Introduction

One of the problems facing a teacher of social research methodology is the shortage of manuals of a general, introductory nature. Recent years have witnessed an ongoing process of fine-tuning of the techniques of collection and analysis of social data and a marked differentiation among research instruments. As regards the quantitative approach to research, these developments have involved both data collection (with the near hegemony of the survey, the growing importance of secondary analysis, centralized archives, panel studies, international comparative surveys) and data analysis (through the creation of increasingly sophisticated statistical techniques). At the same time, qualitative research has experienced a veritable boom in new methods and approaches which, under various labels (critical theory, semiotics, structuralism, deconstructionism, interpretive theory, biographical approach, etc.) have given fresh impetus to this way of tackling social research.

This process of fine-tuning and differentiation has been mirrored by the production of textbooks. Anyone who walks into a 'social research supermarket' will find the shelves stacked with manuals and handbooks, each one focusing on some particular subject or technique. If, however, the reader is looking for a complete general manual, a sort of 'first textbook' that explains what social research is, how it developed historically and how it can be undertaken today, in its various branches and different approaches, the search is likely to be an arduous one.

It is this need for a general synthesis that has given rise to the present volume. First of all, I believe that an introductory manual of social research must necessarily start out by illustrating the philosophical foundations on which the various research methods have been constructed. The empirical approach to the study of society sprang from the enthusiasm of the positivist illusion at a time when it seemed that the research methods that reigned in the natural sciences and in technology could be applied to the study of man and society. This perspective, however, was soon challenged by those who maintained that the human sciences could not be equated with the natural sciences and that research on people and society had to be conducted along alternative pathways which would safeguard the intrinsic individuality and irreproducibility of the human being. It was in these two opposing views, which became consolidated at the beginning of the twentieth century, that the methods and techniques of social research were rooted, and I am convinced that without an understanding of this fundamental philosophical dichotomy it is impossible for the student to understand fully the spirit that animates the techniques themselves.

With regard to the methods of quantitative research, it was my intention to write a manual that did not focus solely on the survey as a technique of social investigation. Although this subject has been given the attention it deserves – today it is the most important and widely used social research technique – I have also dealt with experimentation in depth. This decision was based not only on the importance of experimentation in social psychology but also, and especially, on the conviction that only a complete understanding of the logic underpinning experimentation enables us fully to understand the issue of causality and how it

can be tackled in the social sciences. In addition, I have also examined an important and often neglected source of social information: official statistics. Modern society generates masses of social statistics, which constitute a source of knowledge and provide an empirical base for important studies that cannot be carried out with other means.

At the same time, it was my aim to analyse the logic of social research and to devote ample space to the delicate passage from theory to empirical research, from hypotheses to concepts, indicators and variables; in other words, to the question of so-called 'operationalization'. While all these issues constituted the core of methodology in the 1940s and 1950s – a flourishing period for social research, which saw the great contribution of American sociology and in particular of Paul Lazarsfeld – in recent times they have risked slipping into oblivion. Over the years, the term 'methodology' has gradually become synonymous with 'statistical techniques of data analysis'. This has partly been due to the introduction of information technology and the widespread use of personal computers and specialized social research software. While such developments have given an enormous boost to the techniques of data processing, they have also been accompanied by a critical decline in attention to the procedures through which the data themselves are constructed and gathered. The negligence with which this phase of research is carried out, the lack of control and, in general, the scant sensitivity towards the accuracy of data and the reliability of operational definitions engender the risk of carrying out sophisticated elaboration of flimsy data, thereby producing 'garbage research'. It can never be repeated too often that no technique of analysis can improve the quality of the data, and that this quality – which is established *before* the analysis is undertaken – therefore imposes precise constraints on the validity of the results yielded by statistical analysis.

If a social research manual aims to be 'complete', it must of course place proper emphasis on the qualitative approach. As the reader will see, I uphold the view that, although the quantitative and qualitative approaches to social research differ radically, they are nevertheless eminently complementary. According to whether we wish to access the 'world of facts' or the 'world of meanings', we will choose one approach or the other. Two different approaches to the same reality can both make significant contributions to our knowledge of that reality. Indeed, it is almost universally accepted that a painting by Raphael and a painting by Picasso are both works of art, and yet there is an enormous difference between the apparent naturalism and personal interpretivism of the two underlying artistic paradigms.

Nonetheless, the reader will notice that the greater space has been devoted to quantitative techniques. This does not mean that I consider the quantitative approach to be superior. Rather, the main reason behind this choice lies in the fact that the qualitative perspective, because of its very subjectivity, does not lend itself to formalization, and is therefore more difficult to transform into schematic procedures that can be communicated through a textbook. Unlike quantitative research, it does not possess a codified arsenal of techniques, and many of its procedures have to be worked out in the field, in the unique interaction between the observer and the observed. Furthermore, it should be borne in mind that in sociological experience (which constitutes the basic reference of this volume) the long tradition of quantitative research has, for at least 80 years, uninterruptedly accumulated an imposing array of tried and tested techniques. By contrast, the qualitative approach, after its rich and fruitful initial phase, became sidelined for the entire period (from the 1940s to the 1980s) in which neo-positivist sociology predominated, coming back into play only in recent years.

In discussing qualitative research, I have not only dealt with the best known and most commonly applied techniques, such as participant observation and qualitative interviews, but also with the 'analysis of documents', a heading under which I have grouped both

personal documents (letters, diaries, etc.) and institutional documents (court sentences, company reports, mass media output, etc.). In modern society, individuals and institutions produce huge numbers of documents every day; these constitute a treasure chest of empirical material for the study of the most diverse social phenomena.

My long experience in teaching has convinced me of the difficulty of 'learning to do research' without actually 'doing research'. Indeed, only by applying the techniques directly to theoretical problems and to empirical material can one become fully aware of both the potential and the limitations of these tools, and therefore learn to choose the strategies that fit the individual cases. Naturally, reading a book (or teaching by means of theoretical lectures) is by no means the same as learning or teaching through 'doing' (in fact, it is the very opposite).

In an attempt to offset (to some degree) this intrinsic shortcoming of the 'book medium', I have included in the text, wherever possible, a range of examples drawn from actual research. The purpose of these examples is to visualize the context in which the illustrated technique has been used, the questions that the researcher was trying to answer, the efficacy of the technique and the conclusions reached. These examples have been taken from sociology, anthropology, social psychology, political science, education and history, in order to provide as complete a view as possible of social research and its basic unitary nature. Naturally, however, my own scientific background and experience as a researcher have prompted me to place the accent on sociology. The strategy of using examples to illustrate techniques has been adopted most frequently in the part of the book that deals with qualitative research; in the absence of standardized methods, it seems to me that the use of examples taken from actual research projects is the best way of getting across to the student the great variety of situations encountered in qualitative sociology and its creativity in terms of technical solutions, approaches and documentary sources.

This book is intended to be rigorous, complete, and simple. Completeness demands that a wide range of subjects be dealt with; the first chapter has a vaguely philosophical slant, while some sections of the book – such as those on experimentation, sampling and scaling – contain a few more formalized passages. Rigor demands a certain attention to terminology, and the reader is constantly reminded of the definitions of terms; while these may seem prolix, useless or pedantic, in my view they help to maintain conceptual clarity and terminological accuracy. As for simplicity, I have taken as my point of reference a student who has absolutely no knowledge of social research. Hence, nothing is ever taken for granted and each concept or new term is explained as it is introduced. Moreover, I have tried to maintain a measured pace when explaining, without worrying about repeating myself, and bearing in mind the ancient Latin motto *repetita juvant* (repetition is helpful). As a result, some passages may appear excessively lengthy; however, I feel that this is preferable to excessive concision.

Simple does not mean simplistic. If some parts seem particularly simple, this means that I have succeeded in my aim. Nevertheless, the reader should beware of such apparent simplicity. Doing empirical research in the social sciences is a difficult challenge and one that has been faced by generations of scholars. It should be remembered that today's apparently simple acquisitions are the result of decades of discussion and argument, that many problems remain to be solved, and that solutions are never definitive, but rather bound to evolve over time.

This book is no mere introduction, nor does it claim to provide an exhaustive treatment of the field. Needless to say, the philosophical foundations and the technicalities of social research have not been discussed in depth. Although important, certain issues have been dealt with fairly rapidly; others have deliberately been omitted. In any case, even with regard to those issues that are dealt with more completely, the reader will need to refer to

more specialized texts containing empirical applications, in order to become fully conversant with that specific sector. In this respect, the present volume only aims to provide as complete an illustration as possible of the potential, the fields of application and the variety of social research. It can therefore be regarded as a starting point for further investigation of the various techniques; there is no shortage of high-quality specialized material.

This book has been written with three types of reader in mind. First, social science students. Even if they are not destined to become actual 'empirical researchers', in other words to do research in the field, only through learning the methodology and techniques of social research will they be able to learn what social science *is*. Indeed, research methodology stands at the very core of the social sciences; it constitutes the essence, or distinguishing characteristic, of social science; it is indeed what makes social science a 'science', as distinct from other kinds of intellectual activity, such as philosophical speculation. No one who is interested in exploring the nature of the social sciences can do so without some familiarity with social research methodology.

Second, the book is intended for those who want to learn how to 'do research'. Clearly, for anyone wishing to become a professional researcher, it can be no more than a 'first book' and will be followed by many others dealing with specific issues (starting with a good statistics handbook). The present text should be able to provide such readers with a general overview – a solid base on which to build up subsequent knowledge.

Finally, it aims to be of use to the ordinary 'consumer' of social research. In all sectors and at all levels of modern society, among policy-makers, social workers, journalists and so on, there is a growing need to keep track of social phenomena. Such information often takes the form of avalanches of data, percentages, tables and graphs, research reports, case studies, international comparisons and statistical simulations, all of which require skills for informed critical interpretation. It is my hope that this book will be able to provide the critical tools needed.

Outline of the book

The book is divided into three parts. The *first part* (Chapters 1 and 2) illustrates the two basic paradigms – quantitative and qualitative – of social research, describes their origins in philosophical thought, and outlines their current interpretations. The first chapter reconstructs the philosophical foundations of the two approaches and their historical genesis, and traces their subsequent development. In the second chapter, concrete examples are used to illustrate what quantitative and qualitative research consist of today. In addition, the differences between the two approaches are analysed point by point, starting from the ideal types of each kind of research.

The *second part* (Chapters 3–8) is devoted to quantitative research. Chapter 3 deals with the delicate phase of operationalization – a veritable bridge between theory and research. The chapter therefore examines theory, hypotheses, concepts and variables, and introduces the *language of variables*, which constitutes the true distinguishing feature of quantitative social research – a completely new way of talking about social reality, which differs from the traditional language of concepts.

Chapter 4 tackles the problem of causality. The concept of cause is central to all sciences, but it is also highly problematic; in the social sciences in particular, this concept is enormously difficult to transfer into the empirical setting. It could not therefore be overlooked in a book of this kind. The concept is dealt with alongside what is the most coherent attempt at empirical corroboration of the causal relationship, the experiment (with particular reference to the experiments conducted in social psychology).

Chapter 5 looks at the survey. Though this is only one of the data-gathering tools available in social research, it is currently the most widely used technique of social investigation. The in-depth examination of the subject begins with the fundamental problems that

arise when we attempt to study society by questioning its members, and then moves on to look at how questions are formulated and data are collected. Finally, an outline is provided of the current situation, in which large archives set up by national and international agencies provide data on which research can be carried out directly.

The subject of Chapter 6 is 'scaling' — that is to say, 'measuring' complex concepts. This issue is closely linked to those of the operationalization of concepts (Chapter 3) and the survey (Chapter 5), in that it largely involves 'measuring' opinions and attitudes, once again by questioning the subjects studied.

Chapter 7 focuses on official sources of statistics. Produced by governments (as in the case of the census) or by nationwide agencies, official statistics constitute a very important (and often under-exploited) source of information on society.

Finally, Chapter 8 concludes the part of the book devoted to quantitative research by exploring sampling issues, which are a prerequisite both for survey-based studies and for a great deal of research conducted through official statistics.

The *third part* of the book (Chapters 9–11) is devoted to qualitative research. Schematic analysis of this field is much more difficult than that of quantitative research, since the techniques used cannot easily be distinguished from one another and are often interwoven. The strategy adopted here has been to break down the analysis into three chapters according to whether the data-gathering operation is conducted through 'observing', 'questioning' or 'reading'.

Chapter 9 looks at the oldest and most classical of the qualitative techniques, that of participant observation. A certain amount of space is also devoted to more recent developments and other types of observation, such as those utilized in a broad range of ethnomethodological studies.

Chapter 10 deals with the qualitative interview, which may be regarded as the qualitative counterpart of the survey. While the distinctions made (among structured, semi-structured and unstructured interviews) may appear to be slightly contrived, they nevertheless meet the inevitable need to systematize the material for presentation in textbook form.

Finally, Chapter 11 discusses the analysis of 'documents'. This term covers a host of documentary material autonomously produced by individuals and institutions, which the social researcher can gather and 'read'.

Part One

The Logic of Social Research

1   Paradigms of Social Research

This chapter illustrates the philosophical bases of the two basic approaches to social research which gave rise to the families of quantitative and qualitative techniques. We will begin with the concept of paradigm – that is, the perspective that inspires and directs a given science. Then we shall examine the historical roots and the guiding principles of the positivist and the interpretive paradigms. The chapter ends with a few reflections concerning currents trends in social research.

1.   KUHN AND THE PARADIGMS OF SCIENCES

The notion of 'paradigm' has ancient origins in the history of philosophical thought. It was utilized both by Plato (to mean 'model') and by Aristotle (to mean 'example'). In the social sciences its use has been inflated and confused by multiple and different meanings: these range from a synonym for theory to an internal subdivision of a theory, from a system of ideas of a pre-scientific nature to a school of thought, from an exemplary research procedure to the equivalent of

method. It seems useful therefore briefly to review the meaning given to the concept of the paradigm by the scholar who, in the 1960s, brought it once again to the attention of philosophers and sociologists of science. We are referring to Thomas Kuhn and his celebrated essay *The Structure of Scientific Revolutions* (1962).

Reflecting on the historical development of the sciences, Kuhn refuted the traditional understanding of the sciences as a cumulative and linear progression of new acquisitions. According to the traditional conception, single inventions and discoveries would be added to the previous body of knowledge in the same manner as bricks are placed one on top of another in the construction of a building. According to Kuhn, however, while this is the process of science in 'normal' times, there are also 'revolutionary' moments, in which the continuity with the past is broken and a new construction is begun, just as – to take up the building metaphor again – from time to time, an old brick building is blown up to make room for a structurally different one, for example a skyscraper made of glass and aluminium.

Kuhn illustrates his argument with a rich collection of examples from the natural

sciences (especially from physics). For instance, he cites the development of optical physics, which is currently interpreted in quantum terms; according to this view, light is made up of photons, which display some of the features of waves and some of the properties of particles. Kuhn points out that, before quantum theory was developed by Planck, Einstein and others, light was believed to be a transversal wave movement. This latter theory was developed at the beginning of the nineteenth century. Still earlier, in the seventeenth century, the dominant view was that of Newtonian optics, according to which light was made up of material corpuscles.

The shift from one theoretical perspective to another is so pervasive and has such radical consequences for the discipline concerned that Kuhn does not hesitate to use the term 'scientific revolution'. What changes in a given discipline after one of these revolutions? It produces 'a shift in the problems available for scientific scrutiny and in the standards by which the profession determined what it should count as an admissible problem or as a legitimate problem-solution' (1962: 6). A reorientation in the discipline occurs that consists of 'a displacement of the conceptual network through which scientists view the world' (1962: 102). This 'conceptual network' is what Kuhn calls a 'paradigm',

and it is this aspect of his theorising, rather than his analysis of the developmental process in science, that interests us here.

Without a paradigm a science lacks orientations and criteria of choice: all problems, all methods, all techniques are equally legitimate. By contrast, the paradigm constitutes a guide: 'Paradigms' – recalls Kuhn – 'provide scientists not only with a map but also with some of the directions essential for map-making. In learning a paradigm the scientist acquires theory, methods, and standards together, usually in an inextricable mixture' (1962: 109).

Kuhn defines *normal science* as those phases in a scientific discipline during which a given paradigm, amply agreed to by the scientific community, predominates. During this phase, as long as the operating paradigm is not replaced by another in a 'revolutionary' manner, a scientific discipline does indeed develop in that linear and cumulative way that has been attributed to the whole of scientific development. 'No part of the aim of normal science is to call forth new sort of phenomena … Instead, normal-scientific research is directed to the articulation of those phenomena and theories that the paradigm already supplies' (Kuhn, 1962: 24).

Numerous examples of scientific paradigms are to be found in the history of the

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BOX 1.1   PARADIGM

What does Thomas Kuhn mean by 'paradigm'? He means a theoretical perspective:

- accepted by the community of scientists of a given discipline
- founded on the previous acquisitions of that discipline
- that directs research through:

  o the specification and choice of what to study
  o the formulation of hypotheses to explain the phenomenon observed
  o the identification of the most suitable empirical research techniques.

natural sciences. Going back to our previous example, we can speak of corpuscular, wave, and quantum paradigms in optical physics. Likewise, as examples of alternative paradigms that have succeeded one another in time, we can quote Newtonian and Einsteinian mechanics, Ptolemaic and Copernican cosmology, and so on.

To what extent can we speak of paradigms in the social sciences? Kuhn notes that the paradigm is a characteristic feature of the 'mature' sciences. Before the corpuscular theory of light was introduced by Newton, no common paradigm existed among scientists in this sector; instead, various schools and sub-schools opposed and competed with one another, each with its own theory and point of view. Consequently, concludes Kuhn, 'The net result of their activity was something less than science' (1962: 13). In this perspective, because the social sciences lack a single paradigm broadly shared by the scientific community, they are in a pre-paradigmatic state, except perhaps for economics (according to Kuhn, 'economists agree on what economics is', while 'it remains an open question what parts of social science have yet acquired such paradigm at all' (1962: 14).

What has been said with regard to the social sciences also holds for sociology. Indeed, it is difficult to identify a paradigm that has been agreed upon, even for limited periods, by the community of sociologists. Nevertheless, there exists another interpretation of the thinking of Kuhn, which has been proposed in an attempt to apply his categories to sociology. This interpretation redefines the concept of the paradigm, maintaining all the elements of the original definition (theoretical perspective that defines the relevance of social phenomena, puts forward interpretative hypotheses and orients the techniques of empirical research) except one: that the paradigm is agreed upon by the members of the scientific community. This paves the way for the presence of multiple paradigms inside a given discipline; thus, instead of being a *pre-paradigmatic* discipline, sociology becomes a *multi-paradigmatic* one.

This is the interpretation of Friedrichs (1970) who, after highlighting the paradigm inspired by Parsons' structural-functionalism, sees in the Marxist dialectic approach the second paradigm of sociology, in which the concepts of system and consensus that are central to functionalism are replaced by that of conflict.

This interpretation of the concept of the paradigm in terms of an overall theoretical perspective which does not exclude other perspectives but rather is in open competition with them, is certainly the most widespread interpretation and corresponds to the current use of the term in the social sciences. Nevertheless, this less rigorous interpretation, which adapts Kuhn's original category to the status of the social sciences, must not be trivialized by equating a paradigm with a theory or a school of thought. Indeed, fundamental to the concept of the paradigm is its pretheoretical and, in the final analysis, metaphysical character of a 'guiding vision', 'a view of the world', which shapes and organizes both theoretical reflection and empirical research and, as such, precedes both.

In this interpretation, the concept of the paradigm seems useful in analysing the various basic frames of reference that have been put forward, and which are still being evaluated in the field of social research methodology.

2. THREE BASIC QUESTIONS

Having defined and circumscribed the concept of a paradigm and briefly discussed its application to the social sciences, we will now abandon the slippery terrain of the paradigms of *sociological theory* (one paradigm? two paradigms? a hundred paradigms?) for more solid ground: the methodology of *social research*. We will not, however, go deeply into the complex epistemological problems of how many and which philosophical frameworks guide empirical research in the social sciences. Instead, we will confine ourselves to a historical

review by briefly describing the fundamental perspectives that have been proposed and become accepted during the evolution of the discipline. Since this is a book on social research techniques, it seems natural and proper to begin by raising the question of *the founding paradigms of social research*, from which the first operative procedures emerged, and which subsequently guided the development of empirical research. Indeed, as has been said, one of the functions of a paradigm is to establish acceptable research methods and techniques in a discipline. As Hughes writes:

> Every research tool or procedure is inextricably embedded in commitments to particular versions of the world and ways of knowing that world made by researchers using them. To use a questionnaire, an attitude scale of behavior, take the role of a participant observer, select a random sample … is to be involved in conceptions of the world which allow these instruments to be used for the purposes conceived. No technique or method of investigation … is self validating: its effectiveness, its very status as a research instrument … is dependent, ultimately, on philosophical justification. (Hughes, 1980: 13)

Within the philosophical perspectives that generated and have accompanied the growth of social research, can we identify visions that are sufficiently general, cohesive and operative to be characterized as paradigms? It seems so. Indeed, there is broad agreement among scholars that two general frames of reference have *historically oriented* social research since its inception: the 'empiricist' vision and the 'humanist' vision. Various labels have been used, including 'objectivism' and 'subjectivism'; here, we will utilize the canonical term 'positivism' and the less consolidated 'interpretivism'. As we will soon see, these are two organic and strongly opposed visions of social reality and how it should be understood; and they have generated two coherent and highly differentiated blocks of research techniques. Before describing

these techniques, however, it is essential to explore their philosophical origins, since only by doing so can we achieve a full understanding of them.

In order to adequately compare the two above-mentioned paradigms, we will attempt to understand how they respond to the fundamental interrogatives facing social research (and scientific research in general). These can be traced back to three basic questions: Does (social) reality exist? Is it knowable? How can we acquire knowledge about it? In other words: *Essence, Knowledge and Method*.[1]

The ontological question[2]　This is the question of 'what'. It regards the nature and form of social reality. It asks if the world of social phenomena is a real and objective world endowed with an autonomous existence outside the human mind and independent from the interpretation given to it by the subject. It asks, therefore, if social phenomena are 'things in their own right' or 'representations of things'. The problem is linked to the more general philosophical question of the existence of things and of the external world. Indeed, the existence of an idea in the mind tells us nothing about the existence of the object in reality, just as a painting of a unicorn does not prove the existence of unicorns.

The epistemological question[3]　This is the question of the relationship between the 'who' and the 'what' (and the outcome of this relationship). It regards the knowability of social reality and, above all, focuses on the relationship between the observer and the reality observed. Clearly, the answer to this question depends on the answer to the previous ontological question. If the social world exists in its own right, independently from human action, the aspiration to reach it and understand it in a detached, objective way, without fear of altering it during the course of the cognitive process, will be legitimate. Closely connected with the answer given to the epistemological question are the forms knowledge can take: these range from deterministic 'natural laws' dominated by the

categories of cause and effect, to less cogent (probabilistic) laws, to various kinds of generalizations (e.g. Weberian ideal types), to the exclusion of generalizations (only specific and contingent knowledge being admissible).

The methodological question[4] This is the question of 'how' (how can social reality be studied?). It therefore regards the technical instruments of the cognitive process. Here, too, the answers depend closely on the answers to the previous questions. A vision of social reality as an external object that is not influenced by the cognitive research procedures of the scientist will accept manipulative techniques (e.g. experimentation, the control of variables, etc.) more readily than a perspective that underlines the existence of interactive processes between the scholar and the object studied.

The three questions are therefore interrelated, not only because the answers to each are greatly influenced by the answers to the other two, but also because it is sometimes difficult to distinguish the boundaries between them (though, for the purpose of our exposition, we will try to do so). Indeed, it is difficult to separate conceptions of the nature of social reality from reflections on whether (and how) it may be understood and, in turn, to separate these from the techniques that can be used to understand it. Then again, these interrelations are implicit in the very definition of the scientific paradigm which, as we have seen, is both a theoretical perspective and a guide to research procedures.

3. POSITIVISM

Table 1.1 shows a synopsis of the different paradigms with regard to the fundamental questions introduced above. First of all, it will be noted that two versions of positivism are presented: the original nineteenth-century version, to which even the most tenacious empiricists no longer subscribe, and its twentieth-century reformulation, which was

constructed to address the manifest limits of the original version. The original positivist paradigm is presented both for historical reasons – since it was the vision that accompanied the birth of the social sciences and, in particular, the birth of sociology – and because the character of the other two paradigms can be better understood by examining the criticisms levelled against it.

Sociology was born under the auspices of positivist thought. In the middle of the nineteenth century, when the investigation of social phenomena was evolving into a subject of scientific study, the paradigm of the natural sciences reigned supreme. Inevitably, the new discipline took this paradigm as its model. Indeed, the founders of the discipline, Auguste Comte and Herbert Spencer among them, shared a naïve faith in the methods of natural science. The positivist paradigm is no more than this: *the study of social reality utilizing the conceptual framework, the techniques of observation and measurement, the instruments of mathematical analysis, and the procedures of inference of the natural sciences.*

Let us look more closely at the distinctive elements of this definition. The conceptual framework: the categories of 'natural law', cause and effect, empirical verification, explanation, etc. The techniques of observation and measurement: the use of quantitative variables, even for qualitative phenomena; measurement procedures applied to ideological orientation, mental abilities and psychological states (attitude measurement, intelligence tests, etc.) Mathematical analysis: the use of statistics, mathematical models, etc. The procedures of inference: the inductive process, whereby hypotheses regarding the unknown are formed on the basis of what is known and specific observations give rise to general laws; the use of theory to predict outcomes; extrapolation from the sample to the whole population.

According to Comte, the prophet of nineteenth-century sociological positivism, the acquisition of the positivist viewpoint constituted, in all sciences, the end-point of a trend that had previously passed through theological and metaphysical stages. Such development

Table 1.1 *Characteristics of the basic paradigms of social research*

	Positivism	**Postpositivism**	**Interpretivism**
Ontology	Naïve realism: social reality is 'real' and knowable (as if it were a 'thing')	Critical realism: social reality is 'real' but knowable only in an imperfect and probabilistic manner	Constructivism: the knowable world is that of meanings attributed by individuals. Relativism (multiple realities): these constructed realities vary in form and content among individuals, groups, and cultures
Epistemology	Dualism-objectivity	Modified dualism-objectivity	Non-dualism; non-objectivity. Researcher and object of study are not separate, but interdependent
	True results	Results probabilistically true	
	Experimental science in search of laws	Experimental science in search of laws. Multiplicity of theories for the same fact	Interpretive science in search of meaning
	Goal: explanation Generalizations: 'natural' immutable laws	Goal: explanation Generalizations: provisional laws, open to revision	Goal: comprehension Generalizations: opportunity structures; ideal types
Methodology	Experimental-manipulative	Modified experimental-manipulative	Empathetic interaction between scholar and object studied
	Observation Observer-observed detachment	Observation Observer-observed detachment	Interpretation Observer-observed interaction
	Mostly induction	Mostly deduction (disproof of hypotheses)	Inuction (knowledge emerges from the reality studied)
	Quantitative techniques	Quantitative techniques with some qualitative	Qualitative techniques.
	Analysis 'by variables'	Analysis 'by variables'	Analysis 'by cases'

Source: Partially adapted from Guba and Lincoln (1994: 109).

did not occur at the same time in all disciplines; it first took place in the inorganic sciences, such as astronomy, physics and chemistry, followed by the organic sciences, such as biology. It was therefore natural, in the progression from simple to complex material, that the positivist approach should be applied to the most complex material of all:

society. Thus, a new science would emerge: sociology, the positive science of society. According to this view, science is universal, and scientific method is unique. The social sciences do not differ from the natural sciences, and the positivist way of thinking that brought such great advances in the fields of astronomy, physics and biology is destined

to triumph even when its focus shifts from natural objects to social objects, such as religion, politics and work.

The first attempt to apply this overall theoretical perspective to empirical research was made by Durkheim. Indeed, as Durkheim pointed out:

> Up to now sociology has dealt more or less exclusively not with things, but with concepts. It is true that Comte proclaimed that social phenomena are natural facts subject to natural laws. In so doing he implicitly recognized there are only things. Yet when, leaving behind these general philosophical statements, he tries to apply his principle and deduce from it the science it contained, it is ideas which he too takes as the object of study. (Durkheim, 1895: 63)

By contrast, Durkheim actually tried to translate the positivist principles of thought into empirical procedures; he was the first 'social scientist', the first true positivist sociologist. His empirical procedure is founded on the theory of 'social fact'. In his *Rules of Sociological Method*, he states at the outset that 'the first and most basic rule is to *consider social facts as things*' (1895: 60). For Durkheim, social facts are:

> Ways of acting, thinking and feeling which possess the remarkable property of existing outside of the consciousness of the individual … When I perform the duties as a … husband or a citizen … I carry out the commitments I have entered into, I fulfil obligations which are defined in by law and custom and which are external to myself and my actions. Even when they conform to my sentiments and when I feel their reality within me, that reality does not cease to be objective, for it is not I who have prescribed these duties; I have received them through education … Similarly the believer has discovered from birth, ready fashioned, the beliefs and practices of his religious life; if they existed before he did, it follows that they exist outside him … (Likewise, for as far as) the system of signs that I employ to express my thoughts, the monetary system I use to pay my debts … the practices I follow

in my profession, etc., all function independently from the use I make of them. (Durkheim, 1895: 50–51)

These social facts, even if they are not material entities, nonetheless have the same properties as the 'things' of the natural world, and from this derive two consequences. On the one hand, social facts are not subject to human will; they are things that offer resistance to human intervention; they condition and limit it. On the other hand, just like the phenomena of the natural world, they function according to their own rules. They possess a deterministic structure that can be discovered through scientific research. Thus, notwithstanding their different objects, the natural world and the social world share a substantial *methodological unity* (they can both be studied through the same investigative logic and the same method, hence the name 'social physics' attributed to the study of society).

The first assertion is, therefore, that social reality exists outside the individual. The second is that this social reality is objectively understandable, and the third that it can be studied by means of the same methods as the natural sciences. As Durkheim states, 'Our rule implies no metaphysical conception, no speculation about the innermost depth of being. What it demands is that the sociologist should assume the state of mind of physicists, chemists or in physiologists, when they venture into an as yet unexplored area of their scientific field' (1895: 37). And again: 'Our main objective is to extend the scope of scientific rationalism to cover human behaviour … What has been termed our positivism is merely a consequence of this rationalism.' (Durkheim, 1895: 33)

Let us now look at how this understanding is acquired. Positivism is fundamentally inductive, where *induction* means 'moving from the particular to the general'[5] the process by which generalizations or universal laws are derived from empirical observation, from the identification of regularities and recurrences in the fraction of reality that is empirically studied. Implicit in inductive procedures is

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BOX 1.2   ANSWERS GIVEN BY POSITIVISM TO THE THREE BASIC QUESTIONS

Ontology: naïve realism   This position stems from everything that has been said regarding the 'codification' of social reality, and can be succinctly expressed by two propositions: (a) there exists an objective social reality that is external to human beings, whether they are studying or performing social acts; (b) this reality is knowable in its true essence.[6]

Epistemology: dualist and objectivist; natural law   The assertion that knowledge is attainable is based on two assumptions: (a) that the scholar and the object studied are independent entities (dualism); (b) that the scholar can study the object without influencing it or being influenced by it (objectivity). Investigation is carried out as if through a 'one-way mirror'. Knowledge assumes the form of 'laws' based on the categories of cause and effect. These laws are part of an external reality that is independent of the observer ('natural laws'); the scientist's task is to 'discover them'. There is no fear that the researcher's values might distort her reading of social reality, or vice versa. This position, which excludes values in favour of facts, necessarily derives from the vision of social fact as *given* and unmodifiable.

Methodology: experimental and manipulative   The methods and techniques of positivist research – like its basic conception – draw heavily on the classical empiricist approach to the natural sciences. Two features of the experimental method are taken up: (a) its use of inductive procedures, whereby general formulations are derived from particular observations; and (b) its mathematical formulation which, though not always attainable, is the final goal of the positivist scientist. The ideal technique remains – even though its applicability to social reality is limited – that of experiment, founded on manipulation and control of the variables involved and the detachment of the observer from what is observed.

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the assumption of order and uniformity in nature, that universal organizing principles exist. The task of the scientist is, of course, to discover these. This vision has long dominated the natural sciences and has even been identified with the scientific method. In assuming that social life, like all other phenomena, is subject to immutable natural laws, the positivist conception of society fully adopts this vision. According to Durkheim, the social scientist is an explorer 'Conscious that he is penetrating into the unknown. He must feel himself in the presence of facts governed by laws as unsuspected as those of life before the science of biology was evolved. He must hold himself ready to make discoveries which will surprise and disconcert him.' (1895: 37)

Finally, with regard to the 'form' of this knowledge, there is no doubt that these laws of nature will eventually be identified, formulated, demonstrated and 'proved'; in their most complete form, they are laws that link cause and effect:

> Since the law of causality has been verified in the other domains of nature and has progressively extended its authority from the physical and chemical world to the biological world, and from the latter to the psychological world, one may justifiably grant that it is likewise true for the social world. Today it is possible to add that the research undertaken on the basis of this postulate tends to confirm this. (Durkheim, 1895: 159).

In the positivist paradigm, the elements that we have called 'naïve faith' in the methods of the natural sciences are all too evident. Underlying the various manifestations of positivism there is always, in fact, a sort of enthusiasm for 'positive' scientific knowledge, whereby the 'scientific method' is viewed as the only valid means of achieving true knowledge in all fields of human endeavour.

4. NEOPOSITIVISM AND POSTPOSITIVISM

Throughout the twentieth century, the positivist approach was continually revised and adjusted in attempts to overcome its intrinsic limits. The reassuring clarity and linearity of nineteenth-century positivism gave way to a twentieth-century version that was much more complex and detailed and, in some respects, contradictory and unclear. However, some basic assumptions were maintained, such as ontological realism ('the world exists independently of our awareness of it') and the pre-eminent role of empirical observation in understanding this world. We will not enter into the details of this development, or the various phases of its history; rather, we will mention only 'neopositivism', the term used to denote the approach that dominated in the period from the 1930s to the 1960s, and 'postpositivism', which is used to identify its further evolution from the end of the 1960s onwards.[7] We will therefore outline the principal shifts in perspective that occurred – over time and with differing degrees of intensity – with respect to the positivist orthodoxy presented in the previous section.

One of the first revisions of nineteenth-century positivism was made by the school known as *logical positivism*, which gave rise to neopositivism. The movement formed around the discussions of a group of scholars of different disciplinary origins who, in the second half of the 1920s, constituted the so-called 'Vienna Circle'. Among its principal exponents were the philosophers Schlick and Carnap, the mathematician Hahn, the economist Neurath, and the physicist Frank. A few years later, a group of like-minded thinkers (Reichenbach, Herzberg, Lewin, Hempel and others) was formed in Berlin. In the wake of Nazi persecution, some notable representatives of this school emigrated to the United States, where the affinity between their views and American pragmatism contributed considerably to the spread of neopositivist thought. This influenced other disciplines, including sociology, which had been developing a very rich tradition of empirical research in the United States throughout the 1930s.

The new point of view assigned a central role to the criticism of science and redefined the task of philosophy, which was to abandon its broad theorization in order to undertake critical analysis of the theories elaborated within single disciplines (Schlick hoped to see a time when there would be no more books on philosophy, but all books would be written in a 'philosophical way'). This led to the rejection of the 'great questions' and of all metaphysical issues that could not be demonstrated ('pseudo-problems'), and which were therefore branded as meaningless. Instead, the utmost attention was devoted to methodological problems in every science, to the logical analysis of their language and their

theoretical output, to the criticism of their assumptions, and – not least – to the procedures by which conceptual elaboration could be empirically verified.

From what has been said, it is evident that epistemological questions are central to this movement of thought, and the influence it had on the methodology of the sciences, including the social sciences, is comprehensible. It must be remembered that one of the postulates of neopositivism is the widespread conviction that the meaning of a statement derives from its empirical verifiability. The formula 'the meaning of a proposition is the method of its verification' neatly summarizes this point of view.

What did this conception of science and scientific knowledge mean for social research? What were the repercussions on operational procedures and research techniques? The main consequence was the development of a completely new way of speaking about social reality, using a language borrowed from mathematics and statistics. Paul F. Lazarsfeld, the principal exponent of neopositivist empirical methodology in sociology, called this the *language of variables*. Every social object, beginning with the individual, was analytically defined on the basis of a range of attributes and properties ('variables'), and was reduced to these; and social phenomena were analysed in terms of relationships among variables. The variable, with its neutral character and objectivity, thus became the protagonist of social analysis; there was no longer any need to recompose the original object or individual as a whole again. In this way social research became 'depersonalized', and the language of variables, with the measurement of concepts, the distinction between dependent and independent variables, the quantification of their interrelations and the formulation of causal models, provided a formal instrument that allowed social scientists to go beyond 'the notoriously vague everyday language (in a process of) clarification and purification of discourse (that is)

very important for the social scientist; … we must sort out this knowledge and organize it in some manageable form; we must reformulate common sense statements so that they can be subjected to empirical test' (Lazarsfeld and Rosenberg, 1955: 2,11). In this way, all social phenomena could be surveyed, measured, correlated, elaborated and formalized and the theories either confirmed or disproved in an objective manner without ambiguity.

But nothing would ever be the same again. The twentieth-century conception of science was by now far removed from the solid certainties of nineteenth-century positivism, in which a 'mechanical' conception of reality dominated, together with a reassuring belief in immutable laws and faith in the irresistible progress of science. This new philosophic-scientific atmosphere arose first of all out of developments in the natural sciences and, in particular, in physics, during the early years of the new century. Quantum mechanics, Einstein's special and general theories of relativity, Heisenberg's principle of uncertainty – to cite only a few of the cornerstones of the new physics – introduced elements of probability and uncertainty to crucial areas such as the concept of causal law, the objectivity of the external world, and even the classical categories of space and time.

Theories were no longer expressed in terms of deterministic laws, but of probability. The crucial moment in this change was the shift from classical physics (Newtonian approach) to quantum physics. According to quantum mechanics, there are processes in elementary physics – so-called quantum jumps – that are not analyzable in terms of traditional causal mechanisms, but are absolutely unpredictable single facts governed by probabilistic laws. Scientific theories would no longer explain social phenomena through models characterized by logical necessity, and deterministic laws were replaced by probabilistic laws that implied the existence of haphazard elements and the presence of disturbances and

fluctuations. If this notion of probabilistic indeterminism was valid for the natural world, then it would be even more valid for the social world, the world of language, thought, and human interaction.

An element introduced into scientific methodology by this evolution of positivism is the concept of falsification, which was taken up as a criterion for the empirical validation of a theory or a theoretical hypothesis. This states that a theory cannot be positively confirmed by data, and that empirical validation can take place only in the negative, through the 'non-confutation' of the theory by the data – that is to say, by demonstrating that the data do not contradict the hypothesis and, therefore, that the theory and the data are merely compatible. Positive proof is impossible, since the same data could be compatible with other theoretical hypotheses.

This position gives rise to a sense of the provisional nature of any theoretical statement, since it is *never definitively proven* and always exposed to the axe of possible disproof. As Popper writes, the idol of certainty crumbles: 'The old scientific ideal of *episteme* – of absolutely certain, demonstrable knowledge – has proved to be an idol. The demand for scientific objectivity makes it inevitable that every scientific statement must remain *tentative for ever*' (1934, English translation 1992: 280). Man cannot know but only conjecture. This point is also illustrated by a statement attributed to Einstein: 'to the degree that our propositions are certain, they say nothing about reality; to the degree that they say something, they are uncertain'.

Lastly, and this brings us to the most recent development of the postpositivist approach, it has become a widespread conviction that empirical observation, the very perception of reality, is not an objective picture, but is *theory-laden*,[8] in the sense that even the simple recording of reality depends on the researcher's frame of mind, and on social and cultural conditioning. In other words, despite the assumption that reality exists independently from the cognitive and perceptive activity of humans, the act of understanding remains conditioned by the social circumstances and the theoretical framework in which it takes place. The thesis of the theory-laden nature of empirical observations – that is to say, the claim that no clear distinction exists between theoretical concepts and observed data – brings down the last positivist certainty: that of the objectivity of the data collected and of the neutrality and inter-subjectivity of the language of observation.

It must be said, nonetheless, that this process of moving away from the original positivist orthodoxy, first through neopositivism and then postpositivism, did not mean that the empiricist spirit was abandoned. Modern positivism, when its states that laws (both natural and social) are probabilistic and open to revision, when it affirms the conjectural nature of scientific knowledge and in the end, the theoretical conditioning of the observation itself, has come a long way from the naïve interpretation of the deterministic laws of the original positivism. It has lost its certainties, but does not repudiate its empiricist foundations. The new positivism redefines the initial presuppositions and the objectives of social research; but the empirical approach, though much amended and reinterpreted, still utilizes the original observational language, which was founded on the cornerstones of operationalization, quantification and generalization. And, since we are dealing with research techniques, it is this point that interests us here. The operational procedures, the ways of collecting data, the measurement operations and the statistical analyses have not fundamentally changed. Conclusions are more cautious, but the (quantitative) techniques utilized in reaching them are still the same.

At this point, we will conclude our brief excursus on the developments of the positivist paradigm by filling out the column in Table 1.1 regarding the positions of modern postpositivism on the three fundamental questions.

BOX 1.3 ANSWERS GIVEN BY NEO- AND POST-POSITIVISM TO THE THREE BASIC QUESTIONS

Ontology: critical realism   As in the case of positivism, the existence of a reality external to human beings is assumed; but – contrary to what is upheld in the positivist paradigm – this reality is only imperfectly knowable, both because of the inevitable imperfection of human knowledge and because of the very nature of its laws, which are probabilistic. This point of view has also been called 'critical realism': realism, in that it assumes that cause-effect relationships exist in reality outside the human mind; critical, in that it underlines the view that the scientist must always be prepared to question every scientific acquisition.

Epistemology: modified dualism-objectivity; middle range, probabilistic and conjectural laws   With regard to the question of the relationship between the scholar and the object studied, dualism, in the sense of separation and non-interference between the two realities, is no longer sustained. It is recognized that the subject conducting the study may exert a disturbing effect on the object of study, and that a reaction effect may ensue. The objectivity of knowledge remains the ideal goal and the reference criterion, but this can only be achieved approximately. In the cognitive process, deductive procedures are emphasized, through the mechanism of falsifying hypotheses. The intent remains that of formulating generalizations in the form of laws, even if limited in scope, probabilistic and provisional.

Methodology: modified experimental-manipulative   The operational phases of research remain fundamentally inspired by a substantial detachment between the researcher and the object studied (experiments, manipulation of variables, quantitative interviews, statistical analysis, etc.). Nevertheless, qualitative methods are admitted. The scientific community is important as it critically analyses new hypotheses, and can confirm results by means of new experiments (repeated results are more likely to be true).

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5.   INTERPRETIVISM

5.1   Beginnings

Two versions of the positivist paradigm have been presented: the initial nineteenth-century perspective and its critical revision, carried out in the 1930s and again in the 1970s. The paradigm presented in this section underwent an almost symmetrical development. If we wished to stress the analogy between the two paradigms, we would introduce the initial vision of 'interpretive sociology', which owed both its methodological elaboration and its first attempts at empirical research, at the beginning of the twentieth century, to Max Weber (his role was symmetrical to that played by Durkheim in positivism). This

would then be followed by the 1960s reinterpretation of the original approach, above all in American sociology. This, in turn, gave rise to the various lines of thought found in symbolic interactionism, phenomenological sociology and ethnomethodology, which, in spite of their differences, are unified by a common emphasis on individual interaction.

However, we prefer not to proceed in this manner, since there is no discontinuity between the original Weberian vision and subsequent developments, as there was in the shift from nineteenth to twentieth-century positivism. Instead, we will put these two historical blocks of approaches to social research together under the same heading and utilize the general term 'interpretivism' for all the theoretical visions in which reality is not simply to be observed, but rather 'interpreted'.

How did this new vision of social science arise? While positivism originated in nineteenth-century French and English cultures (we need mention only Auguste Comte, John Stuart Mill and Herbert Spencer) and owed its sociological development chiefly to the French culture (we are, of course, referring to Durkheim), its most radical and organic criticism emerged in the context of German historicism.

In general, the German philosopher Wilhelm Dilthey is credited with the first critical attack on Comtean scientism in the name of the autonomy of the human sciences – in the sense that they are non-homologous to the natural sciences. In his *Introduction to the Human Sciences* (1883), Dilthey draws a famous distinction between 'sciences of nature' and 'sciences of the spirit', basing the difference between them precisely on the relationship that is established between the researcher and the reality studied. Indeed, in the natural sciences the object studied consists of a reality that is external to the researcher and remains so during the course of the study; thus, knowledge takes the form of *explanation* (cause-effect laws, etc.). In the human sciences, by contrast, since there is no such detachment between the observer and what is observed, knowledge can be obtained only through a totally different process, that of *comprehension* (*Verstehen*). According to Dilthey, we *explain* nature, whereas we *understand* the life of the mind.

5.2 Max Weber: objectivity and orientation towards individuality

But it is only with Max Weber that this new perspective enters fully into the field of sociology. Indeed, Dilthey had spoken generically of 'sciences of the spirit', among which he singled out historiography. Weber brought the concept of *Verstehen* into sociology, and revised Dilthey's original position. While adopting the principle of *Verstehen*, Weber did not want to fall into subjectivist individualism or psychologism; he wanted to preserve the objectivity of social science both in terms of its being independent of value judgements, and in terms of the possibility of formulating statements of a general nature, even when an 'orientation towards individuality' is adopted.

Regarding the first point, throughout his life Weber reiterated the need for the historical and social sciences to be free from any value judgement whatsoever. However, his awareness of the problem (sharpened by his intense involvement in politics and, later, by the ethical questions arising from the imminent threat of world war) exceeded his ability to provide an unequivocal answer. Nonetheless, he never abandoned his conviction that the historical and social sciences must be *value-free*. 'The distinction between knowledge and judgement – that is to say, between fulfilling the scientific responsibility of seeing factual reality and the fulfilling the practical responsibility of defending one's own ideals – this is the principle to which we must adhere most firmly' (Weber, 1904).

While value judgements must be kept out of the historical and social sciences, values will, according to Weber, inevitably influence the choice of the objects of study, thus taking on a guiding role for the researcher. Even if they play no role in forming judgements, values are still involved in what could be called a 'selective function'; they serve to decide upon a field of research in which the study

proceeds in an objective manner in order to reach causal explanations of phenomena.

Freedom from values was therefore the first condition for objectivity in the social sciences. The terms of the second condition, understood as the ability to produce statements which would be to some extent *general*, remained to be defined. According to Weber, the social sciences are to be distinguished from the natural sciences not on the basis of their object (as in Dilthey's contraposition of human sciences with the sciences of the spirit), nor because their goal is to study social phenomena in their individuality, since the social sciences also aim at formulating generalizations; rather, the distinction lies in their 'orientation towards individuality'.

This orientation is primarily one of method. For Weber the method is that of '*Verstehen*'. However, in defining what he means by this, Weber rejects any form of psychologism. *Verstehen* is neither psychological perspicacity nor sudden illumination; it is the rational comprehension of the motivations underlying behaviour. It is not intuition, but 'interpretation': understanding the purpose of the action and grasping the intentional element in human behaviour. The ability to identify with others, which is inherent in *Verstehen*, is also channelled towards rational interpretation: putting oneself into the other person's position so as to 'understand'. This involves understanding the motivations of actions, the subjective meaning that individuals attribute to their own behaviour: because every action, even the most apparently illogical, has its own inner rationality, its own interior 'sense'. As Boudon writes:

> For Weber, to understand an individual action is to acquire sufficient means of obtaining information to understand the motives behind it. In his view, observers *understand* the action of an observed subject as soon as they can conclude that in the same situation it is quite probable that they too would act in the same way. … As can be seen, *understanding* in the Weberian sense implies the ability of the observer *to put him or herself in the actor's place*, but does not in any way imply that actor's

subjectivity is immediately transparent. … Indeed, the Weberian notion of *comprehension* designates a procedure which is very close to what textbooks of logic call 'ampliative induction' and which consists of reconstructing motives not directly accessible by cross-checking facts. (Boudon, 1984: 31, 51)

How can this orientation towards individuality yield objectivity? If we start with the individual and the subjective sense of his action, how can we attain objective knowledge that has general characteristics? Here we are faced with the second condition for objectivity in the historical and social sciences.

The answer is provided by the Weberian concept of the *ideal type*. For Weber, ideal types are forms of social action that are seen to recur in human behaviour, the typical uniformity of behaviour constituted through an abstractive process which, after isolating some elements within the multiplicity of empirical fact, proceeds to coordinate them into a coherent picture that is free from contradiction. The ideal type, then, is *an abstraction that comes from empirically observed regularities*.

The Weberian ideal type impinges upon all fields of social science and can be found at different levels of generality, ranging from the single individual to society as a whole. Weber exemplified ideal types with reference to social structures (for example capitalism), institutions (e.g. bureaucracy, church and sect, forms of power) and individual behaviour (e.g. rational behaviour).

These 'ideal types', writes Weber, are not to be 'confused with reality … they were constructed in an ideal heuristic manner' (Weber, 1922a); they are 'ideal' in that they are mental constructs; they carry out a 'heuristic' function in that they direct knowledge. They are empty shells, 'fictions lacking life' as Schutz has described them; they have no concrete counterpart in reality, but are theoretical models that help the researcher to interpret reality. For example, probably none of the three ideal types of power Weber distinguishes – charismatic power, traditional power, and rational-legal power – has ever

existed in its pure form. The ideal type is a clear, coherent, rational, unambiguous construct. Reality, however, is much more complex, contradictory and disorderly. No form of charismatic power that has ever existed has been wholly and exclusively charismatic; though globally identifiable with this Weberian 'type', the actual form will doubtless contain elements of the other two forms of power.

The regularities that the researcher pursues and identifies in order to interpret social reality are not 'laws' in the positivist sense. For Weber, 'the number and type of causes that have determined any individual event whatever, are in fact, always *infinite* … and the causal question, when treating the *individuality* of a phenomenon is not a question of laws but rather a question of concrete causal *connections* … the possibility of a selection within the infinity of determining elements' (Weber 1922b). Instead of laws, then, we have causal connections, or rather, to use Boudon's expressions, *mere possibilities or opportunity structures* ('If A, then most frequently B', Boudon, 1984: 75). It is therefore impossible to establish the factors that determine a certain social event or individual behaviour, but one can trace the conditions that make it possible.

Thus, in contraposition to the causal laws of the positivist approach, which are *general and deterministic* (though less so in the more probabilistic neopositivist interpretation), we have statements and connections characterized by *specificity* and *probability*.

5.3 Further developments
Weber has been discussed at some length because the work of the great German sociologist anticipated practically all the themes that would be subsequently developed in the rich vein of sociological theory and research that gave rise to approaches such as phenomenological sociology (Husserl and Schutz), symbolic interactionism (Mead and Blumer) and ethnomethodology (Garfinkel and Cicourel), which became established in American sociology from the 1960s onwards. All these perspectives share fundamental characteristics of the Weberian approach: a strong anti-deterministic conviction; opposition to all philosophies of history and all forms of evolutionism; the fundamental 'ontological' difference between natural sciences and social sciences, and the irreducibility of the latter to the former's methods of research; and the criticism of any attempt to explain human action by starting from social systems and the conditioning factors within them. Finally, all of these approaches share – this time in positive terms – a strong conviction that 'individual action endowed with meaning' must be seen as the core of every social phenomenon and of the sociologist's work.

Weber, however, did not push his methodological approach to extreme consequences. While he elaborated these concepts in his methodological writings, in his theoretical reflections and empirical research he constantly operated on a macrosociological level, adopting the perspective of comparative history, in an effort to understand macrostructural phenomena such as the economy, the state, power, religion, and the bureaucracy. By contrast, the movement that arose in the United States in the 1960s developed the Weberian perspective in its natural direction, that is, in a 'micro' perspective. If society is built on the interpretations of individuals, and if it is their interaction that creates structures, then it is the interaction of individuals that one must study in order to understand society. This conviction opened up a completely new area of sociological research, the study of everyday life, which had formerly been disregarded as non-scientific.

It is clear that the interpretivist paradigm differs radically from the positivist frame of reference. The 'subjectivist' view is first of all a reaction to the 'objectivist' positivist position. By treating social reality and human action as something that could be studied objectively, the positivist approach overlooked the individual dimension: all those aspects that distinguish the world of human beings from the world of things. The very elements that disturbed the 'scientific'

BOX 1.4 ANSWERS GIVEN BY INTERPRETIVISM TO THE THREE BASIC QUESTIONS

Ontology: constructivism and relativism (multiple realities)   'Constructivism': the knowable world is that of the meanings attributed by individuals. The radical constructivist position virtually excludes the existence of an objective world (each individual produces his own reality). The moderate position does not ask whether a reality external to individual constructions exists, since it claims that only the latter can be known. 'Relativism': these meanings, or mental constructions, vary among individuals; and even when they are not strictly individual in that they are shared by the individuals within a group, they vary among cultures. A universal social reality valid for all persons, an absolute reality, does not exist; rather, there are multiple realities in that there are multiple and different perspectives from which people perceive and interpret social facts.

Epistemology: non-dualism and non-objectivity; ideal types, possibilities, opportunity structures   The separation between the researcher and the object of study tends to disappear, just like that between ontology and epistemology. In contrast to the positivist vision, social research is defined as 'not an experimental science in search of law, but an interpretive one in search of meaning' (Geertz, 1973: 5), in which the central categories are those of value, meaning and purpose. In pursuing its objective, which is to understand individual behaviour, social science can utilize abstractions and generalizations: ideal types and possibilities or opportunity structures.

Methodology: empathetic interaction between the researcher and the object of study   The interaction between the researcher and the object of study during the empirical phase of research is no longer judged negatively but constitutes, instead, the basis of the cognitive process. If the aim is to understand the meanings that subjects attribute to their own actions, the research techniques cannot be anything but qualitative and subjective, meaning that they will vary from case to case depending on the form taken by the interaction between the researcher and the object studied. Knowledge is obtained through a process of induction; it is 'discovered in reality' by the researcher who approaches it without prejudices or preconceived theories.

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research of the positivist approach and were therefore excluded – individual, motivations and intentions, values, free will, in short, the subjective dimension that cannot be perceived by quantitative tools – become the primary object of interpretive research. It is on this fundamental difference between the objects studied that the interpretive point of view bases its alleged superiority over the positivist approach. The convinced supporter

of the interpretive paradigm affirms not only the autonomy and diversity of the historical and social sciences from the natural sciences, but also their superiority, since only an approach that adopts the principle of *Verstehen* can achieve that understanding from the inside which is the basis of the knowledge of behaviour and of the social world.

These fundamental differences inevitably imply different techniques and research procedures. And it is this aspect that most interests us here. Indeed, if the essence of human life differs from that of the natural world, then it should be studied by means of different methods from those of the positivist approach. The subjectivist position cannot adopt 'the language of variables'. It cannot adopt it in the phase of empirical observation on account of the centrality of intentional and subjective components which, by definition, escape objective quantification and can be seized only through empathy. It cannot adopt it during the phase of data analysis because it cannot imagine analysing human behaviour in terms of the interaction of separate components (variables), as the human being is a whole that cannot be reduced to the sum of its parts. The subjectivist position has therefore developed its own research procedures, its own observation techniques and its own ways of analysing empirical reality, which form the body of so-called 'qualitative research'. This will be discussed in greater detail later. For now, we will conclude our presentation of the interpretive paradigm by summarizing this approach according to the scheme shown in Table 1.1.

6.   A FINAL NOTE: RADICALIZATION, CRITICISM AND NEW TENDENCIES

In the previous sections we have described – with reference to their fundamental concepts and their founding fathers – the two paradigms which have guided social research and shaped its strategies and techniques since its inception. We will now mention the criticisms levelled at these two approaches and a few instances of their radicalization.

For what concerns the positivist paradigm, we have seen that great attention was focused, especially in the period of neopositivism, on formulating and developing empirical procedures. The radicalization of this trend gave rise to a sort of anti-speculative empiricism in which 'the method', and subsequently 'the data', reigned supreme; the task of the social scientist was no longer to formulate theories and then to test them empirically, but to collect and describe data under the naïve illusion that 'the data speak for themselves'.

This was a process of progressive reduction (hence the accusation of 'reductionism') that went through various phases. First, the boundaries of theoretical exploration were shrunk; questions of verification, or confirmation of hypotheses (*ars probandi*), were stressed at the expense of discovery (*ars inveniendi*). Subsequently, attention was shifted from the content to the method. This emphasis on empirical validation meant that questions which could not be translated immediately and simply into empirically verifiable procedures were excluded from theoretical considerations. Theoretical complexity was therefore gradually reduced to banality. Finally, attention was shifted from the method to the data, from the operationalization of concepts to the practical problems of collection and analysis of data (perhaps even statistically sophisticated) – data which by now were bereft of theoretical and methodological background. As Luciano Gallino points out, 'The immediate results of the research were what the critics of sociological neopositivism might have expected: a huge mass of data, meticulously recorded, measured and classified, but uncoordinated, lacking significant connections, and unable to yield adequate knowledge of the object to which they nominally refer' (Gallino, 1978: 457).

Interpretivism was no less exposed to criticism. It was not so much Weber's original model as its subsequent interpretations that came under fire; as we have seen, these took to the extreme the original concept of 'orientation towards the individual'. Weber himself strove to go beyond subjectivity. He did not rule out the possibility of reaching forms of cognitive generalization (ideal types); moreover, a considerable number of his methodological treatise deal with his attempt to reconcile causality and comprehension. In addition, although he started out by focusing on the individual, he did not neglect the great systemic issues or the institutional dimension of society.

By contrast, the new schools of sociological thought that developed from the 1960s onwards accentuated the subjective character of Weber's original model and shifted their attention to the world of everyday life and to inter-subject interaction. Again, this occurred through a process of reduction, though in this case it was the breadth of reflection that was reduced, while in the case of neopositivism the reduction was in the depth of reflection. This shift gave even greater impetus to the two basic criticisms levelled at the interpretive paradigm.

The first of these holds that extreme subjectivity rules out the very existence of science, and of social science in particular. If human action always has a unique dimension or if reality is merely a subjective construction, then generalizations above the individual level cannot be made and knowledge cannot be objective. Moreover, the objectivity of knowledge is also denied by the very mechanism through which knowledge is pursued, since this involves the non-separation of the researcher from the object studied. In addition, the fact that the researcher cannot transcend the object studied also excludes the possibility of inter-subject verification, which is a fundamental principle of science (that is to say, that another researcher can obtain the same result by elaborating the same or other data).

Second, the interpretive approach – again on account of its focus on the individual – is accused of ignoring those objects that should stand at the centre of sociological reflection: institutions. Thus, it allegedly neglects aspects of society which, though stemming from individual interaction, have become independent of individuals and their choices. This same basic criticism is also levelled at phenomenological sociology, ethnomethodology and symbolic interactionism, which are accused of limiting their interests to interaction and interpersonal relationships, in that they are unwilling or unable to address problems that transcend the minutiae of everyday life.

Up to now we've discussed these issues against the backdrop of the major currents of sociological thought, on which the discipline of sociology was founded, which have shaped its research techniques and dominated social enquiry from its very beginnings up to the mid-1970s. The last quarter of the twentieth century has challenged the preceding history of social research. The 1960s – featuring the civil rights movement, student protests, racial conflicts in urban settings, struggles against poverty and inequality, and the rise of feminism – were an extremely lively period in Western societies. Sociological theory and research played a central role and achieved a great degree of popularity in such a context, and sociology seemed to uncover a new 'mission' in its reflections on that decade's social changes. There emerged new theoretical perspectives, such as the neo-Marxian and neo-Weberian approaches, critical theory and other new radical perspectives which openly contested the comfortable alliance between neopositivism and functionalism that had previously dominated social theory and research.

In those same years these new macro-perspectives were accompanied by novel developments in the field of so-called 'micro-sociology', an umbrella term grouping different schools of thought and theoretical outlooks, that resembled each other in their interest for the 'minor' facts of everyday life, micro-interactions among individuals, interpersonal dynamics (rather than great historical transformations and major social processes).

This abandonment of comprehensive theoretical perspectives and wide-ranging explanations eventually led to a generalized critique of any theoretical explanation and questioned sociology's status as a science. This tendency has assumed particularly radical traits in recent years (in the 1990s, roughly speaking) in a heterogeneous (and sometimes confusing) intellectual movement that has been labelled 'post-modernism'.

In extremely simplified terms, one could define this movement in terms of what it challenges: modernism, i.e. the consequences of the Enlightenment, including the critical use of reason over humanity, nature, and society, and confidence in science, based on order, rationality, simplicity of scientific explanations and the cumulative nature of knowledge. 'Post'-modernism transcends (and disputes) modernity's achievements, with a critique which can be summed up in four points: (a) *rejection of general theories*, which stands accused of totalitarianism, cultural imperialism, negation and repression of differences among societies in order to perpetuate the hegemonic goals of Western culture; promotion of multiple theoretical approaches and languages; defence of the fragmentary and non-unitary nature of scientific explanation; (b) *rejection of rationality*, linearity, and scientific knowledge's simplicity; praise for paradoxes, contradictions, opacity, alternative and incompatible multi-faceted outlooks; (c) *exaltation of differences*, multiplicity of local and contextual truths, rejection of the cumulative nature of science; and (d) *exaltation of the 'Other'*, differences, minorities; identification with the oppressed, assumption of 'power' as an explanatory category at the basis of all social relationships and structures.

This overview of recent tendencies and potential paradigms in contemporary social science is too simple and brief, but we will not further develop the issue. Our primary interest is to describe the basic social science paradigms which have influenced and shaped empirical research strategies, methods and techniques. The new perspectives which have emerged in the last quarter-century have not had revolutionary effects on social research techniques, except for promoting the full legitimacy and actual use of qualitative research techniques (but without innovating them in any appreciable way).

SUMMARY

1. Any 'mature' science is accompanied by, in any given moment in history, its own paradigm. Each science's paradigm is its 'guiding vision', a theoretical perspective accepted by the community of scientists that directs research effort by specifying what to study and formulating hypotheses to explain observed phenomena.

2. In the social sciences, the two paradigms that have historically oriented social research since its inception have been 'positivism' and 'interpretivism'. In order to compare them, we have attempted to understand how they deal with the three fundamental questions facing social research: the ontological question (does social reality exist?); the epistemological question (is it knowable?); and the epistemological question (how can we acquire knowledge about it?).

3. The positivist paradigm started to take root in social research in the second half of the nineteenth century, due to the great success achieved by the natural sciences. Positivism applied to social research maintained that social reality should be studied through the same investigative logic and the same method of the natural sciences, hence the name 'social physics' attributed to the study of society.

4. Over the twentieth century the original positivist outlook has been adapted to overcome its intrinsic limits. According to the neopositivist and postpositivist paradigm, social theories are no longer expressed in terms of deterministic laws, but of probability. Any theoretical statement has a provisional nature, is never definitively proven and always remains

exposed to possible disproof. Moreover, the research community grew increasingly convinced that any empirical observation is not an objective depiction, but is rather *theory-laden*, in the sense that even the simple recording of reality depends on the mental framework employed by the researcher. This revised form of positivism, however, does not repudiate its empiricist foundations nor its faith in quantification and generalization; and it promoted a further development of quantitative empirical research methods, the so-called 'language of variables', a language borrowed from mathematics and statistics.

5. According to interpretivism, there exists a fundamental 'epistemological' difference between social and natural sciences. This perspective holds that social reality cannot simply be observed, but rather needs to be 'interpreted'. In the natural sciences the object of study consists of a reality that is external to the researcher and remains so during the course of research; thus, knowledge takes the form of explanation. In the human sciences there is no such detachment between the observer and what is observed; and knowledge can be obtained only through a totally different process, that of comprehension (*Verstehen*). These fundamental differences inevitably imply different techniques and research procedures. The subjectivist position cannot adopt the 'language of variables' and has therefore developed its own observation techniques and its own ways of analysing empirical reality, which form the body of so-called 'qualitative research'.

FURTHER READING

A useful collection of essays that explore the theoretical perspectives that have shaped social research methods is the reader edited by G. Ritzer and B. Smart, *Handbook of Social Theory* (Sage, 2001, pp. 552). The issues addressed in this chapter are further examined in M. Gane, *Durkheim's Project for a Sociological Science*; P. Halfpenny, *Positivism in Twentieth Century*; S. Whimster, *Max Weber: Work and Interpretation*; K.L. Sanstrom, D.D. Martin and G.A. Fine, *Symbolic Interactionism at the End of the Century*; S. Crook, *Social Theory and the Postmodern*.

An introductory discussion about the paradigmatic divisions between quantitative and qualitative research traditions is given in the first chapter of A. Tashakkori and C. Teddlie, *Mixed Methodology: Combining Qualitative and Quantitative Approaches* (Sage, 1998, pp. 185). A more comprehensive guide to the different answers given to fundamental social research dilemmas by classical and contemporary schools of thought can be found in N. Blaikie, *Approaches to Social Inquiry* (Polity Press, 1993, pp. 238).

An attempt to place current approaches to qualitative research in a theoretical perspective can be found in an essay by Y.S. Lincoln and E.G. Guba, *Paradigmatic Controversies, Contradictions, and Emerging Confluences*, in Denzin and Lincoln (2000). Another, more detailed attempt, is the book by J.F. Gubrium and J.M. Holstein, *The New Language of Qualitative Method* (Sage, 1997, pp. 244): the authors identify four 'idioms' (naturalism, social constructionism, emotionalism, postmodernism) which inspire recent qualitative research. A discussion of current trends in social research from a quantitative standpoint can be found in J.H. Goldthorpe, *On Sociology: Numbers, Narratives, and the Integration of Research and Theory* (Oxford University Press, 2000, pp. 337).

NOTES

1. The treatment illustrated in the following pages borrows heavily from Guba and Lincoln (1994), which deals with the topics more extensively.

2. Ontology: that part of philosophy that studies the essence of 'being'; from the Greek óntos (to be, being) and lógos (discourse, reflection).

3. Epistemology: reflection on scientific knowledge, from the Greek epistéme (certain knowledge).

4. Methodology: from the Greek méthodos (pathway to, method). The methodological question has to do with 'methods' of social research, meaning an organic body of techniques. It could also be called (perhaps more correctly) 'technological question', in that it focuses on techniques; this term has been avoided as it has taken on a different meaning in the common language.

5. Stuart Mill states that induction is 'that operation of the mind by which we infer what we know to be true in a particular case or cases, will be true in all cases which resemble the former in certain assessable respects' (Mill, 1843: 288).

6. Some epistemological questions (regarding the knowability of reality) are introduced into our discussion of the ontological issue (the essence of reality) in order to facilitate understanding for the reader new to these concepts. Moreover, as will be seen in the section on the interpretive paradigm, the two issues are inseparable.

7. The criticisms of neopositivism that gave rise to what is now called postpositivism are generally attributed to Kuhn, Lakatos and Feyerabend.

8. The expression comes from Hanson (1958).

2   Quantitative and Qualitative Research

This chapter examines two typical examples of quantitative and qualitative research in order to supply a general overview of the two approaches. The specific stages of social research are outlined, and special emphasis is placed on how quantitative and qualitative procedures deal with each stage. The final part of the chapter describes how the two types of research techniques are both sources of social knowledge and complement each other.

1.   NEOPOSITIVIST PARADIGM: *CRIME IN THE MAKING* BY SAMPSON AND LAUB

Over the years, the debate between the quantitative and the qualitative approaches to sociological research has seen both ebb and flow. The lively and fruitful clashes of the 1920s and 1930s gave rise to valuable outputs on both sides of the divide and contributed significantly to the advancement of the discipline (with particular regard to the qualitative perspective, we can quote the so-called 'Chicago School'). In the 1940s and 1950s, and in the first half of the 1960s, the discussion went through a quiet phase, in which the quantitative perspective dominated. In those years qualitative research was considered a

sort of stepchild of social research. And the image of the ethnographer wasn't very dissimilar from that of the good newsreporter, to whom the status of social scientist was denied.

The controversy re-emerged in the 1960s as a result of a series of important theoretical works (Blumer, 1969; Goffman, 1959, 1967; Glaser and Strauss, 1967; Schutz, 1967). But it was only in the 1980s (in a process that continued throughout the 1990s and continues yet today) that qualitative research experienced a lively development, which has sparked methodological debates, given rise to new journals expressly devoted to qualitative research and stimulated an unprecedented production of reflections, proposals, studies and manuals.

In Chapter 1, we discussed what were defined as the 'basic paradigms' of social research. In the present chapter, we will illustrate the results that they have produced in terms of empirical research. This chapter can therefore be seen as an expansion of the last third of Table 1.1.

We will begin by describing two studies, one inspired by the neopositivist paradigm and the other by the interpretive paradigm. In order to highlight the differences between the two approaches, we have chosen two studies conducted on the same theme – juvenile

delinquency – and tackling many of the same questions. We will then analyse the differences between these two approaches in detail.

The first study that we will examine can easily be traced back to the inspiration and the techniques of the neopositivist current. This is *Crime in the Making: Pathways and Turning Points Through Life* by Robert J. Sampson and John H. Laub, published in 1993 in the United States.

This research sprang from a curious coincidence: the discovery of some 60 'dusty cartons of data in the basement of the Harvard Law School Library'. The cartons contained the original material from an impressive longitudinal study conducted over 24 years, from 1939 to 1963, by Sheldon and Eleanor Glueck, and only partly utilized in their publications (including the classic *Unraveling Juvenile Delinquency,* published in 1950). This lucky find prompted Sampson and Laub to re-analyse the data (through what is commonly called *secondary analysis*) in an attempt to answer the new questions that developments in theory and research had in the meantime laid before scholars of juvenile deviance.

1.1 Hypothesis

The authors lamented the fact that criminal sociology tended to focus on adolescence to the exclusion of other ages. While this emphasis stems from the observation that a disproportionately high number of crimes are committed by adolescents, it also leads to neglect both of childhood, in which some claim that anti-social behaviour is rooted, and of adulthood, in which crucial events, such as marriage or starting work, can induce radical changes in the individual's social attitudes. According to this view, 'cross-sectional studies', which provide a picture of a group of individuals at a particular moment in time, should give way to 'longitudinal studies', in which subjects are followed up for a certain period of time and data are recorded at successive points during their lives.

Sampson and Laub therefore examined the theses put forward by those who had investigated criminal behaviour in the perspective of the life cycle. Before turning their attention to

the data, they roughly outlined a possible 'age-graded theory of informal social control', in which both the fundamental variables traditionally regarded as the causes of deviant behaviour (poverty, family breakdown, anti-social childhood, etc.) and the informal mechanisms of social control operating at each stage of the life cycle were discussed. The aim was to achieve a global vision that would go beyond the 'narrow sociological and psychological perspectives, coupled with a strong tradition of research using cross-sectional data on adolescents' (Sampson and Laub, 1993) which had dominated the field of criminology up to that time; in short, to integrate criminology into a life-course perspective.

1.2 Research design

As has already been said, Sampson and Laub's research was a secondary analysis of data assembled by the Gluecks more than 30 years earlier. The Gluecks had collected data on 500 young white males convicted of crimes, aged between 10 and 17 years at the beginning of the study in 1939, and on 500 youths without a criminal record. The former were located in two houses of correction in Massachusetts. The latter were 'public school' pupils from the same area, selected on the basis of a very thorough matching design; the 500 officially defined delinquents and the 500 non-delinquents were matched case by case on age, race/ethnicity, neighbourhood, and intelligence quotient. The subjects were followed up systematically from 1939 to 1948 through interviews with the individuals themselves, their families and teachers (or employers). Information was also gathered from neighbours, social workers, police officers and judges, and official judicial records were consulted with a view to recording any other possible crimes committed.

1.3 Empirical recording and results of analysis

An example of the quantification procedure followed by the authors can be seen in their construction of an 'unofficial delinquency'

index. In addition to illegal acts (pick-pocketing, theft, gambling, vandalism, etc.), they recorded episodes of simple 'bad behaviour' (smoking, drinking, running away, bunking off, truancy, etc.) reported by the subjects themselves, their parents and teachers. The information gathered from the various sources was pooled into an overall deviance index (with a score from 1 to 26). This index represented 'unofficial' delinquency, while 'official' delinquency, defined on the basis of crimes actually reported to the judicial authority, was represented by the dichotomous variable (delinquents, non-delinquents) on which the sampling design of the 500 + 500 subjects was based. In the final analysis, these two indicators of delinquency constituted the dependent variables in the study.

Sampson and Laub presented the results of their research in five chapters of their book, on the subjects of the family context of juvenile delinquency, the role of school, peers and siblings, continuity in behaviour over time, adult social bonds and change in criminal behaviour. Each chapter is constructed in the same strictly linear fashion: (a) theoretical framework; (b) empirical recording; (c) results of analysis; and (d) return to the theory.

To illustrate the procedures used in analysing the data, we will look at the first of these chapters. In this chapter, as in all the others, the authors draw a distinction between *structural background variables* and *processual variables*. The former are the classic variables (poverty, family breakdown, parental crime, etc.) normally invoked in studies of this kind. The latter refer to those 'informal bonds' (with the family in this chapter, and with school, work, etc. in those that follow) to which Sampson and Laub imputed a fundamental role in the process that leads to delinquency. Thus, the authors hypothesize a theoretical model set out in two stages; the structural background variables are claimed to influence deviant behaviour only indirectly, through the mediation of the 'intervening' variables constituted by the family bond/control.

Having reviewed the literature and drawn up the theoretical framework, the authors move on to the *variables*. They identify nine structural background variables: 'household crowding', classified in three categories (comfortable, average and overcrowded); 'family disruption', classified dichotomically (i.e. in two categories), the value 1 being assigned when one or both parents are absent following divorce, separation, desertion or death; 'family size', determined by the number of children; 'family socio-economic status', classified in three categories (comfortable, marginal, dependent on outside help); followed by 'foreign born', 'residential mobility', 'mother's employment', 'father's criminality/drinking', 'mother's criminality/drinking'. Likewise, they pick out five 'family processual variables'; these have to do with the affective relationship with parents, the use or otherwise of corporal punishment, the presence/absence of maternal supervision, and rejection, abandonment and hostility on the part of the parents. The dependent variable is, of course, constituted by delinquent behaviour; this may be 'official' or 'unofficial', as described above.

We will now look at the *results of the analysis*. In their statistical analysis, the authors used multiple regression. Having drawn up the variables in three blocks – structural background, family processual and the two dependent variables (delinquent behaviour) – they correlated the blocks two by two. Strong correlations were found between background variables and processual variables (a correlation that can be interpreted as meaning that the structural conditions of the family influence the affective bonds and the pedagogical relationship); between background variables and delinquency (family instability, poverty, etc., foster deviant behaviour); between processual variables and delinquency (weakened family bonds also foster it). All of this is to be expected. What is interesting, however, is that when the complete model is analysed (structural background variables and family processual variables are taken together as independent variables and deviant behaviour

is taken as the dependent variable), the effect of the background variables almost disappears. What does this mean? It means that the structural variables do not have a *direct* effect on deviant behaviour, but that their action is mediated by the processual variables. For example family disruption favours abandonment by the parents (absence of control, etc.) and this in turn facilitates the onset of deviant behaviour. However, when there is no difference in terms of parental care and control, the influence of family disruption ceases. The authors estimate that 73% of the effect of the structural variables is mediated by the processual variables.

On completion of the empirical phase, the authors *return to the theory*. They conclude that 'the data suggest that family processes of informal social control have important inhibitory effects on adolescent delinquency … Given the overall nature of our results, it is troubling that many sociological explanations of crime ignore the family. This neglect has generated a marked divergence between both empirical findings and the conventional wisdom of the general public – especially parents – and the views of social scientists who study criminal behavior' (Sampson and Laub, 1993: 85, 97). These results support their 'integrated theory of informal social control' with regard to the family context.

In later chapters, Sampson and Laub apply a similar scheme of analysis to the role of school, the peer group, siblings, work and marriage, and conclude by reformulating their initial summary model in a detailed (and this time empirically corroborated) manner. The result is what they call their 'dynamic theoretical model of crime, deviance and informal social control over the life course', in which they divide the first 45 years of life into five ages (childhood, 0–10 years; adolescence, 10–17; transition to young adulthood, 17–25; young adulthood, 25–32; and transition to middle age, 32–45) and highlight the role of the factors that facilitate or inhibit the onset (or maintenance) of deviant behaviour in each phase. This model provides answers to the questions raised during elaboration of the hypotheses. From their investigation of both 'structural' and 'processual' variables, it emerges that the latter are those which ultimately explain most of the variation seen both in juvenile delinquency and in the subsequent abandonment of delinquency at a later stage in life.

2.   INTERPRETIVE PARADIGM: *ISLANDS IN THE STREET* BY SÁNCHEZ-JANKOWSKI

In the conclusion to their book, Sampson and Laub state, 'This book has been driven by the following challenge: can we develop and test a theoretical model that *accounts for* crime and deviance in childhood, adolescence and adulthood?' (Sampson and Laub, 1993: 243). By contrast, the book that we are about to look at (*Islands in the Street: Gangs and American Urban Society*, by Martín Sánchez-Jankowski, published in 1991 in the United States) contains the concluding remark that 'We, in the social science and public policy communities have not fully *understood* gangs. To begin with, we have failed adequately to *understand* the individuals who are in gangs … The fact that gangs have not been *understood* as organizations has crucially impaired our *understanding* of their behavior' (Sánchez-Jankowski, 1991: 311, 314).

The lexical difference between these two passages, which make reference to the objectives of 'accounting for' and 'understanding' respectively (the italics in the quotations are mine), eloquently expresses the difference between the methodological approaches adopted in these two studies.

2.1 Research design and data collection

Sánchez-Jankowski's research is an example of 'participant observation'. Unlike most studies conducted through participant observation, which focus on a specific group or a single organization, Sánchez-Jankowski's

research was conceived right from the outset as a comparative study aimed at understanding what gangs have in common and what is specific to each of them. The author therefore studied gangs of different sizes, with different racial features and in different cities (metropolitan areas of Los Angeles, New York and Boston). Over a 10-year period, he studied some 37 gangs; he participated fully in the life of the gangs, got involved in what they did, and shared their everyday business, so much so that he got hurt in fights with rival gangs and was repeatedly stopped by the police. In order to study such a large number of groups, his participation had to be rigidly planned (unlike what usually happens in participant observation). At first, he spent an entire month with a new gang, once he had been accepted; subsequently, he spent another five or ten days, and in the last three years of the study, he again spent from three to six days with each one.

As is usual in participant observation, information was recorded in a notebook during the course of the observation, and was filled out, summarized and commented on both daily and weekly (this procedure will be dealt with more fully in Chapter 9). In addition, the author also occasionally tape-recorded conversations.

2.2 Hypothesis

Unlike Sampson and Laub, Sánchez-Jankowski did not go through that phase of systematic theoretical reflection that leads to the elaboration of hypotheses to be tested empirically. In his first chapter, he does not review the literature in order to compare the various theses, nor put forward hypotheses. Instead, he draws exhaustively on the research conducted and sets out the conclusions to which his experience has led him. This structure does not stem from the author's personal choice, but from the very characteristics of the interpretive approach, which – as has already been pointed out – proceeds in an essentially inductive manner and deliberately avoids being conditioned by the theory at the outset; indeed, the theory

has to be 'discovered' during the course of the investigation.

What is original in Sánchez-Jankowski's approach is that he does not look upon the gang as a pathological deviation from social norms; rather, he interprets gang membership as a rational choice. He claims that 'Nearly all theories of gangs emerge from the assumptions associated with theories of social disorganization … the lack of social controls leads to gang formation and involvement because young people in low income neighborhoods (slums) seek the social order (and security) that a gang can provide' (1991: 22). On the other end, according to Sánchez-Jankowski, 'Low-income areas in American cities are, in fact, organized, but they are organized around an intense competition for, and conflict over, the scarce resources that exist in these areas. They comprise an alternative social order … and the gang emerges as one organizational response … seeking to improve the competitive advantage of its members' (1991: 22).

Sánchez-Jankowski develops three themes: the individual and his relationship with the gang, the gang as an organization, and the gang and the community. With regard to the individual, he works out the concept of the 'defiant individualistic character'. This is seen as embodying an acute sense of competition, which often turns to physical aggression and is present in all patterns of behaviour. It is imbued with mistrust of others, and thus gives rise to individualism, social isolation and the need for self-reliance; finally, it is associated with a worldview that the author calls 'Darwinian', according to which life is a struggle in which only the fittest survive, and which engenders a strong survival instinct. In this brief description, the reader will discern the characters of Weber's 'ideal type'.

The gang provides a possible means of meeting the demands that this individual makes of society. Sánchez-Jankowski defines the gang (and this is another ideal type) as a social system that is quasi-private (not open to all) and quasi-secret (only the members are fully aware of its activities), governed by a

leadership structure with clearly defined roles whose authority is conferred through a mechanism of legitimization. The gang aims not only to serve the social and economic interest of its members, but also to ensure its own survival as an organization. It pursues its aims without worrying whether or not they are legal, and has no bureaucracy (there is no administrative staff apart from the leadership). The subject endowed with 'defiant individualism' asks to join the gang because he believes that it is in his interest, that he can gain advantages in terms of wealth, status and power. The gang will take him in if its own needs (prestige, efficiency, services provided) will be met by doing so.

The author goes on to analyse the gang as an organization: the strategies utilized to involve and to keep members, the leadership structure its mechanisms of legitimization, the incentives offered and sanctions imposed in order to ensure the obedience of its members.

Finally, Sánchez-Jankowski examines the gang's relationship with the wider community. Indeed, tight internal cohesion is not sufficient to guarantee survival; this can only be ensured if the gang is integrated into the local community. The local residents must accept the gang as an integral part of the neighbourhood, and will expect services from it. In exchange, the gang will gain the support of the local community in terms of protection from the police and from 'rival predators' (other gangs). The ability to establish such links is one of the main factors that will determine the long-term survival of the gang.

2.3 Interpretation of the empirical material

All the above themes are dealt with in successive chapters – five covering the internal dynamics of the gang and its relationships with the local community, and three concerning its relationships with the outside world (public institutions, the judicial system and the mass media) – in which the author interprets the data with the aid of the categories introduced in the chapter on theory. In order to illustrate the procedure used, we will look briefly at the first chapter, entitled *Gang Involvement*, in which the author tries to answer the basic questions of who joins a gang and why.

Sánchez-Jankowski rejects the four answers provided by the specialist literature: that adolescents join gangs because they come from broken homes where the father is absent, and they seek to identify with other males and with male figures of authority; that they join because the gang is a surrogate family – a motivation closely linked to the previous point; that they have dropped out of the school system and, unqualified for any sort of job, can find nothing better to do than join a gang; or else that they join in order to emulate older youths. As the author says, 'I found no evidence for these propositions. What I did find was that individuals who live in low-income neighborhoods join gangs for a variety of reasons, basing their decisions on a rational calculation of what is best for them at that particular time' (1991: 40). He then goes on to list some of the motivations that he came across:

Material incentives   The individual joins the gang in order to obtain money in a more regular and less risky manner than engaging in illegal activity on his own, in order to have an income in times of emergency (the gang generally promotes a sort of mutual assistance among its members), and in the hope of future money-making opportunities (e.g. getting into the drug trade). The author illustrates the various cases by means of extracts from interviews, as reported below:

Hey, the club (the gang) has been there when I needed help. There were times when there just wasn't enough food for me to get filled up with. My family was hard up and they couldn't manage all of their bills and such, so there was some lean meals! … They (the gang) was there to help. I could see that (they would help) before I joined, that's why I joined. They are there when you need them and they'll continue to be. (Street Dog, Puerto Rican, aged 15, a member of a New York gang for two years) (1991: 42)

Recreation The gang also provides opportunities for enjoyment; it often has a sort of club with a bar, video games, cards and slot machines; it organizes parties and offers a chance to meet girls:

> I joined originally because all the action was happening with the Bats (gang's name). I mean, all the foxy ladies were going to their parties and hanging with them. Plus their parties were great. They had good music and the herb (marijuana) was so smooth … Hell, they were the kings of the community so I wanted to get in on some of the action. (Fox, aged 23, a member of a New York gang for seven years) (1991: 43)

Refuge and camouflage The gang provides anonymity for anyone who needs it on account of his activities in a highly competitive context:

> I been thinking about joining the gang because the gang gives you a cover, you know what I mean? Like when me or anybody does a business deal and we're members of the gang, it's difficult to track us down 'cause people will say, 'Oh, it was just one of those guys in the gang'. You get my point? The gang is going to provide me with some cover. (Junior J., aged 17, New York) (1991: 44)

In like manner, through interview extracts, Sánchez-Jankowski goes on to illustrate the other reasons that he recorded for joining a gang. The final result is a radically different kind of knowledge from that gleaned by Sampson and Laub. The objective is no longer to discern 'causal models', in which variables are connected through cause-effect relationships, but rather to draw up classifications and typologies based on first-hand experience, in a clear application of the interpretive paradigm.

3. QUANTITATIVE AND QUALITATIVE RESEARCH: A COMPARISON

We will now compare quantitative and qualitative research techniques analytically. To this end, the two studies illustrated above will be used (as far as possible) by way of example. The differences between the two approaches – no longer in terms of their philosophical and epistemological premises, but of their concrete application to research – will be made clear by the following analysis. To facilitate comparison, the four phases of each technique – planning, data collection, analysis and results – are summarized in Table 2.1. This is merely an enlargement of the third part ('methodology') of Table 1.1 (some repetition is therefore inevitable).

3.1 Research planning

If we had to pick out a single overall feature to differentiate concisely between these two types of research, we would probably point to the structuring of the various phases that lead from the initial query to the final report. The research conducted by Sampson and Laub displays a strikingly geometrical pattern: exposition of the theory, its formulation in terms of an empirically testable 'model', research planning (the so-called 'research design'), data collection, data analysis and return to the theory. This circular pattern is repeated in each chapter. It should be noted that this format is no mere 'orderly' presentation of the material; rather, it is the expression of a conceptual order which guides the authors through their work and which springs from a vision of research as a rational, linear process.

Sánchez-Jankowski proceeds in a totally different way. His book does not open with a discussion of the literature findings, nor sets out theories and empirically testable hypotheses. His conclusions are already woven into the fabric of the initial theoretical chapter; there is never a distinct separation between theory and empirical findings. His way of working is distinctly different from that of Sampson and Laub; he does not start off with clear hypotheses in mind, but constructs them as he goes along. For example when he rejects the traditional psychosocial explanations for why a youth joins a gang (identity-seeking,

TABLE 2.1 *Comparison between quantitative and qualitative research*

	Quantitative research	Qualitative research
Research planning		
Theory-research relationship	Structured; logically sequential phases	Open, interactive
	Deduction (theory precedes observation)	Induction (theory emerges from observation)
Function of the literature	Fundamental in defining theory and hypotheses	Auxiliary
Concepts	Operationalized	Orientative, open, under construction
Relationship with the environment	Manipulative approach	Naturalistic approach
Psychological researcher-subject interaction	Neutral, detached, scientific observation	Empathetic identification with the perspective of the subject studied
Physical researcher-subject interaction	Distance, detachment	Proximity, contact
Role of subject studied	Passive	Active
Data collection		
Research design	Structured, closed, precedes research	Unstructured, open, constructed in the course of research
Representativeness	Statistically representative sample	Single cases not statistically representative
Recording instrument	Standardized for all subjects. Objective: data-matrix	Varies according to subjects' interests. Tends not to be standardized
Nature of the data	'Hard', objective and standardized (objectivity vs. subjectivity)	'Soft', rich and deep (depth vs. superficiality)
Data analysis		
Object of the analysis	The variable (analysis by variables, impersonal)	The individual (analysis by subjects)
Aim of the analysis	Explain variation ('variance') in variables	Understand the subjects
Mathematical and statistical techniques	Used intensely	Not used
Production of results		
Data presentation	Tables (relationship perspective)	Extracts from interviews and texts (narrative perspective)
Generalizations	Correlations. Causal models. Laws. Logic of causation	Classifications and typologies. Ideal types. Logic of classification
Scope of results	Generalizability	Specificity

etc.) in favour of a detailed list of rational motivations, we can plainly see that this conclusion is based on the interviews conducted, and not on theoretical prejudice. Indeed, this is a case of 'theory emerging from the data'.

In these two approaches, the relationship between *theory* and *research* (the first point in Table 2.1) is radically different. In the case of quantitative research inspired by the neopositivist paradigm, this relationship is structured in logically sequential phases, according to a substantially deductive approach (theory precedes observation) that strives to 'justify', that is to say, to support the previously formulated theory with empirical data. Within this framework, systematic analysis of the *literature* takes on a crucial role, since it is this that provides the theoretical hypotheses on which fieldwork will be based.

In qualitative research, which springs from the interpretive paradigm, there is an open, interactive relationship between theory and research. The researcher often deliberately avoids formulating theories before fieldwork begins, on the grounds that this might hinder his capacity to 'comprehend' the point of view of the subject studied. Theoretical elaboration and empirical research are therefore intertwined. As the theories accumulated within the scientific community lose their importance, it follows that analysis of the literature takes on a minor role.

These two approaches to research also differ in their use of *concepts*. The concepts are the constituent elements of the theory and, at the same time, they allow the theory to be tested empirically through their operationalization, that is, their transformation into empirically observable variables. In the neopositivist approach, the concepts are clarified and operationalized into variables even before the research begins. Let us take the concept of 'family disruption' in the research by Sampson and Laub. As we have seen, the authors operationalized this concept by assigning a value of 1 (disruption) when one or both parents were absent owing to divorce, separation, desertion or death, and a value of 0 in all other cases. This definition (to be precise, 'operational definition') of the concept of family disruption offers the advantage that the concept can be gauged empirically. However, it considerably limits and impoverishes the concept itself. Moreover, it engenders

the risk of reifying the indicator used. In the empirical transformation of the theory, this indicator comes to embody the concept of family disruption itself and, as the analysis proceeds, we may lose sight of the fact that the initial definition is restrictive.[1]

This approach would never have been adopted in qualitative research. Instead of transforming the concept into a variable at the outset (that is, into a clearly defined entity that can be recorded empirically), the researcher would have utilized 'family disruption' as a *sensitizing concept*, to use Blumer's definition: a guiding concept that remains to be refined during the course of the research, not only in operational terms, but also in theoretical terms:

> A definitive concept refers precisely to what is common to a class of objects, by the aid of a clear definition in terms of attributes or fixed benchmarks … A sensitizing concept lacks such specification of attributes or benchmarks … Instead, it gives 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 … (in a) self-correcting relation with its empirical world so that its proposals about that world can be tested, refined and enriched by the data of the world (Blumer, 1969: 147–148).

Moreover, as Blumer adds, these concepts should be sensitizing rather than definitive not because social science is immature or lacks scientific sophistication, but because of the very nature of the natural world, in which 'every object of our consideration – whether a person, group, institution, practice or whatnot – has a distinctive, particular or unique character and lies in a context of a similar distinctive character. I think that it is this distinctive character of the empirical instance and of its setting which explains why our concepts are sensitizing and not definitive' (1969: 148).

Another set of differences between quantitative and qualitative research can be seen in the personal relationship between the

researcher and the object studied. Let us look first at what may be called the general *relationship with the environment studied*. Needless to say, one of the main problems facing the social researcher is that of the 'reactivity' of the object under investigation. The mere fact of examining human behaviour may induce changes in the behaviour itself. Studying people is not like studying ants or atoms; if people know they are being observed, they are very likely to behave in an unnatural way.

The neopositivist approach does not seem to be particularly concerned about this. Not that the social researcher working within this paradigm is unaware of the fundamental difference between the objects studied in the natural sciences and those studied in the social sciences. Nevertheless, she maintains that the problem of subject reactivity does not constitute a fundamental obstacle, or at least believes that a certain margin of 'controlled manipulation' is acceptable. By contrast, qualitative research sees the *naturalistic approach* as a basic requisite to empirical study. When we say 'naturalistic approach', we mean that the researcher refrains from any form of manipulation, stimulation, interference or disturbance, and that the object is studied in its natural setting.

These two opposing ways of conducting research can best be illustrated by the techniques of experimentation and participant observation. In carrying out an experiment, the researcher manipulates social reality extensively, even to the extent of constructing an artificial situation (for instance, by showing students in a laboratory a film on political propaganda). Before and after exposure to the stimulus, subjects are tested (again an artificial situation); moreover, the initial subdivision of the subjects into an experimental group and a control group (on the basis of abstract, unnatural criteria) also involves an artificial operation. The situation is therefore totally unnatural and the researcher's manipulation is all-pervading. By contrast, in participant observation, the researcher's role is restricted to observing what happens in the social reality under investigation, and the

researcher may sometimes even refrain from interviewing or questioning the subjects observed.

Obviously, these are two extreme cases, between which a whole range of situations may be encountered. Participant observation itself is only rarely perfectly 'naturalistic', in the sense that the mere presence of an outside observer is likely to have some effect on the subjects (except in particular cases, such as the observation of small children, etc.) It therefore follows that all instruments of qualitative analysis other than observation (e.g. in-depth interviews, life stories, etc.) will necessarily involve some degree of intervention in the reality studied, even if this means no more than prompting subjects to speak and to communicate. By the same token, quantitative research is not always as manipulative as it is in the case of the experiment, and again various degrees can be discerned. For example, a questionnaire that uses open questions respects the natural context more than one that uses closed questions. Moreover, there are quantitative techniques that do not impinge directly on subjects, but involve statistical sources or 'non-reactive' variables; in such cases, the problem of reactivity does not arise.

So far, reference has been made to the researcher's relationship with the study environment as a whole. A further aspect concerns the relationship between the researcher and the individual subjects studied. As we have already seen, one of the fundamental differences between the neopositivist paradigm and the interpretive paradigm lies in how they define their research objectives; in the former case, the objective can be summarized as 'empirical validation of the hypotheses', while in the latter case it is 'to discover the social actor's point of view'. This dual perspective gives rise to two issues, one of a psychological-cultural nature and the other of what could be called a physical-spatial nature.

The first of these concerns the *psychological interaction between the researcher and the subject studied*. In quantitative research, observation is carried out from a position that is external

to the subject studied, just as the 'scientific' observer adopts a neutral, detached stance. Moreover, the researcher focuses on what he (or the scientific community) considers to be important. By contrast, the qualitative researcher tries to get as deep inside the subject as possible, in an attempt to see social reality 'through the eyes of the subject studied'. To do so, he can never remain neutral or indifferent, but instead will tend to identify empathetically with the subject. As Sánchez-Jankowski points out in the preface to his book:

> The ten years and five months that I have spent on this research project have indeed been a journey.[2] A journey not only through time but also into the lives of gang members and various other individuals who live in the low-income areas of New York, Boston, and Los Angeles. Ironically, it has also been a journey back into my youth … throughout this journey I have met some wonderful people, whom I shall always remember with fondness, and I have met some not-so-wonderful people, whom I shall also not forget. (Sánchez-Jankowski, 1991: xi)

Clearly, this psychological involvement raises the question of the objectivity of qualitative research. It is a problem that also arises in quantitative research, in that what the researcher sees must pass through the filter of his own perspective, experience of life, culture and values. In the social sciences at least, the ideal of absolute scientific objectivity is unattainable. However, it is in qualitative research that this problem is most acutely felt, in that empathetic interaction with the subject studied engenders a risk of emotional involvement, which in turn may give rise to heavily one-sided interpretations.

The second issue, which is directly linked to the first, concerns the *physical interaction between the researcher and the subject*. Quantitative research does not envision any physical contact between the researcher and the subject. We need only think of a questionnaire survey on a sample of the population, in which interviews are conducted by a data-collection agency; or of

a laboratory experiment in which the researcher simply observes the behaviour of the subjects. Another example is that of secondary analysis, like the study conducted by Sampson and Laub (1993), in which the researcher never physically meets the subjects.

Obviously, the opposite is true in the case of qualitative research, in which contact – and even close interaction – between the researcher and the subject is a prerequisite to comprehension. In describing his interaction with the subjects studied, Sánchez-Jankowski writes that during his ten-year study 'I participated in nearly all the things they did. I ate where they ate, I slept where they slept, I stayed with their families, I traveled where they went, and in certain situations where I could not remain neutral, I fought with them' (1991: 13). Once again, it is participant observation that exemplifies the interpretive approach most aptly. However, the need for physical-spatial proximity to the object studied is seen in all qualitative research techniques (such as, e.g. in-depth interviews, life stories, analyses of group dynamics, etc.).

From what has been said, it will be evident that the two approaches also differ in terms of the *role of the subject studied*. From the quantitative standpoint, the subject studied is regarded as being *passive*, and even when he cannot be regarded as such, every effort is made to reduce his interaction with the researcher to a minimum. Research is conceived of as 'observation' and 'recording', and this implies looking at the individuals studied as objects (this takes us back to the original positivist conception of social facts as 'things'). On the qualitative side, by contrast, research is conceived of as 'interaction', which naturally implies an active role on the part of the subject studied. The subject's direct, creative participation in the research process, far from being shunned, is actively sought, as is clearly shown by the two extracts from Sánchez-Jankowski's book quoted earlier.

3.2 Data collection

One of the principal differences between the two approaches has to do with the *research*

design – that is to say, all those operational decisions concerning where, how and when to gather the data; this means deciding what data-collection tools are to be used (interview or participant observation, questionnaire or experiment, etc.), where data collection is to be carried out, how many and which subjects or organizations are to be studied, etc. Again, the difference lies in the degree to which the procedures are structured. The quantitative design, which is drawn up on paper before data collection begins, is rigidly structured and closed, while the qualitative design is unstructured, open, shaped during the course of data collection, and able to capture the unforeseen.

In the case of Sampson and Laub's research, for instance, once the sample of 500 delinquents and 500 non-delinquents had been drawn up, these were rigidly taken as the subjects to be studied. By contrast, in Sánchez-Jankowski's research, once a few basic criteria had been defined (the number of gangs from each of the three cities, plus some constraints on gang size and race), the researcher was free to choose those gangs most suited to his purposes. Moreover, he also had the freedom to interview whomever he wished, to lengthen or shorten the observation as he thought fit, etc. From this point of view, the two studies illustrated are not among the most typical. Indeed, the Gluecks' research, from which Sampson and Laub took their data, envisioned using various sources of information (regarding, for instance, the criminal activities of the subjects) at the discretion of the researcher. Likewise, Sánchez-Jankowski bore in mind the objective of representativeness-comparability, and therefore selected the gangs according to a plan that was to some extent predetermined. Generally speaking, quantitative research has a highly rigid design (as in the case of a questionnaire survey with closed questions conducted on a random sample, or of an experiment), while qualitative research is totally free of constraints (the researcher decides in the field which subjects to study and which data-collection tools to use).

This difference in research design – closed or open, established in advance or during the course of the research – is linked to two further distinguishing features. The first of these is the *representativeness* of the subjects studied. The quantitative researcher is concerned with the generalizability of the results (we will return to this issue later), and the use of a statistically representative sample is the most evident manifestation of this concern; indeed, we might say that the researcher is more concerned with the representativeness of the slice of society that he is studying than with his ability to comprehend it. The opposite is true of the qualitative researcher, who gives priority to comprehension, even at the cost of pursuing atypical situations and non-generalizable mechanisms. Statistical representativeness is of no interest to the qualitative researcher. What may be of interest is a sort of substantive, sociological representativeness, which will be decided on the basis not of mathematical formulae but the researcher's own judgement. Indeed, the cases to be studied in depth will be chosen not because they are typical, or even common in the population, but on the basis of the interest that they seem to hold. Moreover, this interest may be modified during the course of the research itself; thus, as one qualitative research manual states, 'sampling (must be performed) on the basis of the evolving theoretical relevance of concepts' (Strauss and Corbin, 1990: 179).

An example can be seen in the research on 'Communists and Catholics' conducted in a neighbourhood of Bologna at the end of the 1970s by the American anthropologist David Kertzer (1980). Following the classical 'community study' approach, he basically used the technique of participant observation, but supplemented this with a series of interviews with 'key informants'. Both unstructured in-depth interviews and structured interviews were used. However, not all the interview subjects had been selected in advance. The author began data collection with the aim of interviewing all political activists and social workers in both the Communist and Catholic spheres: local Communist Party committee

members, activists in the UDI (Union of Italian Women) and FGCI (Communist Party Youth Federation), priests working in the parishes, lay workers in Catholic associations, etc. During the course of the research, however, Kertzer realized that this objective was unattainable (some Communist Party activists did not trust the 'American' and declined to be interviewed, as did some of the priests). At the same time, some individuals who had not been previously counted among those to be interviewed turned out to be precious informants (one of the richest sources of information on the interaction between Communists and Catholics being a local barmaid).

The second of the two above-mentioned distinguishing features concerns the standardization of the *data-collection tool*. In quantitative research, all subjects receive the same treatment. The data-collection tool is the same for all cases (e.g. a questionnaire) or at least strives for uniformity (e.g. a code-book to harmonize open questions or information gathered from different sources, as was partly the case in Sampson and Laub's research). The reason for this is that the information gathered will be used to create the 'data-matrix', a rectangular matrix of numbers in which the same information is coded for all the cases.

Qualitative research does not aim for this standardization. On the contrary, the heterogeneity of information, as we have seen, is a constituent element of this type of research, since the researcher records different information according to the cases, and at different levels of depth according to his judgement. Once again, the difference in approach stems from the difference in the cognitive objective; in the one case, it is to cover the uniformities of the world of human beings, while in the other, it is to understand its individual manifestations.

The final point to be mentioned under the heading of 'data collection' concerns the *nature of the data*. In quantitative research, the data are (or, at any rate, are expected to be) reliable, precise, rigorous and unequivocal: in a word, *hard*. They ought to be 'objective' in the sense that they should lend themselves

neither to subjective interpretations by the researcher (in the sense that two investigators applying the same techniques should obtain the same results), nor to the expressive subjectivity of the individual studied (in the sense that two people with similar states should give similar answers). They should also be 'standardized', in the sense that data recorded on different subjects (even by different researchers) must be able to be compared. This can easily be achieved when dealing with some basic structural variables (gender, age, educational qualification) or behavioural variables (such as religious observance or voting), but becomes more difficult in the case of multi-faceted concepts (such as social class or intelligence), and even more so when attitudes are involved (e.g. authoritarianism, political conservatism, etc.). In any case, quantitative research always strives to produce *hard* data; for instance, to assess attitudes towards some political personality, respondents might be asked to give the person a score from 0 to 100 (to gauge the warmth of approval by means of a sort of 'feelings thermometer').

In qualitative research, by contrast, the issue of the objectivity and standardization of data does not arise; what counts is their wealth and depth. Data produced by qualitative research are termed *soft*, as opposed to the hard data mentioned earlier. Thus, to return to our previous example, a politician's popularity may be assessed by recording the various opinions expressed by the respondents; according to the point of view, culture, way of thinking, depth of analysis and mode of expression of each individual, judgements may run from the simple and sober to the complex and colourful.

3.3 Data analysis

Data analysis is perhaps the phase in which the difference between the quantitative and qualitative approaches is most visible, not least from the purely graphic point of view. Quantitative research makes ample use of mathematical and statistical tools, together

with a whole array of tables, graphs, statistical tests, etc., as well as the full set of technological equipment (computers, files, data banks, software, etc.). The impact of this weaponry contrasts starkly with the sobriety of a qualitative analysis, in which there is no statistical-mathematical apparatus and the contribution of information technology (if any) is limited to the organization of empirical material.

The most fundamental difference, however, lies not so much in the technological tools of data analysis or the different presentation of results as in the logic that underlies the analysis itself. Let us look first at the *object of the analysis*. By way of example, we will go back again to Sampson and Laub's research into juvenile delinquency.

On the basis of correlations between the dependent variable and the independent variables, these authors reach the conclusion that 'family and school processes of informal social control provide the key causal explanation of delinquency in childhood and adolescence' (Sampson and Laub, 1993: 246). What was the logical and operational pathway that led them to these conclusions? First of all, the research team collected the data *per subject* (as is done in all studies, both quantitative and qualitative), in the sense that all those individual properties that we call 'variables' in the data-analysis phase (acts of violence committed, composition of the family, occupation of the parents, family environment in which the child was brought up, progress at school, etc.) were recorded on the 500 + 500 subjects. Each subject was then described analytically on the basis of all these characteristics. We could say that the unity of the individual is broken down into the same number of elements as the variables that describe him. From this point on, the subject is no longer reassembled into a whole person. Indeed, *data analysis is always carried out on variables*, in an *impersonal* manner. Reference is made to the means of *variables* (mean number of crimes committed, mean number of children per family, mean income, etc.), to the percentages of *variables* (percentage of subjects with previous convictions in the family, with a violent,

authoritarian father, etc.), to relationships among *variables* (correlation between family disruption and youth violence, etc.). Moreover, the *objective of the analysis* is to 'explain the variance' of the dependent variables – that is to say, to pick out the causes of the variation in the dependent variable among the subjects: the factors that 'explain' why some youths become delinquents while others do not. For example, if *all* the delinquents have violent fathers and *all* the non-delinquents have non-violent fathers, then we have found a 'statistical explanation' for the variance of the variable 'delinquency'; we can therefore claim to have found the 'cause' of the variable 'delinquency' (in this case identified as the father's behaviour).

It should be noted that this is the approach adopted in the natural sciences. For instance, the causal relationship between smoking and lung cancer was deduced by observing a statistical connection between the variations in these two variables on thousands of subjects and isolating the trends in these two variables within the array of variables that vary with them.

The interpretive approach criticizes this way of working on the grounds that it constitutes a misappropriation of the scientific model used in the natural sciences (this criticism has not only been put forward in the social sciences; in medicine too, the cause-effect relationship between single variables has come under fire from those who uphold the mental and physical unity of the human being). This accusation is based on the conviction that the integral human being cannot be broken down into a series of distinct and separate variables, and that analysis of human behaviour therefore has to be carried out within a global perspective or, more precisely, a *holistic perspective*.[3] According to this view, the complex interdependence among the parts that make up the whole individual cannot be reduced to the relationships among a few variables, and the comparison of subjects through variables distorts the nature of the subjects themselves.

Qualitative research thus adopts a completely different approach to the analysis of

data. *The object of the analysis is not the variable, but the entire individual*. While quantitative research is *variable-based*, qualitative research is *case-based*. To illustrate the point, we will again turn to Sánchez-Jankowski's research. During the course of his work, Sánchez-Jankowski investigated the causes of violent behaviour among members of gangs. Sánchez-Jankowski began by picking out four factors that trigger violence: fear, ambition, frustration and exhibitionism. At this point, a quantitative researcher would try to record the dependent variable 'violence' (e.g. by assigning a score to individuals according to the degree of violence displayed in their behaviour) and then pick out suitable indicators (no easy task) through which to gauge the four independent variables (fear, ambition, frustration and exhibitionism). By means of statistical techniques, he would then attempt to 'explain the variance' of the dependent variable 'violence', starting from the variations observed in the independent variables; in other words, he would try to spot the correlations between the independent variables and the dependent variable.

Sánchez-Jankowski did not do this. His analysis was not conducted on variables, but on subjects. Rather than breaking the subject down into variables, he classified the subjects in their entirety into types. The classification was the pattern linking the subjects, just as in quantititive research the causal model links the variables.

Sánchez-Jankowski separated incidents of violence into two classes according to whether the violence was individual or collective. He then identified six contexts in which the violence took place (violence against members of the same gang, against members of other gangs, against local residents, against outsiders, against property inside the community, and outside the community). In this way, he drew up a classification composed of 12 situations, within each of which he identified four cases corresponding to the four above-mentioned triggering factors (fear, ambition, frustration, exhibitionism). This gave rise to a typology of 48 types, within which he classified the acts of violence sometimes with more than one subject-incident per type. For example with regard to the type 'individual violence, against members of the same gang, due to ambition', he describes the case of Shoes. Shoes was a 16-year-old member of a New York gang who wanted to become one of the gang leaders, in spite of the fact that he was considered too young and had not been in the gang long. One day, during a gang fight with a rival gang, he noticed that two members of his own gang were hanging back from the fray for fear of getting hurt. At the next gang meeting, Shoes physically attacked one of the two. After being separated by the other members, he justified his behaviour by accusing his two companions of cowardice and claiming that they should be expelled from the gang. The purpose behind all this was to raise his own status within the group.

In this study, the *objective of the analysis* was in line with the perspective of the interpretive paradigm, the aim being to 'understand people', to interpret the social actor's point of view (in the example, to understand the motives behind violent behaviour), just as the objective in the quantitative approach was to 'explain the variation in the variables'.

Finally, it will be all too obvious to the reader that quantitative and qualitative research have different relationships with *mathematical and statistical techniques*. In the quantitative paradigm, the language of mathematics is taken purely and simply to be *the* language of science. Consequently, every effort is made to operationalize concepts in mathematically treatable terms (even to the extent of creating actual 'measurements'); likewise, the greatest possible use is made of statistical techniques of data analysis in order to extrapolate generalizations from the sample to the population. From the qualitative standpoint, by contrast, mathematical formulation is considered not only useless, but also harmful (reductive, pointless aping of the natural sciences), and is completely disregarded.

3.4 Production of results

Given that the two ways of conducting research differ in terms of planning, recording

TABLE. 2.2 *Party activists' vision of social reality*	Christian Democrats	Communists	Total
Absolutely dichotomous	5.6	31.5	18.5
Predominantly dichotomous	25.9	38.9	32.4
Sees reality as a struggle between opposing positions but has a more balanced view of the alternatives	51.8	25.9	38.9
Not at all dichotomous	16.7	3.7	10.2
Total	100	100	100
(N)	(54)	(54)	(108)

and data analysis, it is natural that they will also differ in terms of the type of results obtained. We will look first at the most obvious difference: *how the data are presented*. The two classical (and also the simplest) forms of data presentation in the quantitative and qualitative traditions, respectively, are the 'table' and the 'account'.

By way of example, we will look at a study conducted in Italy in the middle of the 1960s on grassroots militants in the Christian Democratic Party and the Communist Party (Alberoni et al., 1967). Interviews were conducted with 108 activists (54 Christian Democrats and 54 Communists) according to a common framework. The interviews, which lasted from six to seven hours on average and were subdivided into various sessions (from three to six), were recorded and transcribed verbatim. They were subsequently coded by classifying the respondents' comments on each theme into categories and assigning a numerical value to each category (the technical details of this operation will be dealt with in Chapter 10). One of the variables so obtained was defined as 'dichotomous vision of reality' – that is to say, the tendency to interpret the forces operating in the social field in terms of 'opposing fronts … two sides, one of which is good and is identified with, and the other of which is the enemy to be fought and, if possible, defeated and destroyed' (1967: 381). This tendency towards a dichotomous vision of reality naturally varied among the subjects, who were classified according to the four levels shown in Table 2.2

(from 'absolutely dichotomous' to 'not at all dichotomous').

What does Table 2.2 tell us? First of all, if we look at the column corresponding to the total number of interviewees, we can see that the activists studied are split almost perfectly between 'dichotomous' and 'non-dichotomous' (about 50% per group if we combine the first two categories and the last two categories). However, if we consider the Communist and Christian Democrat activists separately, the picture changes completely; while the dichotomous view is in the minority (less than a third) among the former, it is prevalent (more than two-thirds) among the latter. The quantitative information provided by the table is succinct, economical and compact; in just a few numbers, an important feature of the ideology of party activists is illustrated, as is the relationship between party membership and ideological orientation. This is the *relationship perspective* that we mentioned in Table 2.1.

However, such data have two drawbacks. First of all, 'dichotomous vision of reality' is a conceptual category created by the researchers and is interposed like a screen between the person who reads the table and the true mental categories of the interviewee. Moreover, behind this elementary concept there lies a wealth of information that is difficult to imagine for anyone who only reads the table. Interview extracts are less vulnerable to these two limitations. In the first place, the very fact that the interviewee's exact words are reported better enables the reader to 'see

reality through the eyes of the subjects studied'.[4] Second, the verbatim report provides a pictorial dimension that lies beyond the scope of the simple table, thus enabling the reader to 'visualize' the interviewees, much in the same way as a photograph of a person gives us a very different and much more complete image than a simple physical description ever could. This is the *narrative perspective* mentioned in Table 2.1.

The following interview extract refers to the 'dichotomous vision of reality' and reveals that this is a highly synthetic concept made up of numerous specific components. For instance, it involves a clear-cut view of international politics which, in the case of this Communist activist, is expressed as an uncritical idealization of the Soviet Union:

> I've always liked the Soviet Union, ever since I was young. Now of course I know it better still. I'm convinced that Russia has the right policy. I'm sure Russia does everything it can to avoid war. Russia doesn't want war; Russia's war is the propaganda it spreads throughout the world. That's what wins popularity in other countries and attracts the commercial market from countries all over the world. This system has turned a profit, and sooner or later socialism will have to be all over the world and in those states they'll bring them to their knees without having to go to war because she'll strangle them with her action … In Russia they don't have to go on strike at all; they work for the people there … they work for them … There's socialism, and with socialism there's no need to strike … they're way ahead there … I don't know if it was last year or a few years ago, everyone got their bread free … When people get to that stage, it means they don't need to go on strike. (Alberoni et al., 1967: 479)

While the table and the account are the two typical modes of presenting results in quantitative and qualitative research, their use is not restricted to one or the other research type. Indeed, we very often come across quantitative studies in which accounts are used for the purpose of illustration, in much the same way as a photograph accompanies a newspaper article. In such cases, data analysis is conducted by means of quantitative instruments, on numerical variables through tables and multivariate analysis. The account serves to exemplify the results, to give the reader a clearer understanding of the world that lies behind the numerical data. For example, in the study quoted earlier, the researchers used multivariate analysis to pick out the variables that best characterized the different types of party activist (in this case, age, education, commitment to political activism, dichotomous attitude, striving for personal advantage); they then identified some interviewees who displayed this specific set of characteristics, and reported extracts taken from their interviews.

The opposite case is far rarer. A researcher who adopts the interpretive approach is very unlikely to depict relevant variables[5] in table form. Since his objective is to report the subject's vision of reality rather than to pick out generalizable features, he will be reluctant to apply his own categorizations to the responses and attitudes of the subjects studied.

We will now look at the question of *generalization*. The table and the account are two forms of elementary, and in a sense fragmentary, presentation of data. The conclusion of a study has to go beyond the simple exposition of the distributions of variables or a mere illustration of cases; it must be able to establish relationships among the variables or connections among the cases. Indeed, the objective of research is not just to describe aspects of reality, but to systematize them and to provide higher-order *syntheses* (be they explanations or interpretations). Only in this way can research be linked to theory, which is a form of synthetic rational abstraction of reality.

The pathway leading to these syntheses is clear in quantitative research; through the study of the relationships among variables, it brings the researcher to the enunciation of causal relationships among the variables themselves. After breaking down the individual into variables, quantitative analysis reaches a preliminary synthesis by correlating these variables (which can be synthesized into
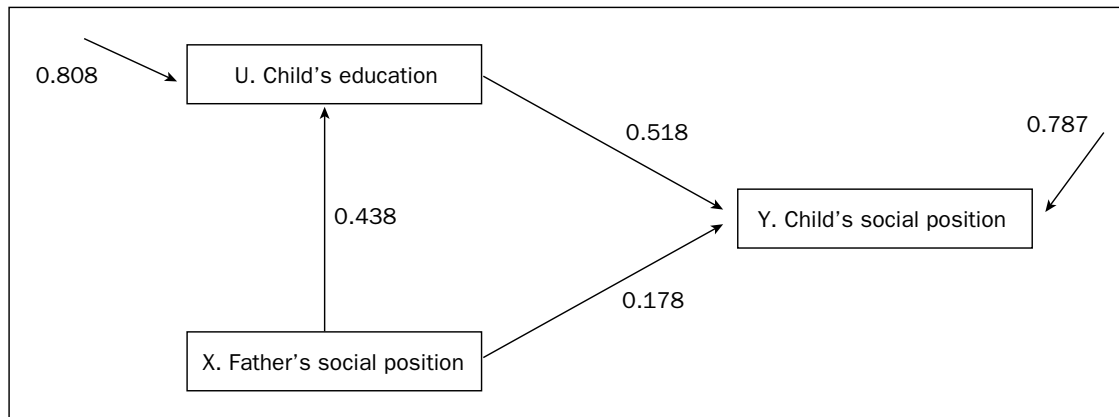
FIGURE 2.1 *Causal model of the links among father's social position, child's education and child's social position (Blau and Duncan, 1967)*

numerical indexes such as the correlation coefficient). It then achieves a higher level of conceptualization in the causal model (constituted by a network of cause-effect relationships among variables) and, in the most successful cases, in the formulation of synthetic expressions that come close to the 'laws' of the natural sciences.

To illustrate this point, we will look at a well-known study of the processes of social stratification conducted in the United States in the 1960s (Blau and Duncan, 1967). One of the tasks undertaken by the authors was to gauge how far an individual's social position was influenced by 'ascribed' status (in this case, the social position of the father) and how far by 'acquired' status (acquired during life, in this case through education). To put it bluntly, they wanted to find out whether it was more important to have a rich father or a good academic curriculum in order to be socially successful. The authors were well aware of the difficulty of separating the action of the two factors, given that the two 'causal' variables are interrelated (as the father's social position also influences the child's success at school). The model reported in Figure 2.1 shows the causal links (represented by arrows) hypothesized among the variables: a direct influence of 'child's education' on 'child's social position' (U → Y); a direct

influence of 'father's social position' on 'child's social position' (X → Y); and, finally, an indirect influence of 'father's social position' on 'child's social position' operating through 'education' (X → U → Y: a father with a good social position can help his child to achieve a high level of education, which in turn acts favourably on social position). Through the statistical technique of *path analysis* (which we will not dwell upon here) the relative weights of these different causal factors can be quantified (cf. the coefficients assigned to the arrows in the figure). The values reported reveal that the influence of education is greater than that of the father's social position. Moreover – going deeper into the analysis – it can be shown that even when the indirect influence of the father's social position is taken into account, the overall action (direct + indirect effect) of this variable does not reach the level of influence of education. Therefore the study was able to quantify the separate effects of the variables' 'ascribed' and 'acquired' status, and to demonstrate that the latter plays a more important role than the former.

This type of procedure is fairly common in quantitative research. In qualitative research, however, it is more difficult to pick out generally agreed-upon methods of synthesizing information. Nevertheless, many authors (including Lofland, 1971; Hammersley and

Atkinson, 1983; Spradley, 1980) maintain that the best way to achieve this kind of synthesis is by identifying 'types'. Then again, this is the approach proposed by Weber, who formulated the concept of the 'ideal type'.

As mentioned in Chapter 1, the ideal type is a conceptual category that does not have a genuine counterpart in reality. Although arising out of the observation of actual cases, it is a construction. It distils out the essence of the actual cases by purging them of the details and haphazard features of reality. In this way, it raises them to a higher plane of abstraction, so that the 'model' thus obtained can be used as a limit-concept to illuminate and interpret reality itself.

The use of the ideal type to guide the interpretation of reality is exemplified by the study *Lads, Citizens and Ordinary Kids*, conducted at the end of the 1970s by Jenkins (1983) on a group of working-class, Belfast adolescents (53 boys and 33 girls). Through in-depth interviews and participant observation, the author was able to identify three synthetic conceptual categories: 'lads' (boys whose behaviour and reference values are characterized by certain male-chauvinist, anti-bourgeois traits traditionally found in the working class), 'citizens' (who embody the respectable bourgeois values of sobriety, hard work, independence and aspiration to social betterment), and 'ordinary kids'. These he used to re-examine, order and analytically interpret the whole of his empirical material.

Through these categories, the author was able to interpret lifestyles (spending, clothing, pastimes, etc.), interaction with the opposite sex, relationships with the Church and with sport, views of the family and marriage, school careers, early work experience, etc. Classification into the three types provided a very good framework within which to interpret the subjects' various views of, for instance, marriage and the family. According to the 'lads' and the 'ordinary kids', a woman's place is in the home and, as a general rule, she will give up her job shortly after getting married, in order to have children. The 'citizens', on the other hand, hold the

view that a wife should continue to work, in order to save up to buy a house, and put off having children until later. The 'citizens' also see public courtship, engagement and a Church wedding as the 'respectable' pathway to marriage; sex before marriage is acceptable, but only within the context of a steady relationship. The other two types express various degrees of dissent from these views. Likewise, this typology is used to interpret the differences in the sample over the whole range of issues raised.

It should be stressed that, in all such cases, reality is not simply described; on the basis of the categories or ideal types identified, it is read, interpreted, analysed and finally *recomposed and synthesized*. Indeed, Jenkins re-examines the cases, reassesses their attributes and reinterprets the data in the light of the three types proposed. To return to an example quoted earlier, Sánchez-Jankowski (1991) used his four emotional triggers of violence in the same way (and these were also ideal types: fear, ambition, frustration and exhibitionism) in order to interpret the various episodes of violence that he had witnessed.

We will conclude this section with a reminder of the difference between the quantitative and qualitative approaches in terms of the two mechanisms of 'explanation' and 'interpretation'. In the qualitative studies illustrated here, no attempt is made to investigate the causal mechanisms that lead to the differences in attitudes, behaviours and lifestyles observed among the subjects during the course of data analysis. Jenkins does not ask why the 'lads' have a different view of marriage from the 'citizens'; rather, he seeks to describe these differences by interpreting them in the light of the general characteristics of the two ideal types. To put it simply, while quantitative research asks *why*, qualitative research asks *how*. Denzin, a staunch supporter of the interpretive approach, affirms, 'In my study on "Alcoholics Anonymous", I did not ask why individuals became alcoholics; I asked instead, how they came to see themselves as alcoholics. This way of asking the question led to a focus on social process,

and not to a preoccupation with antecedent causal variables … My preference is to always focus on how an event or process is produced and created, and not to ask only why it happened or what caused it' (Denzin, 1989: 26).

At the other extreme, the ultimate aim of quantitative research is to identify the causal mechanism. While it will not always be possible to formalize a 'causal model' in which independent and dependent variables are linked by a precise network of causal relationships (as in the example of Blau and Duncan's 1967 study), the quantitative researcher will nevertheless be guided by the logic of the cause-effect mechanism. An example of this has already been seen in Sampson and Laub's research, in which the variables can basically be grouped under the three headings of 'causes', 'effects' and 'conditions', and the researchers' inquiries are always driven by the question of 'what causes what' and on what conditions.[6]

Recalling what has been said about the different focus – on variables or on subjects – of quantitative and qualitative analyses, we may add that the causal model binds *variables* together (in the logic of 'causation'), while the typology represents the theoretical scheme that links *subjects* (in the logic of 'classification').

Finally, a question that subsumes many of the themes treated is that of the *scope of findings*. This issue has already been touched upon with regard to sampling and the representativeness of the cases studied. As qualitative research necessitates in-depth investigation and identification with the object studied, it cannot handle large numbers of cases. The research carried out by Sánchez-Jankowski, who took part in the lives of the members of 37 gangs, is not so much rare as unique. Indeed, his observation in the field lasted some 10 years, which is in itself exceptional. Normally, research is conducted on few, or even very few, units. A very frequent occurrence is that of the 'case study', which focuses on a single specific situation (a gang, a neighbourhood, a factory, an organization, an event, etc.)

But in situations that are so specific (even if they are chosen in such a way as to be as representative as possible), how can we make observations or draw conclusions that have general validity? Research conducted on few cases can certainly go into greater depth, but this will necessarily be at the expense of the generalizability of its findings. As Michael Patton points out:

> It is possible to study a single individual over an extended period of time – for example the study, in depth, of one week in the life of one child. This necessitates gathering detailed information about every occurrence in that child's life and every interaction involving that child during some time period. With a more narrow research question we might study several children during a more limited period of time. With a still more limited focused question, or an interview of a half hour, we could interview yet a larger number of children on a smaller number of issues. The extreme case would be to spend all of our resources and time asking a single question of as many children as we could interview given the resource constraints (Patton, 1990: 166).

Depth and breadth are therefore inversely correlated; the more deeply the study penetrates, the fewer cases it can take in. However, the number of cases is linked to the generalizability of the findings. The broader the research – that is, the greater the number of subjects it covers – the better the sample will be able to represent the multifarious nature of reality, and the more legitimately the research results (provided no systematic bias arises) can be extended to the entire population.[7] In sum, quantitative research findings are undoubtedly more generalizable than those of qualitative research.

4. A FINAL NOTE: TWO DIFFERENT MODES OF INVESTIGATING SOCIAL REALITY

We will conclude this chapter with a naïve question: Is it better – scientifically more correct, cognitively more fruitful – to adopt

the quantitative or the qualitative approach to research? Can it be claimed that one is superior to the other from a 'scientific' point of view? Three positions on the issue can be discerned. The first is that the quantitative and qualitative approaches, the neopositivist and interpretive paradigms, represent two incompatible points of view, in that they are epistemologically incommensurable and are based on contrasting philosophical foundations. The supporters of each perspective claim that theirs is the right one and that the other is wrong. According to the advocates of the quantitative approach, the qualitative approach is simply not science, while adherents to the latter maintain that aping the natural sciences is no way to grasp the true essence of social reality.

A second point of view is widely held among social scientists of the quantitative persuasion. Though having opted for the neopositivist paradigm, these researchers do not deny that worthwhile outputs can be yielded by qualitative techniques. Nevertheless, such techniques are seen as belonging to a pre-scientific exploratory phase, their function being to stimulate thinking in a kind of brainstorming that precedes the truly scientific phase. This ancillary role of qualitative research is aptly illustrated in the following extract by Blalock:

> In general, techniques of participant observation are extremely useful in providing initial insights and hunches that can lead to more careful formulations of the problem and explicit hypotheses. But they are open to the charge that findings may be idiosyncratic and difficult to replicate. Therefore, many social scientists prefer to think of participant observation as being useful at a certain stage of the research process rather than being an approach that yields a finished piece of research. (Blalock, 1970: 45–46)

Finally, the third view upholds the legitimacy, utility and equal dignity of the two methods, and expresses the hope that social research will adopt whichever approach best suits the circumstances (and this may mean both). This is a stance that has been consolidated in recent years, and one which has emerged not so much from new philosophical and epistemological reflections as from the pragmatic realization that valuable contributions have been made to sociology and social research by both quantitative and qualitative techniques. On this point, Bryman states explicitly that 'the distinction between quantitative and qualitative research is really a technical matter whereby the choice between them has to do with their suitability in answering particular research questions … (not unlike other technical decisions) such as when it is appropriate to use a postal questionnaire, or to construct a stratified random sample' (Bryman, 1988: 109). This same viewpoint is expressed in the manual of qualitative research methodology entitled *Two Styles of Research, One Logic of Inference*, in which the authors claim that 'the same underlying logic provides the framework for each research approach … the differences between the quantitative and qualitative traditions are only stylistic and are methodologically and substantively unimportant' (King et al., 1994: 3–4).

My own position is closest to this third view, but with some important differences. I do not agree that quantitative and qualitative methods are simply two different technical manifestations of what is substantially the same vision of the social world and of the purposes of research. In my view, these two ways of conducting research do not differ merely in terms of procedure, as Bryman claims. Rather, they are the direct and logically consequential expression of two different epistemological visions, the methodological manifestations of two different paradigms which imply alternative conceptions of social reality, research objectives, the role of the researcher and technological instruments.

But if the two approaches are different, does this necessarily mean that one is right and one is wrong? My personal answer is 'No'. Surely, two different visual perspectives of the same reality can both contribute significantly to our knowledge of that reality, just as a city might be illustrated both by a

panoramic photograph and by a photograph of one of its most characteristic streets.

Let's consider Sampson and Laub's research, which aims to test a precise theoretical model of the pathway that leads the individual into crime and consolidates illegal behaviour, analyses this process in terms of dependent and independent variables by utilizing the categories of cause and effect and recording quantitative data on a sample of 1000 subjects. And let's consider, by contrast, Sánchez-Jankowski's research, which strives from within to understand the motivations that prompt a youth to join a gang and to engage in acts of violence, involves close participation in the daily life of city gangs. Of the two perspectives that are illustrated by these two different methods of conducting research, can we say that one is right and the other is wrong? Can it be claimed that one enriches our knowledge of juvenile delinquency while the other paints a distorted and deceptive picture? Such a thesis would be difficult to sustain, as both studies clearly make their own significant contribution to our knowledge of this social phenomenon.

Nevertheless, I feel that it is difficult, if not impossible, to harness the two approaches within the same research design; the procedures and the instruments used are too different.

Indeed, those studies that are quoted as having adopted both approaches have, in reality, been substantially oriented towards one of the two perspectives, and have made purely ancillary use of techniques taken from the other. Moreover, I believe that the same researcher is unlikely to be able to conduct studies by means of the two different approaches (obviously at different times) and achieve equally good results. His training as a scholar, indeed the very structure of his scientific mind-set, will probably preclude this kind of flexibility.

To conclude, neopositivist and interpretive approaches, quantitative and qualitative research, yield different results, but both are rich of social knowledge.

SUMMARY

1. Sampson and Laub's secondary analysis of survey data concerning juvenile delinquency is an example of quantitative research based on the neopositivist paradigm. It features a systematic working method, in which each chapter follows a four-step path: theoretical framework, empirical recording, results of analysis,

return to theory. Data analysis is performed on variables with quantitative statistical tools in order to produce 'causal models', in which variables are connected through cause-effect relationships.

2. Sánchez-Jankowski's study, a typical case of participant observation, is a good example of qualitative research based on the interpretivist paradigm. Even though the topic is similar to Sampson and Lamb's study, the working method is very different. The author participated fully in the life of the gangs which were the object of his investigation, got involved in what they did, and recorded data by writing notes in his notebook during the course of observation. His overall goal is not to discern cause-effect relationships between variables, but rather to understand the motivations underlying gang members' behaviour and to draw up classifications and typologies.

3. The differences between quantitative and qualitative research – no longer in terms of their philosophical and epistemological premises, but of their concrete application to research – can be understood by examining how they develop the four basic stages of empirical research: planning, data collection, data analysis and scope of findings.

3.1 *Research planning* The difference between quantitative and qualitative research hinges on the fact that the first relies on a pre-defined, structured design based on hypotheses drawn from theory; whereas the second rests on an open, interactive work plan, in which specific procedures emerge and change as the research proceeds. Moreover, in quantitative research the researcher's attitude toward her subjects is neutral and detached, whereas in qualitative research it features empathy and identification.

3.2 *Data collection* Quantitative research usually deals with a representative sample of the target universe and aims to build a 'data matrix', i.e. gather the collected data in a standard format which is the same for all cases. Qualitative research does not address issues of standardization and representativeness, and prefers treating selected cases in a differential manner, according to their perceived relevance.

3.3 *Data analysis* In quantitative research data analysis focuses on variables, i.e. on the characteristics of cases, which are examined with mathematical procedures and statistical tools. In qualitative research, on the other hand, analysis focuses on subjects considered in their entirety and attempts to achieve an understanding of these subjects rather than identify relationships among variables.

3.4 *Scope of findings* The goal of quantitative research is to produce generalizations, i.e. syntheses that apply at a higher, abstract, conceptual level (such as cause-effect relationships among variables) and in a wider field (such as other societies, different from the one actually studied). In general, qualitative research is less interested in generalization of findings and pays more attention to the specific features of social situations in which research is carried out.

FURTHER READING

A. Bryman, *Quantity and Quality in Social Research* (Routledge, 1988, pp. 198) is a good introductory text which explores the distinction between qualitative and quantitative research. Another introductory text, which will help the would-be researcher to choose between the two approaches, is J.W. Creswell, *Qualitative and Quantitative Approaches* (Sage, 1994, pp. 227).

Two volumes are recommended for all those who wish to reconcile qualitative and quantitative approaches and make the most of their differences: I. Newman and C.R. Benz, *Qualitative-Quantitative Research Methodology: Exploring*

the Interactive Continuum (Southern Illinois University Press, 1998, pp. 218); A. Tashakkori and C. Teddlie, *Mixed Methodology: Combining Qualitative and Quantitative Approaches* (Sage, 1998, pp. 185).

The basic text on qualitative research is the vast collection of materials and discussion gathered by N.K. Denzin and Y.S. Lincoln, *Handbook of Qualitative Research* (Sage, 2000, pp. 1065); it offers a large number of essays (41) that trace the history of qualitative methods (see A.J. Vidich and M.L. Stanford, *Qualitative Methods: Their History in Sociology and Anthropology*), the underlying paradigms, the different strategies of inquiry and methods of collecting, analyzing and interpreting empirical materials.

Two volumes can be recommended for further study of quantitative methods. The first – P.S. Maxim, *Quantitative Research Methods in the Social Sciences* (Cambridge University Press, 1999, pp. 405) – adopts a more methodological approach and addresses the philosophical bases of scientific research, the issues of statistical inference, measurement, scaling, research design, and sampling. The second volume – T.R. Black, *Doing Quantitative Research in The Social Sciences: An Integrated Approach to Research Design, Measurement and Statistics* (Sage, 1999, pp. 751) – is more technical and devotes over half its pages to procedures of statistical transformation of information into data and their analysis.

NOTES

1. A much debated example of this kind of reification was that of the intelligence quotient; in many situations, the instrument (IQ) used to measure intelligence became synonymous with the concept of intelligence itself. The highly restrictive and culturally biased nature of the instrument gave rise to serious consequences.

2. The author had previously noted that one of the meanings given for the word 'gang' in Webster's *New American Dictionary* was that of 'journey'.

3. The 'holistic perspective' (from the Greek *hólos* = whole, entire) is also taken to mean an approach in which social objects (organizations, institutions, groups, etc.) are studied in their entirety as complex systems, on the supposition that a system cannot be divided into distinct, independent parts on account of the systemic interaction of all its parts.

4. This does not mean that the simple use of quotations can convey to the reader the vision of reality held by the individuals studied. What is conveyed by the research report will always be the researcher's interpretation: the choice of which subjects to quote, emphasis on one snippet of conversation rather than another, and the logical thread that ties the various quotations together. Nevertheless, the fact remains that the interviewee's response is reported in its original form, while the data reported in the table are subject to a further mediating element, which is the coding of responses within categories pre-established by the researcher.

5. Tables may, of course, be used to depict secondary and descriptive variables, such as basic sociographic variables.

6. For illustrative purposes, the comparison between quantitative and qualitative methods has highlighted the opposition between explanation and interpretation, the question of why and the question of how, causation and classification, analysis by variables and analysis by subjects. In reality, of course, these distinctions are never so clear-cut. For instance, quantitative research also makes ample use of typologies. What is even more important, however, is that the causal mechanism is evident in many interpretive approaches; Weber, for example, even admits the existence of 'laws', though he regards them only as instruments for understanding the behaviour of the individual, and not as the objective of social research (cf. Kaplan, 1964: 115).

7. The argument that few cases, if carefully selected (so as to be 'typical'), can represent the range of variations present in the population is unconvincing. Indeed, how can we ensure that the cases selected are 'typical' of the host of possibilities occurring in reality, when the very purpose of the research is to discover that reality? Moreover, sometimes it is those very cases that deviate from the norm which are the most illuminating.