the relationship between two or more variables that produces an observable expected outcome. Using the first of our examples you might have a good knowledge of commuter flows and therefore expect to observe more crowds during peak hours. This is a hypothesis that you can test by gathering observations on peak and non-peak hours and compare what you have observed. Glaser and Strauss (1967), Schatzman and Strauss (1973), Strauss and Corbin (1990) argue that hypotheses are always indispensable in research but that they should only be formulated and tested (or verified) after the ethnographic notes have been collected so that the researcher goes into the field without preconceived ideas. We refer to those as inductive hypotheses. Alternatively, the American anthropologist Hymes (1978), the British methodologist Silverman (1993: 44) and the well-known market researcher Yin (1984: 29–35) suggest that an ethnographer can conduct a hypothesis-oriented ethnography perfectly well if he or she already has a good level of knowledge about the culture that he or she is studying. Whether hypotheses are specified before or after data are collected, we agree with Silverman as he ironically

points out that ‘qualitative research would look a little odd, after a history of over 100 years, if it had no hypotheses to test!’ (2000: 8).

Whether hypotheses are more or less specified and formalized also depends on the amount of knowledge that the researcher possesses. Based on our level of confidence in our expectations we may design working or guiding hypotheses.



## Case study

### Guiding hypotheses

The idea of guiding hypotheses has been suggested by the American psychologist David Rosenhan in his study of the construction of mental illness in psychiatric institutions. Prompted by widespread doubt that mental illness diagnosis ‘may not be quite as accurate as people believe they are’ (1973: 250) or even a ‘myth’, Rosenhan formulated the hypothesis that insanity was a construction by psychiatric hospitals and psychiatrists. He started by asking the following question: ‘Do the salient characteristics that lead to diagnoses reside in the patients themselves or in the environments and contexts in which observers find them?’ (Rosenhan, 1973: 250). The answer could be obtained:

by getting normal people (that is, people who do not have and have never suffered symptoms of serious psychiatric disorders) admitted to psychiatric hospitals and then determining whether they were discovered to be sane and, if so, how. If the sanity of such pseudopatients were always detected, there would be prima facie evidence that a sane individual can be distinguished from the insane context in which he is found ... and abnormality is carried within the person. If, on the other hand, the sanity of the pseudopatients were never discovered, serious difficulties would arise for those who support traditional modes of psychiatric diagnosis. (Rosenhan, 1973: 250)

In order to test his initial broad, guiding hypothesis, eight researchers sought admission to 12 different psychiatric hospitals in five states across the USA. Although they behaved entirely ‘normal’ from the outset, all the researchers were kept in hospital for several months and then discharged with a diagnosis of ‘schizophrenia in “remission”’. To see whether the tendency towards diagnosing the sane as insane could be reversed (1973: 252), Rosenhan conducted a second ethnographic experiment, which represented a sort of validation of the previous findings. He told the medical staff of a teaching and research hospital – who knew of Rosenhan’s previous research but claimed that such gross errors could not happen at their hospital – ‘that at some time during the following three months, one or more pseudopatients would attempt to be admitted’ (1973: 252). Out of the 193 patients admitted to the hospital in that period, 41 were identified as pseudopatients by the staff. Interestingly enough Rosenhan admitted that ‘no genuine pseudopatient (at least from my group) presented himself during this period!’

(For more on the risks run by those who work with hypotheses, go to [www.sagepub.co.uk/gobo-molle](http://www.sagepub.co.uk/gobo-molle).)



### Exercise 5.3

We have seen that *from the operational point of view* a hypothesis is an assertion about the relationships between two or more variables. Look at the following hypotheses and write down the variables that they connect.

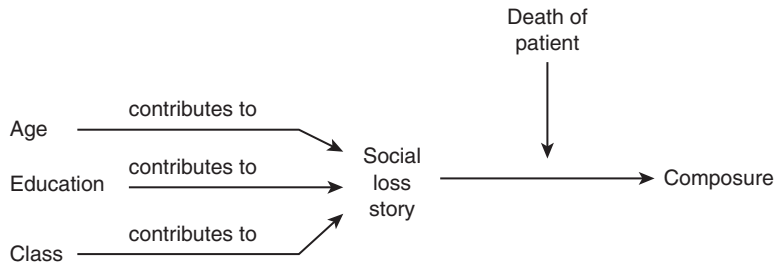
- Political science majors are on average more on the left side of the political spectrum than students of economics.
- Working students have lower attendance rates than full-time students.
- HIV is a disease that more commonly afflicts gay individuals.<sup>2</sup>

Now compare your answers with your classmates. Finally try and rewrite the hypothesis according to your own expectations.

## 5.9 Drawing models

Models are graphical representations of hypotheses (see Figure 5.5). A hypothesis may be descriptive and neutral, in that it states the existence of a relationship between two attributes or variables without specifying its direction, or it may be directional and explanatory or suggesting a causal relation. The simple model  $A \rightarrow B$  is the graphical equivalent of the sentence: 'it is hypothesized that there is a given relationship between variable A and variable B, and that this relationship is unidirectional, in the sense that A influences B but is not influenced by it'. For example, Strauss, Buchner, Ehrlich, Schatzman and Sabshin (1964) conducted an empirical study on the rules and informal agreements present in various psychiatric hospitals. They then constructed a causal model in which the differences among the rules applied at the hospitals were explained by the existence of different patient care practices. But these practices were in turn conditioned by the professional models learned at different schools by the hospital staff and reflected different psychiatric ideologies.

The relationship between variables may take various forms; a simple association or correlation, a symmetric relation, or an asymmetric relation such as a specific causation. In the first case, we know that there is a relation between variables A and B, but it is not clear which of the two influences the other. In the second case, both variables influence each other. In the third case, the asymmetry is due to the fact that a specific causation has been constructed through our research. We must be careful, in the social sciences, to claim causation. Causal relations require, in fact, more than the evidence of correlations for at the very least the researcher must be able to identify the cause and the effect, where the cause precedes the effect in time, excluding the intervention of other factors. As you can easily understand it is very hard to have enough information to satisfy both these requirements at once.



**Figure 5.5** Graphical representation of Glaser and Strauss' theory of social loss

Finally, variables may be of at least three kinds: independent, dependent and intervening (sometimes defined as spurious). The first are variables that exert influence on other variables; the second are those which undergo the influence; the third are variables which intervene in the relation between two variables, impinging on both and reducing the strength of a relation. The reader should be aware that all of the above pertains to the logic of association and causality and has nothing to do with statistics in principle. Some examples will clarify the point.



## Exercise 5.4

According to you:

- does *religion* (A) condition the way in which members of society (B) behave or
- does *society* (B) condition *religion* (A), or
- do they reciprocally influence each other (symmetric relation)?

Discuss these issues among yourselves or with your professor and classmates.

Understanding the direction of a relationship, and being able to identify causation, is especially important if ethnography is to provide practical suggestions for stakeholders and policy-makers. What, one may ask, is the point of social scientists if they are unable to provide advice that other professionals can use to design effective policies?



## Case study

### Climate change and civic sense

Consider the state of the environment. Is it a *lack of civic sense* (A) that contributes to *climate change* (B), or does *climate change* (B) create a *lack of civic sense* (A)? While

(Continued)



(Continued)

the former hypothesis is rather obvious, the latter is more counter-intuitive: it means that if you happen to live in a place that is highly impacted by climate change, you are not cognitively conditioned to refrain from damaging the environment because 'it's already too late anyway', whereas you might be more cautious if the area wasn't really impacted already. This second hypothesis derives its rationale from the 'broken windows' theory by Wilson and Kelling (1982) which prompted the policy (improperly renamed as 'zero tolerance') enforced by Rudolph Giuliani, Mayor of New York from 1994 to 2001. This theory can be summarized by the following example: if a window of a building (a school, an abandoned factory, etc.) is broken and not replaced, pedestrians will not feel guilty about breaking another window in the future. If the broken window is immediately replaced, children will be less tempted to break other windows. In our example, if an ethnography conducted in a city or a neighborhood finds out that a *lack of civic sense* (A)  $\rightarrow$  *climate change* (B), then a policy targeted on environmental education is necessary. If instead the study concludes that *climate change* (B)  $\rightarrow$  *lack of civic sense* (A), then the administration should take action on behalf of the environment, funding technology rather than education. These are two separate public policies, and we assume there is just insufficient money to implement both of them at once.

### 5.9.1 Spurious associations

But what if there is something else? Let's now briefly consider spuriousness. This is the case where evidence may suggest that  $A \rightarrow B$ , but we find out that both A and B are influenced by C, an intervening variable that we have not previously considered in our study. The trap of spurious association is often out there, and it is not always easy to avoid.

If your analysis is extended to include the verification of spurious associations, the research becomes more complex and difficult. But it also protects us by making our explanations much less naive, our theories more refined, and as a whole social research more credible. Consider the following example, taken from the sociology of music.



#### Case study

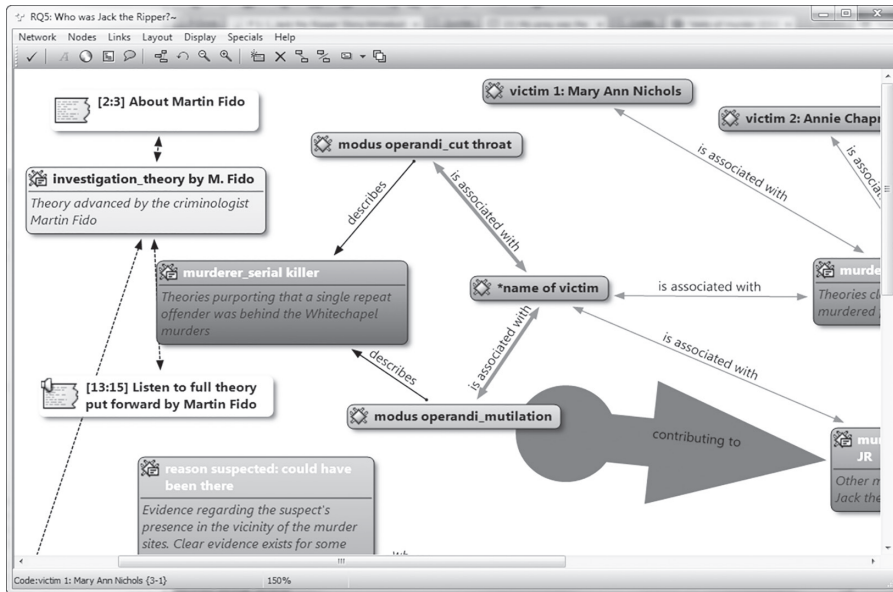
##### Are females less talented than males?

In nineteenth-century Vienna, women pianists did not play the music of Beethoven (1770–1827). According to music critics of the time, the reason was that female pianists were not as accomplished as their male counterparts in executing pieces by the great composer. If talent (A)  $\rightarrow$  accomplished execution (B) of Beethoven,

then females were less talented than males. What do you think? Do you agree with this explanation? Neither do I. Yet this was the theory argued by the music critics of the time. Do you find it a spurious association? So do I. But can you think of an alternative explanation? The sociologist of music, Tia Denora, has suggested one in an article with a significant paragraph entitled 'Gendering the piano' (1995). On reconstructing the social environment of the time, Denora notes that in the 50 years before the advent of Beethoven, both male and female pianists gave public performances. How come half a century later women had become so mediocre at the piano? Denora (2002) notes that Beethoven innovated not only the music of the time but also the manner of its execution: from whence derived the stereotype of the romantic musician flamboyantly emoting at the keyboard. But could a woman perform in the same way? No, she could not, because the social conventions of the time would not permit it. Women had to appear restrained and genteel in their public piano performances. Even their clothing was designed to remind them how they should move on the stage: tight bodices with plunging necklines (to show off necklaces and jewelry) restricted their movements. Can you imagine a female pianist decorated like a Christmas tree pounding a piano? Denora also notes that wind instruments (except for the flute) had already been precluded to women because playing them required unfeminine postures and unseemly 'grimaces'. Hence the intervening variable that influenced (supposed) talent and musical performance was the etiquette of the time. It was not that Beethoven's music was unsuited to women; rather, the social conventions of the time that prevented women from playing as the fashion of the time demanded.

### 5.9.2 On keeping it simple

Spurious associations are very common in social theory, and in the hard and biomedical sciences as well. It is therefore not advisable to try to suggest we have discovered the cause, or causes, of a phenomenon but rather offer our explanation in the context of describing a more complex reality. In the 1930s the Polish semanticist Alfred H. S. Korzybski (1879–1950) stated this principle in an oftentimes abused quote: 'a map is not the territory' (1933: 58). While this quote confirms that those who argue that models are ultra-simplified representations, and that the reality is more complex, are indeed 100% correct it is also true that we need such a map. Many postmodernists believe that because of this complexity we should abandon modeling and science but those who practice this entrenchment often forget that they make complexity more understandable. The simplest theories are usually the most successful ones in communicating such complexity. They are also the most aesthetically attractive, elegant and parsimonious; they comply with the famous Occam's razor principle that if there are two theories explaining the same thing, it is better to choose the more economical one (that is, the one using fewer concepts). Moreover, software is now available for textual data analysis (NVivo, Atlas, etc.) which graphically represent hypotheses and theories (which are nothing other than



**Figure 5.6** Theory building with a network analysis software

sets of congruent hypotheses) and progress in the growing field of computational social science and agent-based modeling have contributed to make our models and theories more accurate (Squazzoni, 2012). The screenshot in Figure 5.6 is an example of the theory building process.

Simple models play a central role in ethnographic research. Although modeling is still a relatively uncommon practice, it is very useful and has great communicative impact. A graphical representation is an extremely intuitive narrative tool. Consider for instance, the difference between the verbal description of a kinship system and its graphical representation. Moreover, modeling is a unique tool or common ground to communicate, cross-disseminate and hybridize findings with other approaches in the social sciences such as the field of computational analysis. While we believe that fields and methodology should remain distinct and every researcher should be aware of their primary cognitive mode, it is also clear that this shouldn't prevent anyone from informing and enriching their research using other's previous work. What prevents that cross-contamination is the absence of a common language and we believe that modeling can fill this gap.

## 5.10 Concluding remarks

In communication studies when discussing the 'audience', the English mass media analyst John Hartley pointed out that 'in no case is the audience "real", or external to its discursive construction' (1987: 25), which is a natural or self-evident fact. The

so-called 'object' of a research project is always a fiction which serves the needs of the institution or researchers that have conceived it and imagined it as naturally given so that they can monitor and measure it. For this reason, research design is not simply a matter of understanding some pre-existing phenomenon but rather a process of constructing it. The more transparent and deliberate this process the more informative and reliable the research.

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## KEY POINTS

- Strictly speaking, there are no such things as pure facts. Facts are always interpreted or constructed.
- In the majority of cases, the research topic is constructed *during* the research. It is the derivative of the contingent situation, of the constraints and resources present within that situation and of interactions with the stakeholders in the research and the social actors investigated.
- The world of the social sciences is more populated by concepts than by objects. The social phenomena that we study are primarily ideas.
- Conceptualizing a research topic is to break it down into more isolated and basic attributes.
- Operationalizing serves to make the observations more accurate and it enables researchers to document their findings more convincingly (for themselves and their audience).
- Our culturally biased assumptions and prejudices tacitly condition our perception of events. They cannot be frozen or deactivated. However, with the help of conceptualization, we can reflexively learn to deal with them so that they do not excessively mislead us.
- Although objectivity can never be achieved, this awareness does not imply that 'anything goes'. There are several methodological possibilities between these two extremes. Just because a perfectly aseptic environment is impossible, this does not mean that we should conduct surgery in a sewer.

## KEY TERMS

**Association**  $A \leftrightarrow B$

**Asymmetric relationship**  $A \rightarrow B$  or  $A \leftarrow B$

**Attribute** Aspects, elements or components that the researcher isolates in the studied phenomenon. While the concept of 'characteristic' or 'property' pertains to an objectualist view, the concept of 'attribute' emphasizes the constructive aspect of research.

**Conventionalism** A philosophical theory according to which all principles are not natural but pure and simple conventions.

**Dependent variable** The variable that is influenced by another variable.

**Hypothesis** *From the conceptual point of view*, a hypothesis is an assertion - conjectural in nature - about the relationships among certain attributes of a research topic. *From the operational point of view*, a hypothesis is an assertion about the relationships between two or more variables.

**Independent variable** The variable that influences or contributes to creating a particular state of another variable.

**Indexicality** A term introduced by Y. Bar-Hillel (1954) and reprised by Garfinkel (1917-2011). It indicates that the meaning of an utterance always depends on the context in which it is said. In other words, there are no objective expressions, that is, ones which are context-free.

**Indicator** This is the sign or clue of a concept. It is important to remember that indicators are always cognitive tools, not things as a certain kind of objectivist methodology believes.

**Intervening variable** A third variable impinging on two variables believed to be connected by a symmetric or asymmetric relation. This relation was instead a spurious association.

**Model** A graphical representation of hypotheses.

**Operational definition** The set of conventions that guide the researcher's interpretative work and with which the status of each case on the attribute X is determined, assigned to one of the categories established, and recorded so that it can be analyzed with the techniques that the researcher intends to use. The operational definition helps the ethnographer 'discipline' the observation.

**Pre-assumptions** Introduced by the German hermeneutic philosopher Hans-Georg Gadamer (1960), the concept of 'pre-assumption' reminds us that our observations are never direct; rather, they are mediated by pre-formed schemas, common sense and congealed knowledge, which exist *before* experiences and are transmitted by socialization and study.

**Research questions** These help the researcher specify and circumscribe the research topic. Asking research questions is much more effective if it is done with another person or in a group.

**Script** A model or schematized knowledge.

#### Symmetric relationship



**Variable** A variable is the outcome of the operational definition, its terminal, the device with which the researcher collects information. Variables serve to detect differences and communicate them. Indicator and variable are therefore two sides of the same coin: the indicator pertains to the conceptual plane, the variable to the practical one.

## RECOMMENDED READING

### Undergraduate students

Button, Graham, Crabtree, Andy, Rouncefield, Mark and Tolmie, Peter (2015) *Deconstructing Ethnography*. Cham, Switzerland: Springer International Publishing. Chapter 7, 'Ethnography, ethnomethodology and design', pp. 133-55.

### Graduate students and advanced researchers

Hammersley, Martyn (2013) *What's Wrong with Ethnography?* London: Routledge.

## SELF-EVALUATION TEST

Are you ready for the next chapter? Check your knowledge by answering the following open-ended questions:

- 1 The American cognitive anthropologist Michael H. Agar has said that 'hypotheses ..., samples, and instruments are the wrong guidelines' (1986: 12). The British qualitative methodologist David Silverman has instead said that 'qualitative research would look a little odd, after a history of over 100 years, if it had no hypotheses to test!' (2000: 8). What do you think?

- 2 Do facts exist?
- 3 What is the purpose of reflexivity?
- 4 Why are indicators and variables two sides of the same coin?
- 5 What is the only difference between common-sense reasoning and scientific reasoning?
- 6 What does this sentence mean: 'a map is not the territory'?

## Notes

- 1 Inscriptions originated as stylized signs or commemorative symbols (for example, sepulchral, honorary inscriptions) in the epoch before writing was invented.
- 2 Although this statement may seem absurd, it is what official medicine believed in 1979, when the first cases of HIV appeared. Indeed, until 1982 the disease was called GRID (Gay Related Immune Deficiency). Then in 1982, a physician in Denver, Colorado reported a case of a non-gay patient who had contracted the disease from a blood transfusion. The initial hypothesis thus collapsed. This seems a perfect example of Popper's falsification principle at work.