6. THEORY IN THE METHODOLOGY OF SOCIAL SCIENCE

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In Chapters 2 and 3 we highlighted conceptualization as being absolutely crucial in social science research. In Chapter 5 we suggested that generalizations, inferences and explanations build on different ways of employing theories in research practice. Abduction, just to mention one example, could imply recontextualizing empirical phenomena within the framework of alternative theories. It is now time to more explicitly examine the role of conceptualization and theory in social science methodology.

In social science it is common to deal with theory and method separately. Universities may of course be justified to have separate courses in theory and methodology. Yet it is restricting if method is primarily associated with methods of data collection and empirical analyses, since an essential element of the craft, the method, is about developing and employing theories. Theorizing is an integrated part of research methodology (Swedberg 2014; Karlsson and Bergman 2017), or, as Sayer (2010:45) so pertinently puts it 'Any serious consideration of method in social science quickly runs into basic issues such as the relation between theory and empirical observation and how we conceptualize phenomena'. Social scientific skill in essence is a matter of analysing, developing and applying concepts and theories. There is also another reason why method and theory should not be treated as two separate elements of social science. The value of different methods depends on how we theoretically define our research object.

The outline of this chapter is as follows: First, there are two sections aimed at clarifying what a theory is, from the perspective of critical realism. Then we proceed to the components of theories – concepts. The following sections will describe different ways of relating theories and to data in research practice.

Three perspectives on theory and observation

Regarding the relation between theory and empirical observation, two different views have often been polarized. On one view, the role of theory is to order, explain and predict facts (Sayer 2010:45). The validity of a theory is assessed when hypotheses of empirical patterns, correlations and effects are verified or falsified in relation to data. This view has been developed within the positivist research tradition.

On the second view, theories are regarded as constructions creating imagined relations between phenomena. Theories can never be submitted to decisive empirical tests, since there are no facts independent of the theories. Under the influence of Kuhn's studies in particular, of the history of science, it has been argued that researchers always understand reality – and define their data – within the framework of theories that are more or less taken for granted. Therefore theories cannot be true or false; yet they can be more or less useful. In radical constructivism this is taken to such an extreme that it seems meaningless to evaluate theories in relation to data. Theories have no valid reference to a reality independent of the theories.

Critical Realism represents a third position. We have already described this position in Chapter 2. Still, let us briefly review the central arguments of a critical realist understanding of the relation between theory and observation/data.

1. In research, we can never understand, analyse and explain reality without using a theoretical language of concepts.
2. These concepts are constantly being developed.
3. The development of concepts presupposes an (intransitive) reality independent of these concepts. The relation between theoretical concepts and the properties or objects the concepts are referring to, is not unambiguous and simple; nor is it arbitrary. All conceptualizations and theories are fallible but not equally fallible.

Theorizing has a key role in ordinary research practice. The reason is actually quite simple. To a large extent the objects of social science are such social relations, processes, and structures that never appear as given facts or as something directly observable. Social relations and structures can only be understood by means of concepts. Development of knowledge presupposes development of the theoretical language we use in order to understand and explain the social reality. Theorizing is not only a mean to improving empirical studies but is also a goal in its own right for a social science aiming at insight about basic social structures and mechanisms. Theories should be apprehended in an undogmatic way; they are fallible and changeable and there will always be competing theories.

Research thus implies a conscious attitude to the theoretical language of science. Theories must not become arbitrary constructions; they must be founded on systematic research. The ability to switch between theorizing on different levels of abstraction and observations of concrete reality, without yielding either to arbitrary theorizing or to short-sighted observations, is in the core of social science working procedure.

What is a theory?

The word "theory" is differentially used in reference to guesses and ideas about possible explanations, working hypotheses, models, and concepts for specific structures and mechanisms, as well as more comprehensive systems of ideas. Before we discuss the critical realist view, it is essential to distinguish between the different theoretical languages that exist within social sciences. Raymond Morrow and David Brown (1994:40) answer the question "What is theory?" by distinguishing between three theoretical languages in social science: meta-theory, normative theory, and descriptive theory. (Morrow and Brown use the term "empirical theory," which we find somewhat misleading since theory is something qualitatively different from empirical research. In our view, what they are referring to is better captured by the term descriptive theory.) By also distinguishing between two types of descriptive theory – on the one hand theories confined to specific areas of inquiry, and on the other hand general theories – we arrive at four instead of three types of theory.

Metatheory is theories about the foundational assumptions and preconditions of science. Critical Realism, phenomenology, hermeneutics and positivism are metatheories building on different ontologies and epistemologies. *Normative theory* refers to the theoretical language which examines as well as support ideas of how something ought

to be. It can be theories focussing on moral, political or ideological issues. Normative theories have evolved within, for example, political philosophy, but are important in social sciences more generally. The relationships between what is and should be, facts and values, have been analyzed not least within critical realism. It is, however, beyond the scope of this book to examine this issue more closely (see part three in Archer et al. 1998).

Descriptive theory refers to theories claiming to describe and characterize properties, structures, internal relations and mechanisms. Such theories thereby suggest how we may interpret and explain social phenomena. We can distinguish at least two different types of descriptive theories, first, theories focusing on specific subject area such as unemployment, residential segregation, drug abuse, professionalization etc., and second, more general theories conceptualizing and explaining fundamental aspects of social activity, social interaction, social institutions and social change. Goffman's (1990) theory of dramaturgic action, Butlers (2002) theory of the performative subject, Giddens's (1984) structuration theory, and Rosa's (2015) theory of social acceleration are all examples of general theories.

Concerning descriptive theories, Sayer (2010) makes another distinction, capturing something essential with regard to research practice. He distinguishes between theory as *ordering framework* and theory as *conceptualization*. In line with the first view, theories are 'a way of ordering relationship between observations (or data) whose meaning is taken as unproblematic' (Sayer 2010:50). This type of theory is often presented in formalized models pointing out, on the one hand the variables included in the theory, and on the other hand the assumed relations between these variables. Quantitative (statistical) relations between empirically measurable phenomenon are studied by means of such models. Hellevik (1984:11, our translation) refers to this perspective when he discusses causal analysis:

> A causal analysis falls into two parts, a theoretical and an empirical one. In the theoretical part the scientist defines her ideas of causal relationships in a model showing what variables are assumed to be relevant and what influences are assumed to exist between these variables.

There are probably few scientists who would say that theory is the same thing as causal models/ordering framework. In concrete researchers it is however often assumed that theories are tested by measuring correlations between variables from such models. In this case theories are perceived as assumptions of general (causal) relations between observable events or social facts.

Within critical realism, theories are primarily understood as conceptualizations, rather than ordering frameworks (Sayer 2010:50). Models can assist in mapping for example the dimensions of, and relations between, social phenomena. Essential in theorizing is, however, the conceptualization of social phenomena, relations, structures and mechanisms. Conceptualizing involves abstracting, and isolating fundamental qualities (see Chapter 3). Concepts are the central building blocks of theories. Theory is, as Jensen (1991:7) writes: 'qualitative, insofar as it represents a configuration of interrelated concepts'. If we link this with what we have said in the previous chapter, we see that what was there called abduction and retroduction concerns simply

conceptualization. Abduction can be redescribing and giving meaning to events, taking one's starting point in a theory, a coherent system of ideas. Through retroduction, concepts and theories are developed which can provide answers to such questions as: What characteristics make X what X is? Social theories are abstractions, crystallizing the necessary conditions for social structures to be what they are. Sayer (1989:258) expresses it thus: 'Theory is no longer associated with generality in the sense of repeated series of events but with determining the nature of things or structures, discovering which characteristics are necessary consequences of their being those kinds of objects.'

Theories are utilized in science to explain events and actions. A particular understanding of causal explanation is actually directly related to an understanding of scientific theory. This becomes clear if we compare positivism and critical realism:

> For the positivist, science is an attempt to gain predictive and explanatory knowledge of the external world. To do this, one must construct theories, which consist of highly general statements, expressing the regular relationships that are found to exist in that world. /.../ Thus, for the realist, a scientific theory is a description of structures and mechanisms which causally generate the observable phenomena, a description which enables us to explain them. (Keat and Urry 1978:4 and 5, respectively)

From a positivist perspective, explanation is to explain one event by relating it to an empirical regularity. Theories articulate assumptions of such general regularities, formulated as law-like relationships between events (see the Popper-Hempel explanatory model in chapter 5). A fundamental idea in critical realism is, as we have already shown, that causality refers to properties, structures and mechanisms identified through retroduction and by means of abstract concepts and theories. Even here explanations relate to general conditions, but this time in the sense of fundamental structures.

We can summarize our answer to the question 'what is a theory?' in four statements:
1.   Theory is a language, indispensable to science (see Chapter 2).
2.   The theoretical language includes an interpretation of the social reality. We see and understand the world – the meaning and relationships of phenomenon – with the help of theories. Theories serve as interpretative framework.
3.   Theories are indispensable in explanation, since they conceptualize causal properties and mechanisms.
4.   Theories are abstractions; they describe phenomena with reference to certain aspects (dimensions, constituents and structures) separated from other aspects also characterizing concrete events or phenomena.

Theoretical concepts

Social theories build upon concepts and relations between concepts. A concept refers to a particular ideas and meaning. The concept must be distinguished from the term we use to express this meaning, and from the object or the properties in reality, to which the concept is supposed to refer.

The relation between terms and concepts is in principle arbitrary, not natural. This relationship is determined by linguistic and cultural agreements that are changeable, for instance agreements within the scientific community. Different terms can denote the same meaning. The English word 'alienation', the German 'Entfremdung' and the Swedish 'främlingskap' are three terms used for one and the same concept.

An insight, usually ascribed to the Swiss linguist Ferdinand Saussure, and which has later been developed in semiotics, is that the meanings of concepts are shaped through relationships. The basic relationship is the relation of opposites. Concepts are, Saussure (1966:117) writes, 'purely differential and defined not by their positive content but negatively by their relations with the other terms of the system'. When we develop concepts in science we do so precisely by differentiating, by separating and specifying the meaning of one concept in relation to another. Conceptualizations aim to specify characteristics in relation to other characteristics, in a way that gives a deeper knowledge of social reality.

The relational character of concepts is manifested in the triadic conceptualization, so common in social science. It has been most clearly expressed in dialectics by Friedrich Hegel and then in Marxism, by the concepts of thesis, antithesis and synthesis. Thesis and antithesis represent concepts that are defined precisely as each other's opposites. Synthesis is a concept whose essence of content is an integration of, or a relation between, thesis and antithesis.

Much of social theory is built on triadic conceptualizations. Feminist theory builds on a differentiation between male and female and a third concept for the relationship itself between them, for example concepts like patriarchy or gender stratification. In chapter four we have discussed theories conceptualizing structure, agency and the interrelation between the two concepts. This way of defining concepts as opposing each other and then create concepts for the mediation itself or the relationship between them, is a fundamental feature in social scientific conceptualization. In ordinary research practice, the triadic logic can be a productive guideline in conceptualizations.

Numerous concepts and conceptual distinctions are presented in scientific literature. There is sometimes a tendency among scientists, in their respective field, to successively develop their own models with different conceptual distinctions. In the literature there are also more speculative terms / concepts, which appear to be an expression of academic marketing rather than thorough analyses. The task of discovering and conceptualizing social phenomena and their distinctive characteristics is one of the most central activities in the social sciences (Swedberg 2014). It is, however, important not to reduce conceptualizations to superficial empirical categorizations or to inflict new names on known phenomena.

Taking our starting point in critical realism, we have specific expectations on conceptualization: concepts define, distinguish and discern certain properties. Conceptual differentiation should strive to discern those properties that are decisive for social activities, relationships and institutions to be what they are and not something qualitatively different (Sayer 2010:82). It is essential not to confuse abstract concepts with empirical categories. The former distinguish mechanisms and structures, while empirical categories instead divide reality into different types of events and empirical phenomena. Conceptualization is thus more than labelling empirical categories. When

we examine theoretical models and concepts, one question is central: What mechanisms do these concepts distinguish, that no other concepts have distinguished? In many cases it is more fruitful to develop and work with already existing concepts than to come up with new ones.

In other words, how we divide and label reality is far from arbitrary. With a metaphor we might say that a good concept is a concept that has 'punch', that is, it should be sharp and forceful. A concept that has punch is a concept that functions in practice, that provides deeper insight and has strong explanatory power. What punch the concept in fact has, will turn out when we use it in practice to analyse reality.

In the literature there are suggestions and guidelines for working on conceptualizing and theorizing. The triadic logic presented above is one such example. Swedberg (2012:32) presents other important examples of how concepts and theories can be developed, including: *differentiating* (e.g. from capitalism to different types of capitalism); *converting nouns into verbs* (from what states, institutions, identities, etc. are to how they are being and become); and, *transforming entities into social relationships* (using the classic example of how Marx defined capital as a social relationship). This is based on abductive inferences (to understand something in a new way) but also retroduction (to clarify what is fundamentally constitutive for, for example, different forms of capitalism).

Metaphors are frequently used in scientific conceptualization (Sayer 2010:63). Metaphors build on analogies, conveying meanings from one thing to another. We describe something unfamiliar by referring to something familiar (Berger 1982:32). With the help of metaphors one creates images of circumstances which are otherwise hard to understand. Metaphors elucidate properties in an illustrative and illuminating way. They function well in communication, as they create opportunities for common associations. Metaphors, like abstractions, are a way of defining certain aspects of a phenomenon.

Let us give three examples of metaphors in social science: (1) Organization theorists have used metaphors to crystallize various ideas of the nature of organizations. According to Morgan (1986) we can understand aspects of complex organizations by using metaphors. He mentions the following metaphors: An organization is a machine, organism, brain, culture, prison, constant flow, instrument of dominance, and a political system. Each of these metaphors draws attention to different aspects of organizations, according to Morgan. (2) Goffman's use of the theatre and the dramaturgical performance as a metaphor for social interaction has been very important for social scientific conceptualization. (3) In political economy the market is often used as a metaphor in describing the context of social action. Some economists, for example, have illustrated the relationships between construction companies, house-owners and residents with the picture of a marketplace where people come to buy supplies. At a market individuals choose where to buy. They look at several stalls where different goods at different prices and quality are for sale. At the market the sellers at the same time adapt to other sellers and to the actions of the customers.

However, the strength of metaphors also entails a risk. Through the associations and 'aha-experiences' they create, they may also tempt us to go too far in utilizing them. The problem is that it is hardly possible to modify a metaphor, and scientific concepts

should be revisable. Regarding a metaphor, however, we must either keep it or abandon it completely. The image of the marketplace is either a good one that helps us understand the relationships in the housing sector, or it is simply misleading. There is no way of revising the image without it losing its value as a metaphor. Metaphors can contribute to the maintenance of deceptive conceptions. Empirical analyses from metaphors risk being reduced to predictable, one-sided interpretations.

Typical of metaphorical images is that they are based on immediate experiences of concrete situations: a machine, a theatre, a marketplace. In Chapter 2 we argued that conceptualization and abstraction often require our breaking with the immediate and everyday conception of reality. Here there is a fundamental contrast between metaphorical images and abstractions, which calls for our consideration.

At the same time science, like other activities where language is used to describe reality, is dependent on the capacity of language to create images of reality (Denzin 1989). Some theorists of science have also emphasized that metaphoric models can inform in creative discoveries and redescriptions of familiar phenomena. Bengt Kristensson Uggla (1994:400), for one, writes that scientific discoveries can be understood 'as the fruit of metaphoric imagination, just as scientific revolutions can be connected to shifts of a predominant metaphor' (our translation). The demand of science that concepts should constantly be submitted to critical examination and correction requires, however, that simple everyday metaphors are employed with great care.

Theorizing and empirical research – two leading traditions

It is now time to address the question how theories can be more specifically integrated in the research process. The aim of scientific work can be formulated in different ways: our objective is to *test* this theory; the empirical material will *elucidate* the theory; the aim is to *interpret* the empirical material in the light of the theory; the aim is to *develop* theoretical concepts from the empirical material. So theories can be used in a number of ways in research practice.

Traditions in the social sciences have developed distinctive approaches to theories. Positivist-oriented science has tried to establish principles for how theories should be tested (be verified or falsified) against data in line with a hypothetic-deductive logic. In the traditions usually brought together under the designation of the interpretative paradigm – symbolic interactionism, ethnomethodology, ethnography – theories have been applied as interpretative framework, but it is also within these traditions that the more inductive strategies to generate (develop) theories from data have been of great importance.

Middle range theory – verifying theories with the help of data

In the same year, 1967, two works were published that deeply influenced the discussion of the relation between theorizing and empirical research in social science: Robert Merton's *On Theoretical Sociology* with the essay *On Sociological Theories of the Middle Range,* and Barney Glaser's and Anselm Strauss' *The Discovery of Grounded Theory*. These texts represent two different traditions, which are even today considered as two main alternative research approaches. They differ thoroughly regarding the question how theorizing in practice should be related to empirical research. Merton's

approach, influenced by positivism, indicates that theories should be tested against data. Glaser and Strauss develop a methodology for inductive theory generation. In the following we shall present and critical discuss these two approaches. In several respects they can provide important guidance for a social science based on critical realism. But we will also draw attention to some important limitations. In the section after that we shall present some other ways of integrating theory in concrete studies.

One of the most significant contributions to the discussion of the role of theory in social scientific research is Robert Merton's argument for middle-range theory. In his essay 'On Sociological Theories of the Middle Range', Merton criticized the social science that is directed at developing grand theories, that is, very general and all-inclusive theories. The Marxist theory of the capitalist society and Talcott Parson's theory of social systems and social action are examples of the theories to which Merton alludes. However, he also repudiates a purely empirical social science, a science that collects data and tests empirical hypotheses without connecting them to theories. Theories are necessary for the explanation of social phenomena. Middle-range theory (MRT) refers to a certain type of theory and a specific methodology aiming at bridging the gap between general theories and empirical observation. Merton does not repudiate in principle a development of more general theories, but he believes that grand theories tend to be too speculative and without support in data. The problem of grand theories, Merton argues, is that they are of such a nature that it is hardly possible to test them. He maintains that it must be possible to test theories by rigorous scientific methods.

Characteristic of the kind of theory that Merton advocates is that it is restricted to specific social phenomena. Merton himself uses the theory of relative deprivation as an example. This theory is based on the idea that people look upon themselves in relation to what in social psychology are called reference groups. The theory suggests that people's experiences of some kind of deprivation are not only, or even primarily, related to how substantial this deprivation is from an objective viewpoint. Instead the experience is dependent on what these people's situation is like in relation to that of others, with whom they compare themselves. From this theory one can then at the next stage formulate testable hypotheses concerning particular situations, such as people's experiences of a deteriorated material standard in connection with unemployment. Even if Merton himself mostly relates to social phenomena at micro level, he emphasizes that this methodology is just as applicable when testing theories of macro conditions. Weber's theory of Protestant ethic and the spirit of capitalism, as well as Durkheim's theory of suicide, can be seen as examples of MRT, according to Merton.

All theories comprise abstractions. According to the MRT approach, theories should be abstract enough to enable application to different social contexts, but also concrete and specific enough to permit testing against data:

> Middle-range theory involves abstractions, of course, but they are close enough to observed data to be incorporated in propositions that permit empirical testing (Merton op. cit. p. 39).

> Middle-range theories consist of limited sets of assumptions from which specific hypotheses are logically derived and confirmed by empirical investigation (Merton op. cit. p. 68).

Theories should be close to observable data. This proximity has essential implications for social scientific method. A theory has two basic components – concepts and the assumed relations between them. This means, first, that it should be possible to reformulate the theoretically defined concepts into operationally defined concepts (variables) without the theoretical concept essentially losing its meaning. It must be possible to find a valid indicator of concepts like class, status or social role. Second, it must be possible to carry out empirical testing of the assumptions of relations between the concepts. Within the scientific tradition to which Merton adheres, this testing is done by studying the existence of empirical quantitative relationships. MRT thus builds on the basic assumption that the relations between concepts, formulated in the theory, should be studied (and tested) in the form of quantitative relationships between variables.

What does this approach imply, as regards the orientation of the research process? Merton himself is not very clear as to what he means by the testing of a theory, let alone how it should be done. In social science, however, methods have been developed for a theory and hypothesis testing research, which correspond well with Merton's approach. From the 1950s up to the present an exhaustive amount of literature has been published, with the common ambition to develop and present methods how to test theories empirically. Some of this literature builds on advanced logic and statistics (accounts of which go beyond the scope of this book). There are also other, more elementary books on method, describing a research design that basically follows the principles of MRT (see chapter 7). To show what the MRT approach can mean in practice we will, however, draw attention to the central stages in a research process directed at testing theories. Through these stages theory, hypotheses and observations are being related to one another.

1. In this research approach a theory is typically regarded as a system of propositions, which can be reduced to a number of testable hypotheses, by means of deductive logic. A theory is not testable in itself, only indirectly so by the specific hypotheses that are derived from the theory.

We illustrate this by reconstructing part of Emile Durkheim's study of suicide (used by Merton himself as an example of MRT). Durkheim's far-reaching theory can be summed up thus: changes and differences in suicide rate can be explained by social facts, or more precisely, the degree of social integration and collective control. This theory Durkheim tries to confirm by empirical testing of some more concrete hypotheses.

From an assumption that family provides social integration for the individual, the following hypothesis is deduced from the theory: after the age of twenty, married men and women are better protected against suicide than unmarried persons. If one further assumes that there is a higher degree of social integration among Catholics than among Protestants, the following hypothesis can be derived from the theory: suicide is more frequent among Protestants than among Catholics. Our example is a crude simplification. Durkheim's theory involves many more hypotheses. What is important in this context, however, is the principle. By deriving hypotheses from a more general theory, the theory can be tested indirectly.

Social theories are more abstract than empirically testable hypotheses. Hypotheses can be derived from the theories, but their contents never correspond completely. The same theory can always be tested indirectly through several different but nevertheless valid hypotheses. It is not uncommon that some hypotheses are verified while others are falsified, despite the fact that they have been formulated to test the same theory. A falsified hypothesis is thus not necessarily a falsified theory. In the example of Durkheim's theory of suicide, for example, it might be true that the theory of social integration as having an effect on suicide is correct, even if the hypothesis of differences between married and unmarried persons turns out to be wrong. The theory points at an abstract mechanism and the hypothesis at empirical regularities. The more abstract a theory is, the greater the distance between the theory and the empirically testable hypothesis. The MRT approach is an attempt to find a middle course: on the one hand it repudiates an empirical social science that does not concern itself with abstract theory at all but; on the other hand it repudiates theories that are so abstract that they can hardly be tested by a hypothetic-deductive method.

2. An important stage in a research process oriented towards testing theories is operationalization; the construction of indicators that can be used to measure the content of theoretical concepts. When we have selected and defined an indicator, we have proceeded from a theoretical definition to an operational definition of the concept. There have been lively discussions within the philosophy of science concerning the possibility of translating theoretical language into such indicators (or what has been called a language of observation) (see e.g. Coniavitis 1984). The idea that theoretical concepts and empirical indicators should correspond with each other as far as possible is at least an ideal in testing theories.

In addition, this problem can be illustrated by means of Durkheim's studies on suicide. The concept of social integration is central to his theory. In the hypothesis highlighted above, there is a first step of operationalization, when social integration is expressed in terms of married or unmarried. This variable becomes measureable when Durkheim in the next step employs data from population statistics as an indicator of who is to be regarded as married or unmarried, respectively. The question is how well these data capture the contents of the concept of social integration. Another central concept is of course that of suicide. Durkheim's theoretical definition of suicide is: 'As suicide we regard all deaths that are the direct or indirect result of a positive or negative act (that is, failure to act), performed by the deceased, and which he knows will have this result ' (Durkheim 1979). As operational indicator Durkheim mainly uses information about suicide in official statistics. The problem here is that one cannot count upon this information being built on definitions of suicide consistent with Durkheim's own theoretical definition.

3. Characteristic of the theory-verifying method is that theories are tested against empirical relationships between variables. The relationship studied is a quantitative one, which permits measurement and statistical analysis. In some cases the quantitative relationship is already inherent in the theoretical formulation. However, if we go back to Durkheim's theory by way of example, we notice that on the one hand it describes qualitative (substantive) properties and relations– it describes certain qualitative characteristics of social integration, assumed to either counteract or support people's inclination to commit suicide. But on the other hand it is a theory assumed to explain quantitative variations in the variable 'suicide' (changes and differences in suicidal

rate), by showing how this co-varies with quantitative variations in other variables (that is, indicators of high/low social integration). When the theory is tested, it is tested against statistical correlations.

In this methodology, there is a strong connection between theory verification and preference for quantitative/statistical methods. The basis for this is the connection between causality and empirical regularities, which we have problematized before. Durkheim's theory includes an assumption of a crucial causal mechanism behind suicide, namely the degree of social integration. In his argument, he presupposes that this mechanism, if it has causal significance, will manifest itself in empirical regularities. If no such regularities can be observed, one should, in accordance with this research approach, be forced to reject the theory of any causal significance of social integration. In a research based on the assumption that theories express qualitative properties, causal powers and mechanisms, operating in an open system, it is, however, not self-evident that theories should be tested against quantitative correlations between variables.

4. In research involving theory verification, it is insufficient to study the correlation between just two variables. Theories usually contain assumptions of causality. To be able to say anything of whether a correlation between two variables is also a causal relation, one must take into consideration other relevant variables. To be able to discard the possibility that a certain correlation is actually a spurious correlation, some variables are for example kept constant. By means of statistical method researchers also tries to study several cooperating causes of a particular phenomenon. Within the framework of this research procedure, models are developed indicating which variables are to be included in the empirical study, and how these variables are supposed to be related to one another. In some cases, the concept of theory is equated with just these models. The theories become what Sayer (2010) calls ordering frameworks.

By way of summarizing, the decisive elements in this research design are the methods and logical arguments applied to relate the theory to testable hypotheses, and the testable hypotheses to the quantified data. The relation between theorizing and empirical research becomes a question of deduction following logical rules on the one hand, and of operationalization on the other. These two elements will be absolutely decisive, since the validity of theories in this perspective is considered as totally dependent on the results achieved, when the theory is tested against empirical correlations and regularities.

Grounded theory – generating theories from facts

It is hardly an overstatement to regard grounded theory as the most elaborate and best-known alternative to the theory testing approach, summed up in the previous section. Grounded theory (GT) stems essentially from the work of Glaser and Strauss (1967) (and their co-authors; e.g. Corbin and Strauss 2014), but it has also been applied and developed by a range of scientists in various disciplines such as sociology, psychology, ethnology, business economics, media and communication research. The core of GT, what makes it a distinctive approach, is first that it takes its starting point in inductive theory generation, and second that it suggests various methodological guidelines and procedures with the objective of making theory generation more rigorous and systematic. Without any pretensions of giving an exhaustive description of GT, we will

in this section examine what, in our view, are the central aspects of this research approach (see also for example Bryant and Charmaz 2007; Charmaz 2014; Kempster and Parry 2014; Layder 1993). Then we will discuss the limitations of MRT and GT in relation to critical realism.

Inductive theory generation

As Glaser (1978:15) points out, a standard question in sociological research is: What is the relation between theory and empirical research? We might also ask: How should theorizing and empirical research be linked to one another? Instead of deductive theory verification (MRT), Glaser and Strauss advocate inductive theory generation. GT is primarily a qualitative research approach, with strategies that serve as guidelines for an inductive generation of theories, with their roots in data.

What does inductive mean, then, in this context? First and foremost it means that the researcher must start by thorough studies of empirical phenomena, and from them successively elaborate theories that are well grounded in data. Grounded theories should be useful not only for the researcher but also for the people involved in the social practice under investigation. The theory becomes grounded and useful, according to GT, if it fits the data and is a relevant way of conceptualizing specific phenomena and social contexts. Theories should fit data and not vice versa. According to GT we should approach data in an open and relatively unbiased way. This has been interpreted and criticized as a sign of naïve inductivism. On the one hand Glaser and Strauss argue for a research which permits data to speak for itself and avoids analysis derived from already defined concepts. On the other hand they maintain that previous research provides knowledge about possible concepts, thereby contributing to the theoretical sensitivity, which is a vital resource in interpretations of data.

Grounded theory is also described as dense. A theory is dense and substantive if it integrates data from different settings. To Glaser and Strauss the opposite of a dense theory is an abstract theory, in the sense of being fairly void of empirical content. At the same time they often emphasize – and this is important – that even a grounded theory must be abstract and not superficially descriptive if it is to integrate multiple data. Conceptualizing, writes Glaser (1978:6), is to surpass data and to create concepts which on a more abstract level point to relations between seemingly separate events. It is by integrating multiple data at a higher level of abstraction that a theory can be useful in explaining and understanding what happens in different social contexts.

It is an essential starting point for GT that conceptualization should be grounded in individuals' everyday understanding of reality, such as it appears in specific social and cultural contexts and discourses. It is somewhat uncertain to what degree Glaser and Strauss hold that theory development should surpass everyday understandings. On the one hand they stress that grounded theory should be accessible, instrumental and relevant for the individuals that are studied or operate within the field of study. One might also interpret their approach to indicate that a theory should correspond to everyday understanding. On the other hand, as we have seen, it is emphasized that conceptualization implies some form of abstraction. What distinguishes GT, anyhow, is the notion that theories must be inductively derived from the study of the phenomena they represent (Strauss and Corbin 1990).

Some central methodical procedures

The systematic methods of social science have often been related to the testing of theories, while the discovery of these theories is believed more or less to originate from creative guesses. By contrast, GT argues that theory generation is a result of a research process, which provides the best results if one follows certain procedures in a rigorous and systematic way. We shall briefly sum up a few central procedures suggested by GT. They can be compared to the procedures in the theory-verifying approach described above.

Coding, or rather different forms of coding, is the core of GT. Theories are developed from data via coding, which means developing categories that discern and label common properties in data. This categorization or conceptualization should be grounded in exhaustive examination and careful data analysis. Coding is the way towards grounded abstraction. Codes are simply the concepts that give data a certain meaning and constitute the building bricks of the theory.

This conceptualization of data, Glaser (1978) also calls substantive coding, to distinguish it from theoretical coding. In the latter the substantial codes (the concepts) are related to one another. In this way theoretical codes indicate how concepts can be related and thus form an important part of theory development. As guidelines for this theory generation Glaser (1978) also presents several so-called coding families, which point at possible ways of conceptualizing the relations between substantial concepts. We discuss some of those that appear to be particularly important.

1 Causality, consequences and conditions According to Glaser this is the first comprehensive code one should bear in mind in theoretical coding. Here the relations between different phenomena are conceptualized as relations of causes and consequences. Other categories can be coded as preconditions for the indicated consequences to appear.

2 Process Here the relation between different concepts is conceptualized in the form of stages, steps, phases, courses of events, transitions, etc. All of them focus on processes and change over time. These theoretical codes are closely related to causality and are very common in social scientific theory.

3 Dimensions This type of theoretical code relates different concepts to one another as parts of a greater whole. An overall category is differentiated into dimensions, levels,parts, aspects, and so on.

4 Strategies and motives for action When people's actions are conceptualized, a theoretical code is used, relating motives to actions, means to ends, etc. Here concepts of the type 'aiming at' and 'strategies for' are used. These theoretical codes are central for rational-choice theory and Goffman's theory of dramaturgic action, to mention just two.

 GT distinguishes between open and selective coding. Open coding is a coding where the researcher approaches data without defined conceptions. The aim is to create concepts, which give meaning to data, and categories, which bring concepts together at a higher level of abstraction. This is a huge effort, taking a great deal of time. The

material one works with must be examined several times, thoroughly and in detail. The first step, according to Strauss and Corbin (1990), is to break down transcribed data into sentences or paragraphs and label different incidents, ideas, etc., give them names that communicate what these elements of the data represent. The next step is to develop categories which integrate different concepts seemingly describing the same type of phenomenon. Each category turns into a new concept, but this time at a higher level of abstraction.

Data do not speak for themselves. Strategies are needed to enable the discovery of concepts and categories. Two general strategies presented in the literature are the constant posing of questions to the material, and different forms of comparison. Strauss and Corbin (1990) give examples of questions that could be posed to the material in order to, as they put it, open up data to enable rethinking potential categories and their properties. Questions that should be asked are: Who? When? Where? What? How? How much? Why? These questions can guide the formulation of more specific questions, which are continually asked as the coding is elaborated. Comparison is fundamental in the GT approach, both in open and selective coding. By systematically comparing different cases and clarifying their similarities and dissimilarities, concepts and categories are developed, providing new insight about a phenomenon. Contrasted with something else, specific meanings may emerge in a clear way. The cases may be people, activities, settings etc. In the coding phase a set of questions can be asked to the various cases, thus guiding the comparison.

Selective coding differs from open coding in that it is more focused on integrating the categories into a refined theory (Strauss and Corbin 1990). The coding is concentrated to what seems to be central categories for understanding and explaining a certain phenomenon. Central categories are those to which other categories can be related and which can integrate other categories at a higher level of abstraction. The analysis is now delimited with the aim of developing a theory that will identify certain relations as being more fundamental than others.

GT advocates a flexible interaction between coding/analysis, sampling and data collection. In continuously new encounters with reality, concepts and theories are successively elaborated. New samples are continually made as a result of questions arising in the analysis. This is called theoretical sampling, since the samples are directed by the question: What other people, cases or situations do we need to examine to be able to develop grounded concepts and the emerging theory? In principle the coding – sampling – process should continue until one has developed a saturated theory. A theory is saturated when new cases and analyses no longer provide new knowledge relevant to the categories on which the theory builds, at the same time as the relations between the categories are well grounded in data.

Substantive and formal theory

Not least in view of the discussion about limitations in GT, which we will presently look into, it is important to pay attention to another aspect of the research approach developed by Glaser and Strauss, namely the relation between substantive and formal theory. Substantive theory refers to theories developed for a specific area of inquiry. It could be theories of the social implications of unemployment or school segregation.

Formal theory is theory built on abstract concepts, which are applicable on a range of subjects – theories of, for example, stigma, socialization, legitimacy and power.

Glaser and Strauss (1967:79) understand substantive theory as a springboard in the development of formal theory. In social science this is sometimes done by what they critically describe as rewriting. Theoretical conclusions grounded in a specific area are rewritten using abstract theoretical wording. By way of example Glaser and Strauss mention how it is possible, by changing concepts, to rewrite a theory grounded in studies of the relationship between a doctor and her patients, so that it applies to relationships between professionals and clients. Thereby the theory claims a higher level of generality. However, one question must be asked: is the theory satisfactorily grounded? Rewriting can be a productive instrument in theory development; however, it should principally be viewed as a hypothetical assumption, until a more complete material is at hand. Formal theory can be developed and successively grounded by a combination of rewriting and attempts to integrate substantive theories. One can look upon the difference between formal and substantive theory as a difference in degree. It is, ideally, an ongoing process of abstraction, resulting in formal theories whose generality successively increases (Glaser 1978:153).

Middle range theory and grounded theory – limitations of these approaches

Both the theory-verifying approach (MRT) and the theory-generating approach (GT) offer important guidelines for social scientific research. The merit of the first approach is above all that it draws attention to on the importance of logical clarity, valid operationalization and precision in empirical measurements, things we should always strive to attain in testing theoretical hypotheses. The GT approach suggests a range of appropriate strategies for an essential part of social scientific method, namely conceptualization and theory development. With the guidance these strategies, it becomes possible to develop concepts and theories, which are abstract but at the same time integrated and grounded in data. The work with data is focused on identification of properties and substantive relations instead of statistical connections between variables. Unlike the MRT approach, which presupposes that theories can be submitted to decisive tests, theory development in GT is an ongoing process.

But neither of these approaches can claim to be sufficient in itself. They are both limited. Let us imagine that social science up till now had followed these two approaches exclusively. In all probability we would then lack a great deal of the knowledge we have about social structures and mechanisms. The theories developed by classical scholars like Marx, Weber and Durkheim or modern theorists like Bourdieu, Butler and Collins, would hardly exist, nor would all the empirical analyses that have been made based on these or other general theories in social science. The remaining part of this section will be devoted to a constructive critique of the two aforementioned research approaches. We shall dwell most on GT, since we consider it to have the most to offer a social science based on critical realism. Two types of limitations will be highlighted: first that the approaches have an empiricist bias; and second that the significance of general theory has been disregarded (cf. Layder 1993, 1998). In the section thereafter we will present examples of how one can work with general theories within a research going beyond both deductive theory verification and inductive theory generation. Here we argue that abduction and retroduction are fundamental and

indispensable features in theorizing and in the processes by which theorizing and empirical research are related to one another.

Empiricist bias

In a research practice informed by MRT, empirical observations are given priority. Empirical facts are assumed to be decisive when the validity of a theory is assessed. Theories that cannot be tested empirically are discarded. The approach seems to imply an empiricist epistemology, as it is assumed to be possible to test abstractions against data through logical deduction and operationalization. Abstract theories describing transfactual social structures and qualitative properties cannot, however, be reduced to observable events or empirical regularities. Two types of knowledge are involved. When abstract concepts like social integration, alienation, class or ideology are transformed into empirical indicators, they lose essential aspects of their original meaning. Social theory is a language with a value of its own, and cannot be reduced to hypotheses of empirical regularities. On the other hand, such hypotheses can be formulated within the framework of a general theory.

GT is often mentioned as an alternative to a positivist social science. Hence it may seem somewhat paradoxical to suggest that GT implies an empiricist bias, which is otherwise regarded as characteristic of precisely positivism. The following methodological ideals, however, give GT such a bias: the inductive approach, the priority given to the coding and labelling of data, the argument that concepts should emerge from data and from the investigated individuals' notions of reality, and the idea that theories should fit the data (cf. Layder 1993). Here there is room, however, for different interpretations and, above all, for different ways of applying GT.

The methods and strategies developed in GT represent an inductive ideal. There is a tendency to regard established theories as an impediment rather than a resource, when arguing that concepts should emerge from data through relatively unbiased coding. At the same time another feature is stressed as being very important, what has been called theoretical sensitivity, that is, the ability to analyse and give meaning to data. This sensitivity may be derived from a number of sources, from personal experience as well as established theories (Glaser and Strauss 1967, Strauss and Corbin 1990). The research process is probably most productive when we manage to combine a fairly open attitude towards data with the use of established concepts as a resource.

Coding without the guidance from theoretical concepts runs the risk of being short-sighted, shallow and naive. Data is always categorized data, and theoretical concepts are the scientific instruments needed to find alternatives to common-sense categories. The critical potential of science is partly to be found here. Strauss and Corbin (1990) present a special strategy to employ in coding, which they call 'waving the red flag'. By this they mean that in analysis and conceptualization of data, we should always react to (wave a red flag at) formulations like 'it is common knowledge…', or 'it is obvious that…'. Any formulation implying that something is natural or normal should be meticulously examined by the researcher. Glaser (1978) also stresses that theory development involves going beyond the empirical, the immediately given, developing theories at an increasingly higher level of abstraction. The question is, however, whether this is consistent with the demand that theories should fit the data. GT seems to underestimate the consequences of the double hermeneutic of social science (see

Chapter 2), and the problematic relation between everyday understandings and scientific abstractions. Concepts describing social structures and mechanisms will always go beyond and problematize individuals' everyday experience.

There is room for different ways of interpreting and applying GT. It is particularly important not to reduce conceptualizations to common-sense-influenced labelling and sorting of data. One should instead employ the strategies developed by Glaser and Strauss, with the aim of integrating data in the development of abstract concepts and theories. It is doubtful whether it is at all fruitful to meticulously follow the various modes of coding as if the constituted a manual for research practice. Such detailed inductive coding would be highly time-consuming and often needlessly inefficient. The risk is that there will be much work and comparatively little new knowledge. Still, there is a tendency in some research to draw conclusions too fast without working with the empirical material. GT points to something important, namely that there are discoveries to be made in systematic and detailed empirical analyses However, existing concepts and theories should not just be used as a form of inspiration in the coding of data. In concepts and theories there is accumulated knowledge, which ought to be utilized. Theories provide knowledge of structures and mechanisms, which can hardly be attained by the inductive method. Glaser and Strauss (1967:34) react against what they call theoretical bias, a research that compels data into ready-made categories. Even if GT has developed since, one is justified to wave a red flag for the empiricist bias implied by this approach.

The significance of general theory

Within contemporary social science there is a fairly wide-spread and unfortunate division of labour between, on one hand theorists who are engaged in developing and analysing general theories, and on the other hand an empiricist-oriented research, which does little to integrate the more abstract theories in their analyses (Layder 1998). We believe that it would be profitable for researchers to make an effort to overcome this division.

In his book *New Strategies in Social Research*, Layder (1993) puts forward a constructive critique of the two strategies we have discussed. One of Layder's principal arguments against MRT is that this approach excludes more general theories from research practice. According to Layder such theories are not speculative to the extent that Merton intimates, even if Layder, too, stresses that general theories should be more empirically underpinned than is often the case. General theories must, however, relate to the data in a different fashion, compared to MRT. Their validity cannot be totally dependent on empirical verification or falsification. They are instead estimated with reference to how fruitful they are as interpretative framework, and to what degree they manage to systematically reconstruct the cultural and structural aspects of social phenomena. In our view, the GT approach, too, underestimates the value of general theories. It is hardly possible to arrive at particularly general and abstract theories, if we take our starting point in a detailed unbiased coding of data.

But what do we mean then, by general theory or grand theory? This is not at all a clear-cut term and we shall finish this section by suggesting a specification. 'General theory' can allude to at least three different characteristics of social theory. Layder uses the term by referring partly to theories conceptualizing more comprehensive processes in the

evolution of society. Marx' theory of the capitalist society, Weber's theory of the increasing rationalization of society, and Habermas' theory of how the system colonizes the lifeworld, is well known examples of such theories. Common for these theories is that they formulate general ideas of social and historical transformations, at a macro level.

When Merton discusses general theories, or grand theories, which is the term he mainly uses, he is primarily alluding to something else (Merton 1967:45). Grand theories to Merton are theories claiming to describe an all-encompassing total system, within which all types of social practices and relationships can be integrated and explained. Such theories strive to totalize social science knowledge in a single system, from which it should be possible to explain empirical conditions in a range of different areas. It is thus the scope of the theory that makes it a general theory.

These two definitions of general theory may indeed be related to each other, in so far as a theory of comprehensive processes at a macro level may be relevant to many different areas. But it is not self-evident that a theory of such processes claims to present an all-embracing system. The sociologist Zygmunt Bauman has, in a series of books (e.g. 1991, 2000, 2007), analyzed an increasing fluidity, ambivalence, insecurity, and individualization in society, with lofty claims of generalization but without integrating the analyses into an all-embracing system. On the contrary, the social transformations that Bauman discusses seem to question the possibility or value of any grand theories (cf. Denzin 1993).

To these two definitions of the term 'general theory', we now add a third, emanating from a critical realist understanding of theory. Many social theories are general in the sense that they develop concepts that can make visible fundamental social properties, structures and mechanisms. This aspect should not be confused with the two others mentioned. There are many examples showing that such theories need not be either formulation of comprehensive macro transformations or all-embracing systems: Mead's theory of the development of self and identity in relation to symbolic interaction; Bourdieu's theory of habitus and different forms of capital; Habermas's theory of the universal rules for our use of language; Hochschild's theory of emotional labour – these are examples of theories of general structures and mechanisms. These are general in the sense that they constitute foundational conditions for a variety of concrete and contextual social processes, practices and relationships.

We can thus isolate three different meanings of the term 'general theory'. For the sake of clarity we sum them up: (1) Theories of comprehensive social processes and transformations at a macro level; (2) theories claiming to represent all-embracing systems capable of integrating, in principle, all forms of social processes and relations; and (3) theories of foundational (transfactual) social structures and mechanisms.

Theories that are general in the first and third sense, are an indispensable element of today's social science and should as far as possible be integrated in research practices. But there are at least two important objections against theories that attempt to integrate all knowledge in an all-embracing system. First, there is an imminent risk that such systems become all-embracing at the expense of depth and explanatory power. In other words they run the risk of being fairly void of substance that is valuable to our understanding of specific, social structures and mechanisms. Second, such systems

easily tend to be totalizing; and theories should not totalize but open up. They should not be used to classify reality from prearranged systems but rather inform analyses, interpretations and explanations. Social reality is complex, consisting of different ontological levels and a variety of structures with their own specific properties. Different theories partly complement each other, since they focus on different levels and structures. Trying to integrate them in an all-embracing system seems futile.

General theories in social science research practice

In Chapter 5 we argued that abduction and retroduction are essential modes of inference alongside deduction and induction. In this section we shall demonstrate how general abstract theorizing can be integrated in the research practice through abduction and retroduction. We emphasize ways of theorizing in concrete research, which are more or less neglected within MRT and GT. We do this under two themes: Participating in the Theoretical Discussion, and Employing General Theory in Empirical Studies.

Participating in the theoretical discussion

Every social practice and subculture to a certain extent develops its own language. Just like football players quite naturally talk about 4-4-2 to indicate a certain formation related to ideas about the game and the positions in the formation, and craftsmen develop their own terminology for different working operations, we in social science talk about macro structures, institutionalization, socialization, symbolic interaction etc., in order to express complex ideas or concepts in a simple fashion.

Sometimes science is criticized for using an abstract language that no outsider can understand. Abstract is then in some cases equated with unnecessary intricacy. It is obvious that the theoretical language of science may function as a forcible means of strengthening the identity of the scientific community, while at the same excluding the uninitiated. But this is not unique to science And, what is more important, the abstract concepts, which in part come from everyday knowledge but also go beyond it, are absolutely vital for the social sciences to be able to live up to the expectations placed on science (see Chapter 2). The language of science may to an outsider seem abstract and hard to understand. But conceptualization in particular, is an indispensable element at the core of science, in a way that does not apply to other professions.

Social theory comprises ideas and hypotheses, to some extent possible to verify and falsify in empirical research. But social theory is also a language, which makes it possible to understand and discuss abstract relations; a language that is continually developed as it is used in scientific discourse – in theoretical literature, in seminars and in other contexts. These discussions always take place in relation to more or less shared experiences of the society one claims to describe. A theorist who develops and uses concepts that do not give others a deeper understanding of the society they live in will hardly be successful. But the theoretical language is always related to an already conceptualized reality. Established concepts are confronted with new ones, they are modified, integrated, reconstructed and surpassed.

How does this affect anyone who conducts social research? First, as scientists and students in an academic institution we are part of a scientific community and the theoretical discussions going on there. Learning about central concepts, reading and

reflecting on classic and modern social theory is thus necessary to be able to participate in these discussions.

Second, one can participate in the theoretical discussions by analysing established concepts and theories in papers and theses. If they are carefully defined, entirely theoretical studies may be appropriate even in more restricted paper assignments. In science there are strong demands on concepts being consistent and well defined. These demands are not always met. In social science new concepts are constantly being introduced. Some of them may be justified, in representing new ideas and clarifying mechanisms not previously conceptualized, but in other instances they may merely be new names for already known phenomena. To clarify different concepts – their contents and relations to other concepts – is in itself an important research task. We could start, for instance, with a certain concept of particular interest to us and ask questions like:

– What is the real content of ideas represented in this concept?
– How is this concept integrated in a larger theoretical context?
– How does the meaning of this concept differ as it is used in different theoretical contexts?
– What mechanisms are described by this concept that other concepts do not describe?
– How can the different versions of this concept be integrated?
– What is the difference between this concept and other neighbour concepts?

If we take our starting point in a theory instead of an individual concept, the following questions may be relevant:

– In what context has this theory been elaborated and what does it claim to explain?
– How are the theoretical conclusions supported? Are there any obscurities in the argument, inconsistencies or contradictions in the theory?
– Is the theory undeveloped in any respect? Are there any vital gaps in the theory, relations or components that the theory has not yet conceptualized or defined?
– What conclusions, if any, can we draw from studies where the theory has been applied? What do they say of the validity of the theory?
– How does this theory differ from other theories claiming to explain approximately the same phenomena?
– Can these theories be complementary and perhaps integrated? What are the possibilities, for instance, of integrating theories claiming to explain the same problem but doing it from the standpoints of different research traditions or disciplines?

To be able to participate in theoretical discussions it is of vital importance that we develop our ability to handle these kinds of questions. Bearing in mind that theories have a crucial role in scientific knowledge development, the value of purely theoretical studies should not be underestimated. It is a matter of developing and refining the theoretical language, which can lead to deeper understanding and explanations of social reality. Theoretical studies can clear away obscurities and ambiguities impeding communication in social science, and can contribute to the development of concepts usable in concrete empirical analysis. We shall now address the question how general theories can be applied in empirical studies.

Employing general theory in empirical studies

We shall now give a few examples of how general abstract theory can be integrated in concrete empirical studies. We start with what is commonly called problem formulation. Then we discuss how general theories can be used as interpretative frameworks and as tools in retroduction.

Formulating a scientific problem

The ability to formulate relevant and productive problems is fundamental in scientific work. In this pursuit, general theories and concepts are indispensable. Many forceful theories have been elaborated in classical and modern social science, forceful because they present a way of looking at reality which opens up interesting problems and questions. As David Silverman (1993) says, theories are the impetus for research.

In research, it is essential to distinguish between what is a scientific problem and what is a problem to politicians, organizations, citizens, or what is described as a problem in, for instance, the media. Hooliganism in connection with football matches, is a problem for those in the club who are in charge, for many supporters, and for football in general. Difficulties to finance quality journalism can be a problem for the newspaper business and perhaps also for democracy. These are problems, but no scientific problems.

Still, such societal problems may be an important starting point for the formulation of a scientific problem. Science should be relevant in society; that is to say, scientists should address issues that, for some reason, it is important to acquire knowledge of. The fact that we always choose (and must choose) a limited section of the social world – restricted by our notions of what is important to study – is something that Weber (1904/1997) strongly emphasized. As we pointed out in Chapter 5 (Figure 5.4), an empirical study may benefit by starting with an introduction, in which the reality we intend to examine are described, partly from the viewpoint of the people involved, that is, their own interpretations and descriptions. In other cases it may occur that the problem even at the outset crops up chiefly as an internal scientific discussion.

For a description of a problem, based on the everyday experiences of people involved, to become a scientific problem, the problem must be analytically resolved and theoretically defined. Theories are used for analysis, in the sense of breaking down a complex and multifaceted reality and from here more precisely defining a scientific problem.

There are at least two reasons for scientific problems to be grounded in theory:

1. Theories help us break down and limit our formulation of the problem in a conscious way. Scientific problems should not only, or even primarily, be limited to certain empirical phenomena but to specific aspects, dimensions or mechanisms. Limitations are made in relation to theoretical frameworks and with the help of the abstract language of science. In the study of journalism, for instance, it is not enough to limit oneself to certain organizations, newspapers, etc. What is important is the focus on certain aspects of journalism: the legitimacy and authority of journalism, professional norms and values, ownership structures, organization of production processes, genres, knowledge claims and epistemologies of news, or some other aspects of journalism. If we choose to focus on, for example, the aspect of legitimacy, the problem formulation should be rooted in theories of legitimacy. We choose the theoretical points of departure, above all

with regard to the relative explanatory power of different theories, and only second with regard to what the people involved may think are the most interesting issues. Theoretical concepts offer depth and precision to scientific problems.

2. Via the use of theoretical frameworks, the specific study is related to general knowledge as well as to more comprehensive social, cultural, and/or historical conditions, thereby avoiding an overly near-sighted perspective. Scientific problems should always be formulated from a general knowledge interest, keeping individual actors' ideas and interests at a distance.

Science is not primarily a matter of solving individual problems, but of contributing to the development of general knowledge and theory, which in its turn may be usable for solving concrete problems (cf. Chapter 8).

In the process of formulating theoretically grounded problems, it is important to employ both general abstract theories and theories focussing on the specific empirical object. It is sometimes hard to find developed theories focusing on, and explaining, exactly the problems we are interested in. A solution is to avoid looking for a theory at too concrete a level. Theories about the more general aspects, structures and mechanisms of relevance for a particular study will always be available.

Applying theories as frameworks for interpretation and as tools in retroduction

> … theories are seen as tools that help us see, operate, and get around specific social fields, pointing to salient phenomena, making connections, interpreting and criticizing, and perhaps explaining and predicting specific states of affairs … Social theories provide maps of societal fields that orient individuals to perceive how their societies are structured. … Social theories are thus heuristic devices to interpret and make sense of social life … Social theories can also illuminate specific events and artefacts by analysing their constituents, relations, and effects. (Kellner1995:24f)

This citation from a book by Douglas Kellner, nicely sums up how theories are to us, both as frameworks for interpretation and as tools, when we via retroduction attempt to identify constitutive properties of concrete phenomena, events and structures.

In Chapter 5 we used the concepts of abduction and recontextualization for the process in research by which we interpret and give meaning to specific phenomena, taking our starting point in some form of interpretative framework. General theories can be used as interpretative frameworks. Such interpretative frameworks contain fundamental theoretical assumptions and cannot be subjected to decisive empirical tests. On the other hand we can formulate more concrete, falsifiable hypotheses within the framework of a particular theoretical context. We here present examples of two concrete research assignments where general theories are utilized as interpretative frameworks:

1. Interpreting/recontextualizing the same data, starting from two different theories, could be one important undertaking. Irrespective of what we study, there is nearly always a number of theories that could be relevant as frameworks for interpretation. Studies with this orientation can address the following questions: In what respects can the theories chosen be said to correspond to one another (that is, lead to similar analyses of data), be openly competitive (entailing conflicting interpretations) or perhaps

complementary? What meanings and relationships are identified, and what explanations are suggested, in one theory but not in another? What particular problems and questions for further research are brought to the fore by the different theories?

2. Applying established theories to partly new empirical fields would be a somewhat different research undertaking. One purpose of such an undertaking is to test the area of application of a certain theory. Is the theory productive when it comes to understanding even this area of inquiry? By thus bringing theoretical perspectives into fields where they have not been applied before, the theory could also contribute to new ways of understanding and thinking about something.

In retroduction, what is also called transfactual argument, general abstract theories are an indispensable resource. As pointed out before (in Chapter 5), the border between abduction and retroduction is not very distinct as regards concrete research. Retroduction, however, points at a specific field of use for abstract theories. The practical research undertaking could be as follows: We depart from a concrete phenomenon and pose the question: What structures are fundamental for this phenomenon to exist and be what it is? When trying to answer this kind of question we can to some extent use the various strategies presented in the section about retroduction in Chapter 5. But we also have to use existing theories. Different theories can complement each other, since they focus on different structures and mechanisms. Theories describing the same mechanisms, although in different ways, should be compared to clarify their validity and explanatory power.

The validity of theories

We have given several examples of how general theories can be integrated in concrete studies. Such procedures are essential complements to the strategies associated with MRT and GT. Different ways of working with theories are grounded in different research logics, which also mean that the validity of theories is evaluated by different criteria. Within the framework of GT, theories are generated whose validity is assessed due to their being grounded and saturated. Theoretical hypotheses tested in accordance with the scientific ideal of the MRT approach are evaluated with consideration given to whether they have been subjected to tests that meet the demands for logically valid derivations and precision in measurements. General theory discussions adhere to yet another research logic: they are evaluated with respect to such criteria as explanatory power, the ability of the theories to conceptualize fundamental social mechanisms and integrate central concepts from other theories, whether they are creative or not, and whether they are logically consistent. When general theories are applied as framework for interpretation they are evaluated with respect to whether they are usable and generate new insight into the phenomena of interpretation.

Abstract general theories need not be either speculative or untried just because they have not been tested strictly deductively or been grounded strictly inductively. Abstract theories are tested and modified primarily by being used in research practice, in theory discussions and empirical studies. Let us take Michel Foucault's theory of power, knowledge and discourse as an example. The theory has been criticised, but it has also inspired research in a range of concrete fields. Scholars from different disciplines (psychologists, geographers, sociologists, pedagogues, historians, media and communication scholars) have found Foucault's theory fruitful and have applied it,

mostly in a partly modified form relevant to their particular object of study. It has inspired the development of more concrete theories connected to specific fields. The same could also be said of many other theories in social science.

It is of course important to avoid a dogmatic application of theories, making it entirely predictable what we see and what we do not see. Theoretical frames for interpretation must constantly be subjected to critical analysis and internal scientific debate. It is essential to be open-minded to other general theories, both in the formulation of research problems and in the interpretation of data. To be able to claim that a theory is tested, we must discuss the advantages of the theory, as well as its limitations and problems. A number of questions are important to ask: To what extent can we, starting in the theory, understand and explain phenomena of which we earlier had a more imprecise conception? What can the theory explain or not explain, respectively? What experiences contradict the theory? Are there aspects/dimensions of the research object that cannot be conceptualized from the theory in question? What are its limits, compared to those of other theories? Theories should also be presented in a way that makes them open to critical examination. The foundational assumptions of the theory, the base of experience referred to as supporting the theory, and the argumentation behind the theory, must all be as clear as possible.

Conclusion

Scientific knowledge builds on systematic development and the application of theories at different levels of abstraction – this is how one might sum up, in a very simplified way, the argument in this chapter. Theories make up a language, indispensable to science, informing interpretations and enabling explanations by conceptualizing structures and causal mechanisms. In this chapter, we have presented a number of ways how to integrate and employ theories in practical research. We have given much space to middle-range theory and grounded theory, as they represent two major traditions in social science and have been very influential in their way of regarding the relationship between theorizing and empirical research. These two approaches both contain important research strategies. At the same time they have essential limitations, having to do with what we have called an empirical bias, and having underestimated the significance of general theories in social science. For that reason we have in the latter part of the chapter given examples of how general theories are used in research practice, all within the framework of a research logic that is different from both middle-range theory and grounded theory.

We hold that there are strong arguments for taking a flexible and undogmatic position on the issue of how theories can and should be employed in research practice, which might sound like too simple a solution to a difficult and disputed problem. However, this position is not a manifestation of eclecticism but is based on certain principles. One of the essential problems of the methodology that has been influenced by positivism is in fact the view that research practice should follow a template for how theories should be tested, a template which is furthermore assumed to be common for social science and natural science. The result is a science which concerns itself with the testing of hypotheses, while at the same time disregarding the value of abstract general theories. Some researchers have applied the grounded-theory approach, as if it presented a complete outline for a methodology which should be followed from beginning to end. The result runs the risk of becoming a rather trivial and shallow categorization of data.

Theorizing and conceptualizing, working with theories and concepts and in different ways relating them to empirical material is fundamental to social scientific research. This work should not be reduced to a method. It involves reasoning with concepts, abstracting, interpreting, testing, modifying established concepts and developing new ones, grounding concepts and testing hypotheses – processes that can only to a limited extent be reduced to logical rules and standardized methods (cf. Layder 1998, Morrow and Brown 1994). In this chapter we have presented a range of strategies as guidelines for such work.

We have also tried to show that the different modes of inference/thought operations (deduction, induction, abduction and retroduction) described in Chapter 5, are foundational for the processes by which we in science develop, test and apply concepts and theories. Earlier, it was common procedure to differentiate between a deductive and an inductive approach when considering the relation between theorizing and empirical research. This is limiting. Retroduction is a key form of thought operation in theorizing and theory generation. When theories are used as guiding framework for interpretation, this is a mode of abductive inference that is an indispensable feature of much of social science research.

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