

Varieties of social research

This chapter

- highlights the varieties of research
- examines the nature of quantitative research
- explains the main attributes of qualitative research
- explains the epistemological foundations of both types of research
- presents a comparison of the two methodologies.

Key headings

Introduction

- 1 The bases of the methodological distinction
 - 2 Quantitative methodology
 - 3 Qualitative methodology
 - 4 Mixed-method research
 - 5 Internet research
 - 6 Critical research
- Main points
- Where to from here?
- Further reading

Introduction

As noted in the previous chapter, social research is complex, diverse and pluralistic. The way research is conducted, its goals and its basic assumptions vary significantly. This diversity appears in well-constructed designs, which ultimately provide the standards and principles of research practice. The two major and most popular forms of research are quantitative and qualitative research. These methodologies guide the work of the vast majority of researchers in the social sciences.

In this chapter we shall address these methodologies in detail, starting with an exploration of the principles that guide the research structure and generate diversity in its design and practice. Following this, we shall present in more detail their structures and processes, their strengths and weaknesses, their usefulness and the degree of flexibility of their epistemological and methodological boundaries.

1 The bases of the methodological distinction

Diversity in research reflects the diversity (a) in the type of the research subjects, and (b) in the standards and principles that guide research. The former is about the way in which each of the two research models perceive reality. For instance, is reality objective or subjective? Is it approachable through the senses or through the mind? The latter refers to the nature of the parameters that construct research designs. In this sense, the diversity and complexity of the research methods will be explored in terms of epistemological and ontological standards and principles of social research, as explained below.

- 1 Social research is guided by three fundamental factors namely *ontology*, *epistemology* and *methodology* (see Figure 2.1).
- 2 These elements are set in a hierarchical and deterministic order, in that ontology constructs the logic of epistemology, epistemology structures the nature methodology, and methodology prescribes the appropriate types of research methods, designs and instruments.
- 3 There are two ontologies, the *realist* and the *constructionist* ontology.
- 4 The realist ontology entails an *empiricist* epistemology, a *quantitative* methodology, a *positivist* paradigm and a *fixed* design.
- 5 The constructionist ontology entails an *interpretivist* epistemology, a *qualitative* methodology, a number of paradigms (e.g. symbolic interactionism, phenomenology, feminism, etc.), and a flexible design, although strict designs are also employed.
- 6 Social research is as diverse as (a) its subject of study and (b) its parameters that guide it.

This list contains the philosophical and methodological elements that make social research distinctive and diverse. The description is obviously complex and requires further explanation of the new concepts and processes, and this is the point we shall focus on in the following discussion.

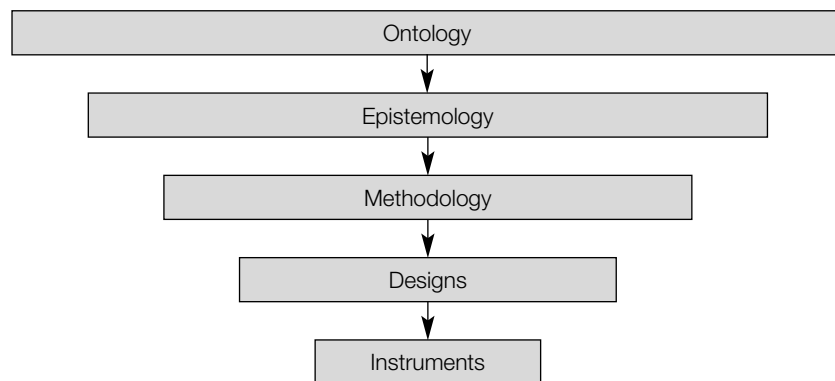


Figure 2.1 The foundations of social research

The specific way in which ontologies and epistemologies influence the structure and process of social research is explained by the area of study known as the *philosophy of science* (Konegen and Sondergeld, 1985; Machamer, 2002; Nelson, 1990; Poser, 2001). The two dominant ontologies are *realism* and *constructionism*. More specifically, ontologies inform methodologies as to the nature of reality, or better as to ‘what’ social research is supposed to study. Epistemologies inform methodologies about the nature of knowledge, or about what counts as a fact and where knowledge is to be sought. Methodologies prepare ‘packages’ of appropriate research designs, to be employed by researchers, instructing them as to where to focus their research activity, and how to recognize and extract knowledge (see Table 2.1).

Table 2.1 Theoretical foundations of social research

Ontology	Ontology deals with the nature of reality . ASKS: What is the nature of reality? Is it objective (out there), constructed, subjective? OR BETTER: What does research focus on?
Epistemology	Epistemology deals with the nature of knowledge . ASKS: How do we know what we know? What is the way in which reality is known to us? OR BETTER: What kind of knowledge is research looking for?
Methodology	Methodology deals with the nature of research design and methods . ASKS: How do we gain knowledge about the world? OR BETTER: How is research constructed and conducted?
Research design	Research is the execution of research designs as constructed and guided by ontological, epistemological and methodological prescriptions.

Ontological, epistemological and methodological prescriptions of social research are ‘packaged’ in paradigms which guide everyday research. Simply, ontological, epistemological and methodological principles of the same nature are organized into paradigms, which together with methodologies constitute the domain within which research is conducted. Hence, the positivist paradigm, which contains a *realist/objectivist ontology* and an *empiricist epistemology*, guides the strategy of quantitative methodology, and therefore prescribes fixed designs and quantitative methods. Likewise, the paradigms of symbolic interactionism and phenomenology, which are based on a *constructionist ontology* and an *interpretivist epistemology*, guide the strategies of qualitative methodology and prescribe mostly flexible designs and qualitative methods. We shall explain this later in more detail.

In this sense, methodology occupies a central position in the research process. Put differently, *methodology* is a research strategy that translates ontological and epistemological principles into guidelines that show how research is to be conducted. Methods, on the other hand, are instruments employed in the collection and analysis of data.

Table 2.2 Theoretical construction of research

	Research strategy 1	Research strategy 2
Ontology	Realism/Objectivism	Constructionism
Epistemology	Empiricism	Interpretivism
Methodology	Quantitative	Qualitative
Paradigms	Positivism	Symbolic interactionism Phenomenology; etc.
Research	Fixed design	Fixed/flexible design

Briefly, a *paradigm* is a set of propositions that explain how the world is perceived; it contains a worldview, a way of breaking down the complexity of the real world, telling researchers and social scientists in general ‘what is important, what is legitimate, what is reasonable’ (Guba, 1990; Patton, 1990: 37). It is a philosophical stance that informs the methodology, provides the arena in which the logic and structure of research are embedded, and guides the process of research (Farber, 2001). Examples of such paradigms are positivism, symbolic interactionism, ethno-methodology and phenomenology.

Before we continue, it is worth noting that there are other types and perceptions of research which do not fit fully within the parameters of qualitative and quantitative methodologies. Structuralism and postmodernism are two examples of how research departs from the two models described above. *Methodological anarchism* (see Feyerabend, 1993, 1989, 1981, 1976) is another example. The followers of this paradigm argue that there is no truth in statements about the nature of reality, and that there are no valid methodological rules as to how research is to be conducted; for them ‘anything goes’. Still, the majority of researchers conduct their studies within either a quantitative or a qualitative methodology, or both. These methodologies provide the parameters for a systematic and valid research design, and will be introduced next.

Box 2.1**What is Realism?**

Realism is the doctrine that ...

- Universals have an objective or absolute existence.
- Matter, as the object of perception, has real existence, is neither reducible to a universal mind or spirit, nor dependent on a perceiving agent.
- The world has a reality that transcends the mind's analytical capacity, and propositions are to be assessed in terms of their truth to reality.
- Reality exists independent from our consciousness and experience.
- The world exists independent from people and their perception, BUT can be made an object of human perception.

(Hügli and Lübcke, 1997: 185)

Another important point that deserves our attention is that there are writers who define the ontology and epistemology of qualitative research in a different way. You may find, for instance, that the ontology of qualitative research is *idealism* and its epistemology *rationalism*. Although these concepts have a place in the philosophy of science and in philosophy in general, a more detailed explanation of their philosophical nature is beyond the boundaries of this text. Our choice for ontologies and epistemologies as explained in this text is well established and popular. Beyond this, it must be stressed that our focus here is on the essence of the parameters that guide social research, for example in how the nature of reality and knowledge is perceived, and less in controversies on philosophical distinctions.

2

Quantitative methodology

2.1 Theoretical background of quantitative research

The theoretical underpinnings of quantitative methodology are those of positivism, as guided by a *realist* (see Box 2.1) and *objectivist* (see Box 2.2) ontology, and by an *empiricist* epistemology (see Box 2.3). Hence, quantitative methodology is an empiricist methodology, and its methods empirical methods. Its main research parameters are presented below.

Box 2.2

Features of objectivism

- Reality and truth exist objectively and can be discovered and adequately measured.
 - Reality is 'out there', has an identity of its own, and exists apart from our awareness.
 - Reality is single, solid and uniform: it generates the same meanings for all actors.
 - Reality is 'found' by the researcher and brought to awareness and to social light.
 - Observance of objective detachment and value neutrality is desirable.
- *Perception of reality.* Quantitative methodology perceives reality as objective, simple and fixed. Furthermore, (a) reality consists of sense impressions, that is of everything that can be perceived through the senses; (b) there is one reality in nature, and only one truth; (c) reality is independent of human consciousness and rests on order, which is governed by strict, natural and unchangeable laws; (d) knowledge of the laws can help to predict and control the outcomes of human action; and (e) all people define reality in the same way because (i) objects generate the same meanings and (ii) people see and name them in the same way.
 - *Perception of human beings.* Human beings are rational individuals who are governed by social laws; their behaviour is learned through observation and governed by external causes that produce consistent results (the same causes produce the same results). Human beings are shaped by their social world just as the physical world is governed by fixed laws; they are subject to fixed patterns of life that are empirically observable (this is the thesis of *nomological thinking*). There is no free will. The world is, however, not deterministic; causes produce effects under certain conditions, and predictions can be controlled by the occurrence of such conditions.

Box 2.3**What is empiricism?**

Empiricism goes back to the writings of the seventeenth and eighteenth centuries, and is directly associated with the work of Francis Bacon (1561–1626), John Locke (1632–1704) and David Hume (1711–1776). Empiricism supports the view that knowledge comes through experience mediated through the senses, and that insight can only be achieved through pure experiences. Empiricism assigns a high value to experience and gives primacy to facts. Hence, observation and experience offer the basis of knowledge. For Hume, opinions are reflections of our impressions of reality. In a more radical form (logical empiricism), empiricists argue that only things that can be verified empirically exist. What cannot be verified does not exist; truths that are not based on experience are meaningless.

- *The nature of social science.* Science, the tool of knowledge extraction:
 - is based on strict rules and procedures, and is fundamentally different from speculation, reason and common sense
 - is deductive, proceeding from the general/abstract to the specific/concrete
 - is nomothetic; that is, it is based on universal causal laws, which influence the course of social events and relationships
 - relies on knowledge gained through sense experiences; other sources of knowledge are unreliable. Observation and experience offer the basis of knowledge. The task of the researcher is to discover the scientific laws that explain human behaviour using quantitative methods, similar to those of natural sciences.

Box 2.4**Central criteria of quantitative research**

- | | |
|---|---|
| 1 Use of empirical methods. | 9 Replicability. |
| 2 Objectivity. | 10 Representativeness and generalization. |
| 3 Value neutrality. | 11 Strict reliance on methods and their results. |
| 4 Clarity in design and procedure. | 12 Rigorous, disciplined, systematic and reality-bound procedure. |
| 5 Distance between researcher and subjects of research. | 13 Strict research design constructed before research begins. |
| 6 Measurement and quantification. | 14 Ethical considerations. |
| 7 Accuracy and precision. | |
| 8 Validity and reliability. | |

- *The purpose of social research.* Quantitative researchers perceive social research in an instrumental way. Research is seen as a tool for studying social events, and for learning about them and their interconnections, so that general causal laws can be discovered, explained and documented. Knowledge of events and social laws helps to control events and to predict their occurrence and outcomes.

2.2 Critical realism

Critical realism (CR) is one out of many types of realism introduced by scholars in a variety of academic areas. Direct realism, empirical or scientific realism, naïve realism,

new realism, representative realism and transcendental realism are a few examples. In the UK, critical realism was introduced by Roy Bhaskar, as presented in his book *A Realist Theory of Science*, but other scholars contributed in many ways to the construction and refinement of this philosophical approach, partly adjusting it to their overall philosophical orientation and school of thought in several countries.

CR is a form of post-positivism, and is concerned with social and physical reality, and more so with the world and the social scientific method. Critical realism is based on the theoretical position, that there is a structured reality which is independent from human thinking (see Albert, 1987; Musgrave, 1993), and that this reality is recognizable, up to a certain point at least (Wiesman, 2005: 61). For the researcher this means that the world cannot be accessed directly but only indirectly and intellectually.

Box 2.5

Features of critical realism

Critical realism ...

- 1 Stands between positivism and postmodernism.
- 2 Rejects the objectivist and constructionist ontologies.
- 3 Assumes that there is a real world.
- 4 Is based on the conviction that reality is independent of people's perception of it, but accessible to scientific study.
- 5 Denies the view that it is possible to access reality by means of sensory experience.
- 6 Presumes that the social world is produced and transformed in daily life.
- 7 Perceives the social world as mediated and subjective.
- 8 Proposes that the existence of constructive mechanisms can be proven through their effects.
- 9 Suggests that the purpose of social research is to seek the outcomes of these mechanisms through hypothesis testing.
- 10 Finds qualitative methods as appropriate to study the social world.

CR rejects objectivist and constructionist ontologies, and instead proposes that 'the social world is produced and transformed in daily life' (Bhaskar, 1989: 4). In this sense it rejects positivistic rules and standards of quantification, measurement and prediction and finds qualitative methods more appropriate for studying the social world. A brief description of critical realism is presented in Box 2.5 (see Wiesman, 2005: 50–54; Bhaskar, 1989: 4)

Critical realism has been established as a popular philosophical approach not only in the UK but also in other parts of Europe, especially Germany, as well as in the USA, and had an impact on a variety of areas of science ranging from philosophy to theology.

2.3 Positivism

Positivism is a philosophical position adequately equipped to guide the procedure of quantitative social research. What attracts researchers to positivism are the way it perceives reality (the object of analysis), the creation of knowledge, and the structure and nature of research. In this sense, positivism perceives reality as being objective, focusing

on observation and measurement of social phenomena, and supporting deductive (not inductive) reasoning, objectivity and empiricism. A list of the central principles of the positivist approach are listed in Box 2.6. We shall see later that these criteria are the opposite of those supported by qualitative paradigms.

Positivism is often taken to be identical to quantitative methodology because it contains the ontological and epistemological prescriptions that show how this methodology should conduct research. Its elements are reflected in the ontological and epistemological descriptions, as well as in the presentation of the theoretical background of quantitative methodology. A brief summary of the main features of positivism is presented in Box 2.6. It is worth noting that positivism appears in a variety of formats.

Logical positivism (also known as logical empiricism and as neo-positivism) and *post-positivism* are two examples. What is characteristic in these types of positivism is that they disagree and even reject the central principles of positivism to the point that one wonders why they carry that name.

Box 2.6

The ten central principles of positivism

- 1 *Objectivism*. Adheres to the notion of objective reality and absolute truths.
- 2 *Empiricism*. Claims that knowledge comes through sense experience.
- 3 *Quantitativism*. Stresses the value of accuracy, precision and measurement.
- 4 *Objectivity*. Discourages subjectivity in the process of social research.
- 5 *Value-neutrality*. Maintains that facts should be kept apart from values.
- 6 *Anti-rationalism*. Rejects the notion that knowledge comes from reason.
- 7 *Universality of science*. Asserts that the methods of the physical sciences are applicable also in the social sciences.
- 8 *Deduction/induction*. Employs a design based on deduction and produces inductive generalizations.
- 9 *Determinism*. The world is deterministic, following strict causal laws, and if these laws are discovered social life can be predicted and controlled.
- 10 *Knowledge*. Asserts that knowledge is gained through descriptions of sense experiences.

2.4 Critique of quantitative methodology

Concerns with quantitative methodology (QtM) expressed mostly by qualitative researchers reflect the underlying positivist paradigm. Critics come from within and from outside this school of thought (e.g. Guba and Lincoln, 1994: 106–7), and raise questions about deep and fundamental aspects of positivism in general and QtM in particular. The most important points can be summarized as shown below.

- *Reality*. Reality is not objective but interpreted social action.
- *Meanings*. In QtM, quantitative measurement is given excessive importance, despite the fact that it often results in ‘meanings’ that are closer to the beliefs of the researchers than to those embedded in reality.

- *Hypotheses.* Hypotheses formed before the research commences bias the course of the study and restrict research options, forcing upon the respondents opinions or intentions that they might otherwise have not expressed.
- *Experience.* QtM restricts experience (a) by directing research to what is perceived by the senses, and (b) by employing only standardized tools focusing on quantifiable data.
- *Appearance and essence.* QtM fails to distinguish between the appearance and essence of social events; it neglects the essence of life, studies 'appearance' and assumes that appearance is reality.
- *Status quo.* QtM employs a theoretical perspective and a type of research that supports the status quo and existing power structures.
- *Methods.* In QtM, methods are given a central position, to the extent that they dictate the parameters of research. Often, instead of trying to adjust methods to reality, reality is adjusted to methods. As a result, research is limited only to what can be approached through the existing methods. What cannot be approached through quantitative methods is deemed insignificant, is not considered worth studying and is not studied.
- *Measurement.* QtM perceives reality as a sum of measured or measurable attributes; its primary purpose is to quantify and measure social events, a characteristic often referred to as *quantaphrenia!* This introduces a peculiar and biased perception of the world.
- *The researcher.* QtM neutralizes the researchers and their influence on the researched, to the extent that they become 'disembodied abstractions', depersonalized (Collins, 1992: 183) and alienated from the world they are supposed to study. This is accomplished by hiding their identity, legitimating a sense of unconnectedness, bracketing out the personal experiences and views of the researcher as well as through refinement and standardization of methods and techniques. The researcher becomes a 'technician' who serves technocratic goals. In addition, respondents are turned into 'units' or 'objects' and are treated as such. Finally, the researcher is assigned power and control over the respondent.
- *Physicalism.* QtM takes the physical sciences as a model (often referred to as *methodolatry* or *physics envy*) and applies their methods in the field of social sciences, treating people as mere natural elements, and seeking the same regularity in social action as in natural phenomena. This is not an acceptable practice.
- *Objectivity.* Reliance on objectivity is unwarranted. Objectivity is not possible, necessary or useful. The perceptions and interpretations of the researcher penetrate the research process in many ways; being subjective offers many advantages in social research, and objectivity can only lead to a technocratic and bureaucratic dehumanisation (Brieschke, 1992: 174).
- *Research procedure.* QtM employs a strict research design that determines what is relevant and how it will be studied, and what is meaningful and required, even before the study begins. This restricts the options of the research process, inhibits the initiative and motivation of the researcher, limits the effectiveness of research and produces artificial data that do not reflect reality as a whole.

- *Context.* QtM operates in a mode that separates the object from its context. The personal attributes of respondents become variables, and intensity of feelings and attitudes become numbers and computer data. Such procedures change the structure and process of social life and convert the world into an artificial laboratory.
- *Gender.* Quantitative research has a gendered character based on the inherent trend to separate the world into fundamental dichotomies, one of which is the masculine versus feminine division. This separation is strengthened by the fact that men are presented as the experts, the 'knowing' subjects, while women are seen as the 'known' (inferior) objects. This ignores and downgrades women and, hence, fails to address reality fully and effectively.

Box 2.7

Is the interest in quantitative research really declining?

Here is how prestigious organizations perceive research (emphases added):

- 'Research refers to *empirical data collection* in the pursuit of *scientific endeavour* usually in the form of an experiment, survey or evaluation' (Australian Psychological Society, *Code of Ethics*).
- 'Sociologists work to develop a reliable and valid body of *scientific knowledge* based on research' (The International Sociological Association, Code of Ethics, Preamble).
- '*As scientists*, sociologists are expected to cooperate locally and transnationally on the basis of *scientific correctness* alone, without discrimination' (International Sociological Association, *Code of Ethics*).
- 'Sociologists should strive to maintain *objectivity* and *integrity* in the conduct of sociological research and practice' (American Sociological Association, *Code of Ethics*, I. A).
- The National Research Council (NRC) initiated the scientifically based research employing "rigorous, systematic, and objective methodology to obtain reliable and valid knowledge" (Ryan and Hood, 2004: 80).

These criticisms are well justified and address the essential elements of the paradigm as seen from the other side of the fence, mainly from the side of qualitative research. Nevertheless, there are those who defend the validity and significance of positivism as a research paradigm (Schrag, 1992). It is argued, for instance, that the positivist basis of quantitative research is still strong and is employed widely all over the world. As Schrag (1992: 6) put it, 'despite the attacks levelled against it, the positivist paradigm is hard to avoid'.

3

Qualitative methodology

3.1 What is qualitative research?

Qualitative research is a procedure that operates within a naturalistic, interpretive domain, guided by the standards and principles of a *relativist orientation*, a *construc-*

tivist ontology and an *interpretivist epistemology*. Nonetheless, the structure of qualitative research is not interpreted and practised by the researchers the same way, to the extent that some writers argue that there is not one but many qualitative methodologies; and that there is no common denominator in the various qualitative directions in social research (Maindok, 1996: 94; Jacob, 1987, 1988). More precisely, it is argued that ‘the field of qualitative research is defined by a series of tensions, contradictions, and hesitations. These tensions work back and forth between and among the broad, doubting postmodern sensibility; the more certain, more traditional positivist, postpositivist, and naturalistic conceptions of this project; and an increasingly conservative, neoliberal global environment’ (Denzin and Lincoln, 2005: 26–27).

Box 2.8

What is qualitative research?

‘Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them.’

(Denzin and Lincoln, 2005: 3)

Diversity is by no means a sign of weakness of qualitative research. On the contrary, it reflects richness and diversity, based on sound epistemological parameters that enable it to address issues of interest within environments that are compatible with the ontological and epistemological parameters of qualitative research. A clear generic definition that reflects the nature of qualitative research is presented in Box 2.8. The theoretical foundations of qualitative research will be introduced next.

3.2 Theoretical foundations of qualitative methodology

3.2.1 Constructionism

Constructionism focuses on the firm belief that there is in practice neither objective reality nor objective truth. On the contrary, reality is constructed. Although physical reality exists, it is not accessible to human endeavour. Constructionism is about realities and relationships (Gergen, 1994, 1999; Schmidt, 1998). Trees, rivers, forests and mountains may exist outside people’s consciousness but have no meaning before they are addressed by people. Their meaning is not fixed, ready to be discovered – as objectivists propose – but emerges out of people’s interaction with the world. Meanings do not exist before a mind engages them. There is no meaning without mind (Cooper, 1998: 8–9).

Box 2.9**Basic assumptions of constructionism**

- There is no objective reality; the physical world exists but is not accessible to human endeavour.
- There are no absolute truths.
- Knowledge does not come through the senses alone.
- Research focuses on the construction of meanings.
- Meanings are not fixed but emerge out of people's interaction with the world.
- Meanings do not exist before a mind engages them.
- The world is constructed by the people who live in it.

Constructing reality means making accounts of the world around us and gaining impressions based on culturally defined and historically situated interpretations and personal experiences. This means that what people perceive as reality is not 'the reality', but what they constructed through experiences and interpretations (Lamnek, 1995; Lueger, 2000: 21–38; Luhmann, 1997). In this sense, new structures are virtual structures because they do not realize real social phenomena but represent options of expressions of phenomena (Lueger, 2000: 24). They are latent and symbolic. Finally, in the social world there is no single structure but multiple structures interwoven with each other.

It follows that the construction of reality is an active process of creating a world. The reality people experience in everyday life is a *constructed* reality – their reality – based on interpretation. The presence of an objective reality is not disputed here; objective reality exists but it is not accessible. Hence, impressions of reality gained by researchers who listen to respondents talking about their lives are constructions of the constructed reality of the respondents; they are impressions of a reconstructed reality.

Box 2.10**The many faces of reality**

- Nature can and will show us another 'face', other laws or categories, and other forms of order, if we approach it at a higher degree of detail.
- The laws of nature and the validity of our observation will often be disintegrated (rejected, deconstructed) when our focus is set at a higher level of competence.
- Order can grow out of disorder if we focus away from details.
- Consideration of details complicates the human understanding of natural phenomena.
- The laws of nature always fall apart as soon as inquiry progresses to higher levels of detail.
- Every law that we might accept at a certain level will in the end be shaken when our knowledge of the details is improved.

(Rescher, 2002: 43–51)

For instance, an accident at the street corner is an objective reality, but it is not accessible to researchers. The impressions of witnesses are *constructions* of what they thought happened. The information gathered by reporters who interviewed these witnesses is a *reconstruction of reality*, and certainly not 'objective' reality. This allows two major observations. Firstly, there is no single reality but three levels of reality; and secondly, reality

does not exist in a frozen state; it is marked by a process-nature, recursivity and reflexivity. Given also that interpretations vary from one person to another, constructed realities are not uniform. Hence there are many forms of constructed realities and they therefore cannot be thought of as the only source of knowledge about reality. They are only variants of reality.

Going a step further into this process we can say that interpretation and (re)construction allow the identification of meanings assigned to objects, and this leads to a structuration of the field. Meanings are employed in the various contexts following cultural instructions rather than through the labels which, according to objectivists, are attached to objects. Identification of meanings reduces the degree of complexity by replacing this complexity with a new complexity that is easier to explore and understand.

Box 2.11

Popular facets of constructionism

- Two people walked through a rose garden. One saw the roses, the other saw the thorns.
- Two people looked out through the window. One saw the stars, the other saw the mud.
- 'All that we see and seem is but a dream within a dream' (Edgar Allen Poe).
- 'If people define situations as real, they are real in their consequences' (Thomas's Theorem).

Central to reality construction is 'communication', which is more than a means of exchanging information. Communication is a selective process of producing meaning in social contexts. This process entails three components: (a) the choice of a piece of information; (b) the choice of the form of information that will be shared; and finally (c) the choice of understanding of this information. Messages are expected to make the content clearly understandable, and to address the point fully. Important in this process of enabling the production of meanings, and of facilitating structuration and communication is, finally, the contextual embedding of objects: objects are meaningful and can be understood only within their context (Lueger, 2000).

3.2.2 *Individual and collective generation of meanings*

The extent to which people create meanings in interaction with objects varies. At the one end of the continuum, subjects assign such meanings each time they come across a subject; a notion criticized by many writers from within and outside the constructionist domain. More common is the view that the assignment of meanings is assisted by cultural mechanisms such as socialization where people learn to recognize meanings in subjects. Here the construction of meanings is based on culturally defined and historically situated interpretations and personal experiences.

This position is more evident in social constructionism, where the contribution of subjects to the construction of meanings is highly stressed. This is justified by the fact that culture and society are thought to play an important role in constructing meanings, through the process of socialization. Put simply, subjects do not assign new names and give no new meanings to objects; meanings are generated collectively, are readily available, already constructed by and conveyed through the culture, and are shared and socially constructed, and also sustained and reconstructed through interaction.

The main point here is that the process of socialization plays an important role by conveying meanings and by educating people where, under what conditions and how to assign them to items in everyday life. As a result of this, people learn how to face the world intelligently and uniformly, and how to make sense of the world. Hence, people learn to recognize objects as trees, cars, stars or forests. Still, the construction of meanings is more complex than it appears, and is certainly not without consequences, as shown in Box 2.12.

Box 2.12

Collective generation of meanings

Although the collective generation of meanings through socialization and through the media is generally highly valued, this process has been criticized by a number of writers. The main point made is that this process sets people's minds into pre-existing structures and inherited meanings, thus significantly restricting their options and chances in life. Simply, cultures and symbols, created and transmitted from generation to generation, or imposed upon them by their contemporaries, are thought to alienate people from the world they created, and ultimately imprison them in these structures. The media add to this problem by creating images of the world that are fed to the people without their consent or even knowledge, and so control their life. It is argued that the collective generation of meanings subjects people to hegemonic interests.

3.2.3 Interpretivism

The processes of construction and reconstruction are laden with personal inputs. Life in a social world makes it necessary for objectivity and rationality to become rather relative concepts. The key process that facilitates construction and reconstruction is *interpretation*. This involves reflective assessment of the reconstructed impressions of the world, and integration of action processes in a general context, which will constitute a new unit.

Interpretivism, as the framework within which qualitative research is conducted, 'looks for culturally derived and historically situated interpretations of the social life-world' (Crotty, 1998: 67). This position has its roots in *Verstehen* (understanding) of social life, which is connected with the work of Max Weber (1864–1920), Wilhelm Dilthey (1833–1911) and the Neo-Kantian philosophers Wilhelm Windelband (1848–1915) and Heinrich Rickert (1863–1936). *Verstehen* implies an interpretive stance and is contrasted to *Erklären* (explaining), which is taken to focus on causality. Within this domain, being 'interpretive' means to emphasize the production of meanings and to learn the special views of actors (Pfeifer, 2000).

Verstehen relates to the views, opinions and perceptions of people as they are experienced and expressed in every day life. Here the qualitative researcher is interested in the subjective meaning, namely the way in which people make sense of their world and how they assign meanings to it. The researcher may be interested in what divorce means to children, or in what it means to be a woman working in a job traditionally held by men. Methods commonly used in this context are intensive or narrative interviews and content analysis. An emphasis on the subjective meaning is evident in research based on symbolic interactionism and phenomenology.

The qualitative researcher often goes beyond identifying the subjective meaning and explores the processes of constructing social situations and everyday structures that guide and explain personal views and opinions, and focuses on *the mode of production of social structures*. The researcher is interested here in the factors and conditions, cultural prescriptions and the social order in general that generates certain situations and social structures, for instance, the manner in which patriarchal structures are created, imposed and maintained that oppress women. An emphasis on this type of research is evident in paradigms such as ethno-methodology and constructionism.

Some concerns

The proposition that subjects construct meanings every time they come across objects, and the failure to acknowledge the contribution of social and cultural mechanisms to this process, have led critics to doubt the credibility of constructionism. Apart from this, the point is made that the accuracy and correctness of people's constructions and of their representativeness cannot be tested (Schütz, 1971: 5). Finally, overemphasis on subjective impressions seems to be as dangerous and counterproductive as overemphasis on objectivism. Interpretivism is not seen as a full proof approach to reality; Blaikie (1993: 110–12; 2000) stresses some major criticisms of this epistemology, as shown in Box 2.13.

Box 2.13

Is interpretivism full proof?

- When interpretivists explore the meaningful nature of social life, they often employ a method which is similar to that employed by positivists.
- Adherence to the central elements of interpretivist inquiry (intention, reason, motives) is quite difficult to police; reflective monitoring is not always present.
- It is not possible to know whether researchers gain a true account of the respondent's meanings. Accounts of researcher and respondents may vary and be competing.
- Interpretivism fails to acknowledge the role of institutional structures, particularly division of interest and relations of power.
- Interpretivism cannot address the factors and conditions that lead to meanings and interpretations, actions, rules, beliefs and the like.
- Interpretivism is conservative in that it does not take into account structures of conflicts and hence the possible sources of change.

3.3 Central elements of qualitative research

The brief reference to the main features of the theoretical foundations of qualitative research highlights the nature of the research focus of this methodology as well as the way in which knowledge is constructed. In summary, and contrasting qualitative research with quantitative research, the following points are most relevant.

- *Perception of reality.* Qualitative researchers consider reality to be subjective, constructed, multiple and diverse. Reality is experienced internally (not through the senses), and resides in the minds of the people who construct it. Hence each person

constructs his/her own reality, which is therefore subjective. Hence, there are as many realities as there are people, and since people perceive the world in different ways, their realities can be different.

- *Perception of human beings*: In qualitative research, human beings occupy a central position; they create the meaning systems of events and with these they construct reality. They are not non-participant observers but active creators of their world. For most writers on the subject, there are no general laws of a restrictive nature. In spite of this, patterns and regularities of behaviour emerge as a result of social conventions, established through interaction. It is the task of researchers to search for the systems of meanings that actors use to make sense of their world.
- *The nature of science*: In this context, science, as a means of extracting knowledge, is assigned a secondary role. Qualitative researchers assert that:
 - The basis for explaining and understanding people's life is not 'science', as in quantitative research, but common sense; only in this way does it become possible to catch the meanings people use to make sense of their lives.
 - The approach employed is inductive, proceeding from the specific to the general and from the concrete to the abstract.
 - Science is not nomothetic but ideographic; it presents reality symbolically in a descriptive form.
 - Knowledge is not derived through sense experiences only; understanding meanings and interpretations is more important.
 - Science is not value free; value neutrality is neither necessary nor possible.
- *The purpose of social research*: In qualitative research, social inquiry has the purpose of helping the investigators to interpret and understand, first, the actors' reasons for social action, second, the way they construct their lives and the meanings they attach to them, and third, the social context of social action. What is important here is not observable social actions but rather the subjective meaning of such actions. The main characteristics of the two methodologies that dominate the social sciences are summarised in Table 2.3.

3.4 Qualitative paradigms

As noted earlier, qualitative methodology is diverse, and this is evident not only in the ways in which research is conducted but also in the variety of paradigms that are associated with this research strategy. Given that paradigms contain ontological and epistemological principles, and since these principles have already been discussed, we shall focus, very briefly, on only two well-known and popular qualitative paradigms. These are symbolic interactionism and phenomenology.

3.4.1 *Symbolic interactionism*

Symbolic interactionism was developed by George Herbert Mead, from the Chicago School, whose work was published posthumously by Blumer (1969, 1973, 1979a, 1979b). The main tenets of this theory, which proved useful to symbolic interactionists, can be summarized as follows.

Table 2.3 The two methodologies: A comparison

Criterion	Quantitative methodology	Qualitative methodology
Reality is ...	objective, 'out there', to be 'found' perceived through the senses perceived uniformly by all governed by universal laws based on integration	subjective, in people's mind perceived not through senses only diverse; perceived differently created, constructed; not found, interpreted differently by people
Human beings are ...	rational individuals obeying external laws without free will	creators of their world making sense of their world not restricted by external laws creating systems of meanings
Science is ...	based on strict rules & procedures deductive relying on sense impressions objective and value free	based on common sense and reason inductive relying on interpretations subjective and not value free
Social research ...	employs quantitative methods aims to explain social life aims to predict the course of events aims to discover social regularities	employs qualitative methods aims to interpret social life aims to understand social life aims to discover people's meanings

- Social life is formed, maintained and changed by the basic meaning attached to it by interacting people, who respond to each other on the basis of meanings they assign to their world. Social life and objects become significant when they are assigned meanings.
- Social life is expressed through symbols. Language is the most important symbolic system.
- The purpose of social research is to study the structure, functions and meaning of symbolic systems.
- The most appropriate method of social research is the *naturalistic* method, which incorporates two major procedures: *exploration* and *inspection* (Blumer, 1969; Vlahos, 1984; Wallace and Wolf, 1986). Exploration studies new areas, looks for details and offers a clear understanding of the research question. Any method is useful here. Inspection, on the other hand, is an analytical method and contains a more intensive and more concentrated testing. (Blumer (1969) called this type of approach *sympathetic introspection*.)
- Data and interpretations depend on context and process and must be steadily verified and, when necessary, corrected.
- Meanings are established in and through social interaction. They are learned through interaction and not determined otherwise.
- Meanings are employed, managed and changed through interaction.

The relevance of this theoretical paradigm for qualitative methodology is more than

obvious (Denzin, 2000). Most of the principles of this methodology are derived from symbolic interactionism.

Box 2.14

Attributes of symbolic interactionism

- 'Human beings act towards things on the basis of the meanings that these things have for them.'
- 'The meanings of such things is derived from, and arises out of, the social interaction that one has with one's fellows.'
- 'These meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters.'
- 'The actor selects, checks, suspends, regroupes, and transforms the meanings in light of the situation, in which he is placed at the direction of his action.'
- 'Meanings are used and revised as instruments for the guidance and formation of the action.'

(Blumer, 1969: 2, 5)

3.4.2 Phenomenology

Phenomenology deals with the way people make sense of their world and how they construct their everyday life (Husserl, 1950). Its contribution to qualitative methodology is evident in a number of aspects of its research theory and practice, a number of which share elements of symbolic interactionism. In a brief, perhaps oversimplified, point form, the central attributes of phenomenology are as shown below.

- There is an objective world.
- Reality is not divided into objects and subjects.
- The objective world is experienced and becomes real only through consciousness, and not through the senses.
- Becoming conscious entails reaching out to reality and knowing it; this is called *intentionality*.
- Social norms reach people without them being aware of it. Norms prescribe how to see and interpret the world, and people follow them without objection. This is called *natural attitude*.
- Neutralizing this natural attitude can be facilitated through *bracketing*: that is through disconnecting or setting aside preconceptions, ignoring cultural prescriptions, symbolic patterns and meanings, using intuition, universal meanings and structures, and going back to the things themselves.
- Husserl called the suspension of previously set rules and judgements *epoche*.

Phenomenology not only provides important elements of the constructionist nature of qualitative methodology, but also shows how emancipation and liberation from oppressive structures can be achieved.

3.5 Features of qualitative research

The main features of qualitative research have already been noted during the presentation of the theoretical foundations of this research model as well as when its ontological and epistemological foundations were introduced. These features also represent the central strengths of this research model and its advantages over other forms of inquiry. Briefly, and in point form, the features referred to by most writers on the subject (e.g. Crabtree and Miller, 1992; Flick, Kardorff and Steinke, 2000: 24; Lamnek, 1993; Patton, 1990; J. K. Smith, 1990, 1992a, 1992b), can be presented as shown below.

Qualitative research is:

- *Naturalistic*. It is a research process undertaken in a natural setting (it is field focused).
- *Dynamic*. It focuses on processes and structural characteristics of settings, and tries to capture reality in interaction through intense contact in the field.
- *Subject-centred*. It describes life-worlds 'from inside out', from the view of the subjects.
- *Informative and detailed*. It offers 'thick' descriptions, and allows entry to subjective social constructions of people; it presents the information gathered verbally in a detailed and complete form, not in numbers or formulae (no statistical analysis).
- *Normative*. It employs a value-laden inquiry.
- *Constructionist*. It assumes that the social world is always a human creation not a discovery.
- *Context-sensitive*. It focuses on contextuality, with the aim of gaining an impression of the context, its logic, its arrangements, its explicit/implicit rules.
- *Reflexive*. It values the reflexivity – the self-awareness – of the researcher.
- *Open*. It stresses the principle of openness; also, it enters the field with no preconceived ideas or pre-structured models and patterns. There is no strict design; no hypotheses; no limits in its focus, scope or operation.
- *Flexible*. Design, methods and processes are open to change.
- *Empathetic*. It aims to understand people, not to measure them.
- *Communicative*. It focuses on communication which is considered a selective process of meaning production in social contexts. Qualitative research operates within communication, of which it is a part.
- *Subjective*. It values subjectivity and the personal commitment of the researcher; it is against objectivity.
- *Interpretivist*. It values the reflective assessment of the reconstructed impressions of the world.
- *Holistic*. It focuses on the whole study object in its entirety.
- *Inductive*. It proceeds from the specific data to general categories and theories.
- *Small scale*. It studies a small number of people.

A brief exploration of the features of qualitative research reveals that they represent the opposite of quantitative research. Simply, qualitative research is what quantitative research is not, and is not meant to be; and vice versa.

Box 2.15**The nature of quantitative and qualitative research****Quantitative research**

Does not set researchers close to reality
 Studies reality from the outside
 Uses closed methods of data collection
 Employs a fixed research design
 Captures a still picture of the world
 Employs scientific/statistical methods
 Analyses data only after collection
 Chooses methods before the study
 Produces most useful quantitative data

Qualitative research

Sets researchers close to reality
 Studies reality from the inside
 Uses open methods of data collection
 Employs a flexible research design
 Captures the world in action
 Employs naturalistic methods
 Analyses data also during collection
 Chooses methods before/during the study
 Produces most useful qualitative data

(See Flick et al., 1991; Lamnek, 1993; Miles and Huberman, 1994)

3.6 Critique of qualitative research

As noted above, the main features of qualitative research are a reflection of its central strengths and advantages over other models of inquiry. Nevertheless, qualitative research has its weaknesses. Some of the most common criticisms relate to the following issues (Pfeifer, 2000; Benini, 2000):

- *Efficacy*. Qualitative studies cannot address relationships between variables with the degree of accuracy that is required to establish social trends or to inform social policies.
- *Representativeness*. Qualitative research is based on small samples and hence does not produce representative results.
- *Generalizability*. Since qualitative studies are not representative, their findings cannot be generalized.
- *Objectivity*. The methodological approach does not ensure objectivity, and hence the quality of the findings is questionable.
- *Validity and reliability*. The research structure and procedure do not ensure the validity and reliability of methods.
- *Interpretations*. There is no way of assuring that the researcher fully and correctly captures the true meanings and interpretations of the respondents.
- *Comparability*. Qualitative studies do not produce data that allow comparisons.
- *Replicability*. Given the individualist and subjectivist nature of this research model, replicability of studies is not possible.
- *Ethics*. The nature of research that allows close contact with respondents can lead to ethical problems.
- *Quality of data*. Often, the nature of data collection leads to the production of large amounts of useless information.
- *Anything goes*. The lack of strict research procedures and the high level of subjectivity and relativism give the impression that ‘anything goes’.

- *Time.* Qualitative inquiry is very time consuming.
- *Costs.* Qualitative research is relatively very expensive.

The common response to these criticisms is that, first, these points are characteristic to the nature of this research and should be seen in their context as strengths and not as weaknesses; and second, many of these aspects (representativeness, validity, reliability etc.) are different but not inferior. For instance, validity and reliability are observed in qualitative research, but in a way that is different from (not inferior to) those employed in quantitative research (see Chapter 4).

4

Mixed-method research – research in practice

4.1 Quantitative and qualitative methods in comparison

The discussion so far demonstrates very clearly that quantitative and qualitative research models rest on different assumptions about the world and use different research procedures. They are two different ways of addressing different aspects of reality, and both offer legitimate impressions of their study object. A brief contrast of the two types of research is presented in Table 2.4

Overall, quantitative research is devoted to gathering facts, and to employing valid and reliable measurement procedures, and the principles of scientific method, of generalization and of replication of results. In contrast, qualitative research is devoted to a naturalistic procedure aiming to retain ‘fidelity to the real world’ emphasizing the significance of ‘social reality in subjects’ perceptions of their environment’ (Bryman 1988:70).

Furthermore, weighing the outcomes of a quantitative versus qualitative research comparison we identify parallel corresponding differences such as ‘realism versus idealism, foundational versus antifoundational, objective versus subjective, impersonal versus personal, deductive reasoning versus inductive reasoning, generalization versus uniqueness, logistic versus dialectic, rationalism versus naturalism, specific versus holistic, causal versus acausal, and correspondence versus coherence’ (Onwuegbuzie, A. J. 2003: 395, 2007). Further, their foundations are based on counts and measures versus words as data (Berg 1995: 3; Tesch, 1990: 56), and causal relationships versus causal mechanisms (Lin, 1998: 163).

Obviously, different methodologies require different methods, that is methods that fit to the context in which they operate. The emphasis here is not on the name of the method itself but rather on its procedure and especially on the way it is employed. Although there are methods constructed for and used by one model only, other methods, such as interviews, observation and text analysis, can be used by both models as prescribed by their methodology.

More specifically, *quantitative methods* are generally geared towards documenting subject attributes expressed in quantity, extent, or strength, as well as ensuring – among other things – objectivity, accuracy, validity and reliability. Their purpose is to measure variables and to produce figures, which will allow assessment of the status of the variables

Table 2.4 Perceived differences between quantitative and qualitative methodology

Feature	Quantitative methodology	Qualitative methodology
<i>Nature of reality</i>	Objective; simple; single; tangible sense impressions	Subjective; problematic; holistic; a social construct
<i>Causes and effects</i>	Nomological thinking; cause–effect linkages	Non-deterministic; mutual shaping; no cause–effect linkages
<i>The role of values</i>	Value neutral; value-free inquiry	Normativism; value-bound inquiry
<i>Natural and social sciences</i>	Deductive; model of natural sciences; nomothetic; based on strict rules	Inductive; rejection of the natural sciences model; ideographic; no strict rules; interpretations
<i>Methods</i>	Quantitative, mathematical; extensive use of statistics	Qualitative, with less emphasis on statistics; verbal and qualitative analysis
<i>Researcher's role</i>	Passive; distant from the subject; dualism	Active; equal; both parties' are interactive and inseparable
<i>Generalizations</i>	Inductive generalizations nomothetic statements	Analytic or conceptual generalizations; time-and-context specific

Box 2.16**Attributes of quantitative and qualitative research: A comparison****Quantitative research**

Is based on realism
 Is foundational
 Is objective
 Is impersonal
 Employs deductive reasoning
 Employs generalization
 Is logistic
 Is based on rationalism
 Is specific
 Is causal
 Appreciates correspondence
 Uses counts and measures
 Focuses on causal relationships

Qualitative research

Is based on constructionism
 Is antifoundational
 Is subjective
 Is personal
 Employs inductive reasoning
 Employs uniqueness
 Is dialectic
 Is based on naturalism
 Is holistic
 Is 'acausal'
 Appreciates coherence
 Uses words
 Focuses on causal mechanisms

(See Onwuegbuzie, 2003: 395, 2007; Berg 1995: 3; Tesch 1990: 56; Lin, 1998: 163)

in question, further processing and comparisons, and replicability. A few examples of quantitative methods are surveys, documentary methods, observation and experiments.

Qualitative methods as a whole are unique, despite their diversity within the qualitative paradigm (e.g. subject-directed, object-directed and methodologies); an issue that often calls for equally diverse methods (see Crabtree and Miller, 1992; Flick et al., 1991, 2000; Lamnek, 1993). Some of the main criteria of qualitative methods are: lack of strict structure, loosely planned designs geared to capture reality in action, expressive language, collection of thick descriptions, presentation of data in the form of words and pictures, close contact with the respondent, and context sensitivity.

Nevertheless, although qualitative research employs 'standard' designs and methods as well as projective procedures (Spitznagel, 1991), most of the methods it employs are the same as those employed by quantitative researchers, adjusted to meet its methodological standards, and as required to address general or specific research needs (that is, to facilitate, enrich or refine the study).

4.2 Methodological symbiosis or incompatibility?

Having explained the nature of quantitative and the qualitative research, there is a question that needs to be answered: given that each research model can only address one (and different) side of the two sides of a problem, can researchers use both models in the same project, and this way address the whole problem? This is not the first time that this question has been raised in social research; and the answers are many and diverse. The main (and controversial) issue here is whether the methodologies are compatible to be employed in the same project. The views on this issue vary significantly (Hammersley, 1996; Morgan, 1998b).

4.2.1 *The debate*

Diversity and incompatibility

One very common position to the relationship between quantitative and qualitative methodologies is that they are not only different but also incompatible. Methodologies are reflections of the perception of reality and of knowledge acquisition, and hence they are as incompatible as the ontological and epistemological principles that guide them. It is argued that one cannot and should not try to interchange them and their measures.

Box 2.17

Thinking critically: The boundaries of mixing

- *Ontology* – Can you mix realism with constructionism?
- *Epistemology* – Can you mix empiricism with interpretivism?
- *Paradigm* – Can you mix positivism with interpretivism?
- *Methodology* – Can you mix qualitative with quantitative methodology?
- *Data* – Can you mix qualitative with quantitative data, e.g. words and numbers?
- *Research design* – Can you mix strictly fixed design with flexible design?
- *Ideology* – Can you mix the built-in ideology of QT research with that of QL research?

Diversity but compatibility

A second position to a synthesis of qualitative and quantitative research proposes that these two procedures may be diverse but they are compatible. Both approaches already share their procedures, with qualitative researchers using quantification and quantitative researchers employing qualitative strategies (Sechrest and Sidani, 1995: 79). As Onwuegbuzie (2003: 396) put it ‘numbers and words co-exist in virtually every research setting’. Lin (1998), on the other hand, argues that qualitative research encompasses both, the positivist and the interpretivist tradition, and notes that ‘positivist work seeks to identify qualitative data with propositions that can then be tested or identified in other cases, while interpretive work seeks to combine those data into systems of belief whose manifestations are specific to a case’ (p. 162).

This demonstrates that a *quasi-quantification*, *hidden positivism* and a *hidden interchange* of methods and practices between the two research models already are a common practice. More obvious and certainly more intensive, expanded and convincing in this context is the *mixed-method approach*, which has been accepted and practised by researchers of both research domains, as we shall see next.

4.4 The mixed-method approach

Mixed-method research is a procedure that employs qualitative and quantitative methods and strategies in the same project. Mixing does not alter the structure and identity of each methodology. The methods, techniques and practices employed in the mixed-method project remain as originally constructed, and as employed in a single-method study. Each methodology acts as guided by its epistemology, and as employed when used alone.

Mixed-method research has been accepted as a research procedure of both domains, although it is a novelty in qualitative research. The procedures and the extent of mixing vary significantly, ranging from *formal qualitative analysis* to a variety of mixing strategies.

4.4.1 *Formal qualitative research*

Formal qualitative research (FQR) is a procedure employed to enrich qualitative research by adding formal logic (Boolean algebra) to its research process. Boolean algebra dates back to John Stuart Mill and is reflected in the work of contemporary researchers, such as Griffin and Ragin. In this sense, FQR is ‘grounded in an inferential logic that is systematic, largely non-probabilistic, and procedurally replicable’ (Griffin and Ragin, 1994: 4).

There are many types of formal methods, with some employing high and others low levels of quantitative research. Overall, they are labelled as mathematical and statistical, and as objectifying techniques, and are employed mostly when qualitative research in itself can not fully address a research topic. Two strategies of FQR are *Qualitative Comparative Analysis* (QCA) and *Event-Structure Analysis* (ESA).

Box 2.18

The premise and promise of Formal Qualitative Research

'A truly synthetic approach would incorporate the respective strengths of *the explanatory* and *interpretive modes* while allowing each to speak, as it were, with its own analytic voice. A synthetic method must by necessity find and enlarge the middle ground between rote proceduralism and formulaic scientism on the one hand, and virtually ungrounded speculation or simple description on the other. This methodological synthesis should compel explicit *causal reasoning*, have the potential for *explanatory generality*, and *allow for replication* so that different analysts working with the same material could either produce the same results or be able to identify the source of differences. These criteria are obviously taken from the analytically formal, or explanation, side of the dichotomy. From the interpretive side, a synthetic method should incorporate the *use of context, specificity, and contingency* to discern and signify cultural and historical meaning. This synthesis is both the *premise and promise* of formal qualitative analysis.'

(Griffin and Ragin, 1994: 7–8)

According to Griffin and Ragin (1994), as a truly synthetic approach, FQR:

- aims to combine the strengths of both methods
- seeks to broaden the ground between the opposite research models
- aspires to explicit causal reasoning
- supports *explanatory generality*
- implements replication and
- includes the *use of context, specificity and contingency* to discern and signify cultural and historical meaning (p. 7–8).

Likewise, Griffin and Ragin (1994: 8) note that when QCA and ESA practise formal qualitative procedures they tend to:

- identify the source of data and extract the data
- analyse the data using a binary format (yes/no; male/female; rich/poor, etc.)
- explain using deterministic (not probabilistic) parameters and standards
- employ Boolean algebra based on inferential logic
- search for causal relations 'as complex conjunctures of factors, conditions or actions', and
- seek to understand and interpret 'cases or events as holistic events as holistic entities analytically defined by the precise constellation and configuration of their attributes (in QCA) or actions (in ESA).'

Briefly, FQR adds non-qualitative methods to qualitative research procedure, in order (a) to improve the quality of the research outcomes and (b) to bridge the divide between QT and QL methods.

4.4.2 Mixed-method research

Mixed-method research employs many procedures. Bryman (1992), for instance, reports 11 ways of integrating quantitative and qualitative research. Tashakkori and Teddlie (1998) on the other hand note that a 'truly mixed approach methodology would incorporate multiple approaches in all stages of the study ... and would include a transformation of the data and their analysis through another approach' (p. xi). The two methodologies are complementary and not competitive.

There are many and different perspectives and designs in mixed-methods research (Creswell, 2007). To begin with, Miles and Huberman, (1994: 41) describe five basic designs, each introducing a new way of facilitating mixed-method research.

- 1 The first design employs qualitative and quantitative methods in succession, that is it may start with qualitative research and finish with quantitative research, and vice versa (see Sarantakos, 1987).
- 2 The second design employs qualitative and quantitative methods concurrently, such as standardized questionnaires and grounded theory.
- 3 The third design begins with a qualitative study, followed by a quantitative method and continues with qualitative analysis and interpretation.
- 4 The fourth design starts with a quantitative technique, then turns to a qualitative and finally employs an experimental procedure.
- 5 The final design employs a step-wise conversion whereby (a) a qualitative method is used to produce qualitative data; (b) the data are categorized and assigned uniform numeric figures; and (c) the data are further quantified and analysed using quantitative-statistical methods (Hammersley, 1996).

Other researchers describe the types of mixing methods as (a) *sequential*, (b) *convergent* and (c) *concurrent* designs, or (a) *merging*, (b) *sequencing* and (c) *concurrent*. Finally, Hammersley (1996) refers to this procedure as triangulation and lists three approaches, namely *successive paradigm triangulation*, *concurrent paradigm triangulation* and *step-wise conversion*.

4.5 Mixed-method strategies

One suggestion about facilitating mixed-method research is to re-conceptualize and unite quantitative and qualitative research under the same framework. To facilitate this it is necessary 'to de-emphasize the terms quantitative and qualitative research and, instead, sub-divide research into *exploratory* and *confirmatory* methods' (Onwuegbuzie, 2003: 406). Generalizations of words and observations arising from inferential statistics '*persistent observations* and *prolonged engagement* to the *population* of words/observations' (ibid) can be constructed using inferential statistics.

Related to this procedure is the use of *effect sizes* in qualitative research. Onwuegbuzie (2003: 407, 1993, 2007) notes that 'computing and reporting effects sizes in qualitative research will assist in bridging the wide gap that presently exists between many

quantitative and qualitative researchers. Moreover, effect size analyses in interpretive research will serve as a mode for translating between quantitative and qualitative data ... the use of effect sizes in qualitative data analysis and interpretation can be used to provide more complex levels of *Verstehen* than is presently undertaken in qualitative research'.

Witcher et al. (2001) propose the use of *sequential mixed-methodological analyses (SMMA)* as a procedure for mixed research, which apart from mixing deductive and inductive reasoning, employs qualitative and quantitative strategies of data analysis in a sequential manner starting with qualitative analyses, 'followed by quantitative analyses that built upon the qualitative analyses'. Binarizing and quantizing procedures are employed.

Another interesting model of mixed-method research entails the *combination of qualitative data collection with a bifocal data analysis*. Coviello (2005), in a study of network dynamics over time in an entrepreneurial firm, conducted data collection using qualitative methods, and proceeded to interpret case data and network maps using qualitative and quantitative methods, or more specifically, *content and event analysis*, employing USINET 6, a software package for social network analysis (p. 39). This demonstrates that 'the application of the bifocal approach facilitates a more meaningful analysis of networks than does a purely qualitative approach. It allows for time-based examination of whole systems of organizations and scrutiny of dimensions pertaining to both network structure and the interactions and relationships between individual actors'. (Ibid)

Hermeneutic-classificatory content analysis is another mixed-method procedure, which uses strategies from objective hermeneutics and quantitative content analysis. Connidis (1983a: 334) on the other hand describes a survey research design, including a structural interview including close-ended questions; an open-ended interview; and conversational interviews with open-ended questions. Finally, Jick (1979) proposed mixing qualitative and quantitative methods as 'triangulation in action', while Singer et al. (1998) employed a type of *textual data analysis*, which commenced with a standard unit-level multi-variable data set (250 variables per person), where the variables were converted into written biographies. The biographies were then analysed using qualitative strategies identifying shared features, and finally reduced to more generic descriptions.

Mixing in social research enters the multi-paradigm domain. In such cases a process parallel to triangulation is employed, that expands it beyond the boundaries of triangulation and aims to integrate cases of paradigmatic diversity. One such procedure is *meta-triangulation*, which is a way of building theory from multiple paradigms (Lewis and Grimes, 1999). Further, Lee (2000: 364) investigating the ways, in which positivist and interpretive research models can be integrated in organizational research, constructed a framework that consists of *three levels of understanding*, each coming from different research domains. These levels are as follows.

Box 2.19**Mixing/linking**

'Now, in an academic world more interdisciplinary than that of previous decades, the opportunity is there for all the social science disciplines to break out of the disciplinary straitjacket and to move their quantitative methodologies forward together. Several major institutions have launched interdisciplinary centers and initiatives focused on quantitative social science methodology in the past few years, providing resources for doing just this. The University of Washington has just established a new Center for Statistics and the Social Sciences. Harvard's new Center for Basic Research in the Social Sciences emphasizes social statistics. The new Center for Spatially Integrated Social Science at the University of California–Santa Barbara is another example, with a focus on spatial statistics. UCLA's young Statistics Department grew out of social statistics, and retains active interdisciplinary links to several social sciences. Columbia's new master's program in Quantitative Social Science is another interdisciplinary enterprise spanning the social sciences and statistics. At the University of Michigan, the new Quantitative Methodology Program is creating and reviving joint graduate programs between the Department of Statistics and several social science departments. These all join what is perhaps the most successful effort of this kind to date: the Social Statistics Department at the University of Southampton'.

(Rafferty, 2001: 32–33)

- 1 *The subjective understanding*, which consists of the everyday meanings and everyday common sense with which the observed human subjects see themselves and the organizational world around them.
- 2 *The interpretive understanding*, which focuses on the organizational researcher's reading or interpretation of the subjective understanding, developed with the help of such methods as those of phenomenological sociology, hermeneutics, ethnography, and participant-observation, and
- 3 *The positivist understanding*, which is based on theoretical propositions, and follows (a) the rules of formal logic and (b) the rules of hypothetico-deductive logic (Lee, 2000: 364).

Mixed-method research has entered the field of research, and holds a stable and legitimate position. This is shown in the number of mixed-method projects and publications which are growing steadily (see Bergman, 2008; Tashakkori, A. and Teddlie C. 2010; Freshwater D. 2007), as well as in the introduction of journals focusing on this topic (e.g. *Journal of Mixed Methods Research* and *International Journal of Multiple Research Approaches*). It must be noted that computer assisted integration of mixed data sources and analyses (see Bazeley, 2010) has already taken its place in the domain of mixed-method research.

4.6 Advantages of mixed-methods research

Mixed-methods research is thought to provide researchers with ways to improve the capacity of their methods and to enrich the quality of their findings, their validity, gener-

Table 2.5 Advantages of mixed-methods research

Advantages	This means that mixed-methods research ...
<i>Bi-focal paradigm</i>	focuses on positivism & interpretivism; objectivity & subjectivity; data and meaning
<i>More powerful approach</i>	uses the strengths of the explanatory and the interpretive research
<i>Diversity of data</i>	can handle two different types of data concurrently or sequentially
<i>Enrichment</i>	enriches the process and outcomes of the research
<i>Complementarity</i>	entails complementarity which strengthens each other's weaknesses
<i>Multi-face contribution</i>	improves two or more parts of the research process
<i>Progressive improvement</i>	meets needs at different stages of the study
<i>Filling gaps</i>	can fill the gaps left by the single study
<i>Flexibility of choice</i>	can move freely from one research model to the other as the research requires
<i>Completeness</i>	covers various aspects (e.g. What & How) of the same topic
<i>Higher credibility</i>	increases credibility of the study
<i>Higher validity</i>	increases validity of the study
<i>Wider coverage</i>	offers wider coverage of research data
<i>Bi-focal approach</i>	covers both structure and process
<i>Higher reliability</i>	improves reliability of the research findings
<i>Wider usability</i>	improves usability of the research findings
<i>Higher generalizability</i>	increases the generalizability of the research findings
<i>Improved capacity</i>	improves the capacity of the research significantly
<i>Higher result quality</i>	increases the quality of the research findings
<i>Higher achievement</i>	improves the probability of reaching higher achievement
<i>More powerful results</i>	is more powerful than the research of a single study
<i>Comprehensive results</i>	offers more comprehensive results than the single study
<i>Result flexibility</i>	can produce two different types of results: qualitative and/or quantitative results
<i>Higher accessibility to grants</i>	offers higher probability of obtaining research grants
<i>Better publishing options</i>	offers higher probability of publishing research findings

alizability and popularity. Greene et al. (2001: 41), for instance, propose that the merits of mixing methods are 'increased validity, more comprehensiveness of findings, more insightful understandings and greater value consciousness and diversity'. A list of the advantages of mixed methods research is presented in Table 2.5.

The number and nature of the 'advantages' of mixed-methods indicate that the reason for many researchers opting for this research procedure is primarily scientific, namely that they look for methods that promise higher levels of academic and scientific standards. It indicates also that both research models benefit from mixing and sharing basic methods, strategies and practices, achieving high standards this way as well as popularity and credibility. Creswell et al. (2006: 8) note that, 'qualitative research can assume a major role in mixed methods studies and it has specific features that make it attractive to mixed methods studies'. Further, Giddings and Grant, (2007) state that 'although most mixed-method studies favour the forms of analysis and truth finding of positivism, mixed-method research offers particular strengths and that, although it serves as a Trojan Horse for positivism, it may productively carry other paradigmatic passengers' (p. 52).

4.7 Weaknesses of mixed-method research

Despite the fact that mixed-method research has been generally accepted, and also widely practised, there are critics who point to a number of methodological and political issues or problems, and either abstain from employing this research procedure, or include it in their research programme but make an effort to reduce the effects of the 'problematic' aspects of this procedure on their research. Beyond this, evidence shows that qualitative research is not always in a supportive, auxiliary role to quantitative research.

The most common criticisms come from qualitative researchers and relate to incompatibilities of the ontology, epistemology, methodology, paradigm, research design and ideology of qualitative and quantitative research, which, they argue, cannot lead to valid and acceptable research outcomes. Sale, et al. (2002: 43), for instance, note that: 'because the two paradigms do not study the same phenomena, quantitative and qualitative methods cannot be combined for cross-validation or triangulation purposes. However, they can be combined for complementary purposes.'

The other objection to mixed-method research is about the negative effects it has on the status of qualitative research. The point is made that the popularization of mixed-method research, and with it the indirect force on qualitative researchers to use mixed-method research to gain the attention of funding agencies, downgrades their status and credibility as an independent research procedure and locks it 'back inside the box of positivism'.

Creswell et al. (2006: 1, 2007), for instance, note that many authors criticize mixed methods research because (a) 'it relegates qualitative research to secondary or auxiliary status,' (b) 'it expresses this status through experimental trials that privilege quantitative research,' and (c) 'it fails to employ critical, interpretive approaches to qualitative research.' A similar position is reported by Giddings (2006: 202) who notes that '... mixed methods inadvertently marginalize those qualitative methodological designs that focus on meaning, symbolism and the power of words ... perpetuat[ing] the traditional dominance of positivism over other research models' and 'its dominance is strengthened rather than challenged'. A critical stance to mixed-method research is presented also by Giddings and Grant (2007).

There are certainly critics within the domain of qualitative research. Nevertheless, as noted earlier, the popularity of mixed-methods research has grown significantly with the number of qualitative researchers recognizing mixed-method research as an acceptable procedure having increased substantially.

4.8 The best choice

Over the years, this polemic has been softening, with many researchers from both camps coming to realize that the two methodologies are equally legitimate and equally efficient alternatives, even as partners in *mixed-method research*.

Researchers came to realize that the differences between the methodologies do not imply differences in quality but in their nature and purpose. Hence, criticisms and conflicts over the value of the methodologies are without logical basis. The fact is that both research models possess certain qualities that make each one suitable for studying

particular aspects of reality that the other cannot address equally effectively. Hence, both research models are valuable in their own context, and are very useful (see Kelle and Erzberger, 1999, 2000), and where possible and necessary, they can be employed together within the same research project.

This appreciation of the specific qualities of these methodological paradigms is reflected in the propositions of many writers who support integration of the two research models in research practice (Bryman, 1984, 1988; Kuchler, Wilson and Zimmerman, 1981), as well as the increased number of publications on this topic (e.g. Bazeley, 2009, 2010; Chin Lin, 2007; Griffin and Ragin, 2007; Tashakkori and Teddlie, 1998; Teddlie, and Tashakkori, 2011). It is also seen in the frequent use of methodological triangulation, which is quite common in social research. Within this domain, quantitative researchers, as shown above, employ qualitative research methods together with quantitative ones either concurrently or successively, and have found them extremely useful (see Kelle and Erzberger, 1999, 2000). Quantitative and qualitative methodologies are legitimate and useful tools of the trade of social scientists, and both have their own legitimate focus, advantages and disadvantages. And when taken together, the one complements the other, and both offer a stereoscopic picture of the world (Sprague and Zimmerman, 1989: 82), without problems or disadvantages.

5

Internet research

5.1 Introduction

The increased growth of the Internet had an impact on social life as much as on aspects of industry, education and of course on social research (Dochartaigh, 2012). It gave birth 'to new research fields or has diversified existing research fields connected with human activities, including computer-mediated communication (CMC), computer-supported cooperative work (CSCW), electronic commerce, virtual communities, virtual architecture, various virtual environments, and information design' (Sudweeks and Simoff, 1999: 29). It also gave a good reason for critical thinking regarding the correct, logical, suitable way of addressing these new fields of research, and the nature of the 'virtual space' itself and its relationship with the 'real space' (Dolowitz, et al. 2008).

In spite of this, Internet research was not greeted uniformly by scholars and researchers. There are differences of opinion regarding, for instance, (a) the nature of the Internet (virtual reality, virtual space) as a part of the research enterprise, (b) the relationship between virtual reality and natural reality, and (c) the methods that need to be employed to address the domain of the Internet. This has become an issue, particularly with regard to the diversity in the methods and procedures employed to study the Internet as well as in its contents, which are reported to change radically over time. In the eyes of the researchers there is not a single and uniform perception of cyberspace. Apart from that, quantitative and qualitative researchers often do not seem to agree as to how to address the Internet appropriately (Farber, 2001; Dimas, 2003).

5.2 What is the Internet?

Often, researchers and writers perceive the Internet as a virtual reality, as a 'space out there', a uniform unit with its own structure and complexities, and one that deserves unique attention, approach and treatment. For others, the Internet is a virtual reality with its own structure and complexities, but it is considered to be diverse and hence it deserves to be identified and approached accordingly. Beyond this, the Internet is seen as a culture as well as a cultural artifact, as a performative space as well as a performed space (Hine, 2000). The Internet is seen not only as a holder of data and symbolic contents, but also as a space of virtual action, interaction and social relationships online. It is seen as social practice and as the extension of real life and of social relationships (Bräuchler, 2005; Hine, 2000).

Put together, and with regard to its nature as the focus of research, the Internet is a diverse space, offering researchers a multi-focal object for virtual analysis. Hence, although researchers speak of Internet research, their focus is directed to one or more of the following features.

- 1 *The Internet as a unit of analysis.* This perception views the Internet as a system with various features and connections which capture the interest of researchers. Here the researcher is expected to explore the way in which the Internet is constructed, its structure and purpose, the hidden or open powers that guide/control it, related political issues, the nature of Internet users, the way it affects people and the community in general and, finally, its real advantages and disadvantages.
- 2 *The Internet as a source of data.* This notion presents the Internet as a source of data. The Internet is perceived here as the library of the world that offers information on any topic, of any length, in any language and at any time to those connected to the Internet, and more so, to those registered to special sources. Here the researcher can identify any accessible aspect of this face of the Internet and perform the preferred study. The best example here is the use of pictures or texts for any form of image or textual analysis.
- 3 *The Internet as a source of people.* In this perception, the Internet offers access to a vast number of people from all countries of the world linked to the Internet, of all religions, of a diverse class status, political preference, education, age, gender, and many other characteristics, which significantly exceed those offered by offline sources. In this sense, online research delivers higher chances for contacting respondents of a specific type in higher number and of greater diversity. Using email, phone, or webcam can facilitate the arrangement of data collection, for example via typescript, conversation or video communication.

The definition of the Internet also entails in some way its relation to physical reality. The options are clear and have been represented in the works of many researchers and scholars. The first position perceives virtual and physical reality as two different and separate spaces, often referred to as 'split' and 'polarity'. It appears to be a debate parallel to that of the 'mixed-methods' approach in qualitative research. The other position sees both

domains as the same, as similar, or the one being an extension of the other. It is then logical to argue that the position of researchers on that issue determines the type of methods they will employ when they conduct Internet research.

The options available to Internet researchers are complex and diverse. Firstly one has to decide about the type of method to be employed in cyberspace; and secondly it has to be determined whether the project will collect only virtual data, or virtual and physical data. Every option has been employed by Internet researchers. The debate on this issue demonstrates that the 'taken for granted' option for many researchers is that Internet research should employ traditional research methods and the data will be collected in cyberspace. The logical explanation for this is that the methods in question have already been tested and found to be adequate for any data provided they contain the required elements, and the domain of the study (here: the Internet) offers the nature of the data. The procedure employed in this context is the same as the one employed in real space research.

The second option focuses on the need for new methods for Internet research. It is argued, for instance, that earlier Internet research 'identified several characteristics of the Internet phenomenon that complicated the use of the classical research schema ... These considerations complicate classical research methodologies, so increasingly, Internet researchers are turning to methods developed in the fields of information systems and data mining' (Sudweeks and Simoff, 1999: 30–2). Further, the question arises whether and how online field research has to be merged with offline procedures (Bell 2001: 194–8).

5.3 Research

Web-related research employed during the 1990s and afterwards took a variety of forms. Schneider and Foot (2004) report three sets of approaches in Internet research: (a) discursive or rhetorical analyses of web sites, focusing on texts and images, and/or on web pages/sites as texts; (b) structural/feature analyses, studying individual web sites, their structure, size and organisation; and (c) one 'that takes hyperlink relationality into account in more sociocultural analyses' (p. 4). Survey research seems to be more popular, which is taken to be in line with the structure and demands of Internet research and the status of the participants (Childress and Asamen, 1998).

5.4 Virtual vs. real dichotomy

Although the virtual vs. real dichotomy seems to have been taken for granted, seeing dichotomy as a dividing rule that holds the virtual and real world as two unrelated and untouchable entities, other researchers do not accept fully this perception of the world. Instead, they perceive the two domains as related and accessible, using an approach similar to mixed-method research. One design of such a procedure goes as follows: it starts with (a) a complete online research procedure, followed by (b) an offline exploration of relevant examples in the cultural context, exploring, and gaining face-to-face experiences with, real people, and finally (c) combining the findings within a qualitative model, and constructing relevant conclusions (Baym, 1995; Kendal, 1999; Morton, 2001).

Another design (a) begins with online research for the purpose of collecting experiences and data and then (b) continues the project offline, incorporating the results with the data collected through the online research (Witte et al., 2000). It is worth noting that methods often are reported to be adapted to meet the parameters of both online and offline phenomena (Schneider and Foot, 2004: 2).

5.5 New approaches

Most researchers conduct Internet research employing traditional methods in their original mode, or with slight adjustments, which do not alter the structure of the method in question in any way. Survey remains survey, and textual analysis remains textual analysis as known in offline research. The changes relate mostly to 'external' features, namely to those that do not affect the nature of the method but facilitate its employment in an online environment. That appears to be sufficient for most, but not to all researchers. Some have developed procedures tailored especially for Internet research. Two such methods are *Web Sphere Analysis*, and *Complementary Explorative Data Analysis*, and will be described briefly next.

Web Sphere Analysis is 'an analytic strategy that, fully implemented, includes analysis of the relations between producers and users of Web materials as potentiated and mediated by the structural and feature elements of Web sites, hypertexts and the links between them' (Schneider and Foot, 2004: 17). In the words of its creators, *Web Sphere Analysis* can be described as follows.

- 1 Web sites related to the object or theme of the sphere are identified, captured in their hyperlinked context, and archived.
- 2 The archived sites are annotated with human and/or computer-generated 'notes' of various kinds, which creates a set of metadata.
- 3 Sorting and retrieval of the integrated metadata and URL files are accomplished through several computer-assisted techniques.
- 4 Interviews of various kinds are conducted with producers and users of the web sites in the identified sphere, to be triangulated with Web media data in the interpretation of the sphere (Schneider and Foot, 2004: 18).

Web sphere is defined here, as 'a hyperlinked set of dynamically defined digital resources spanning multiple web sites deemed relevant or related to a central theme or "object." The boundaries of a web sphere are delimited by a shared object-orientation and a temporal framework' (ibid). The focus of web sphere analysis is on historical and/or inter-sphere comparisons of macro units. For instance, the web sphere of the 2011 earthquake in New Zealand can be compared with web spheres of previous earthquakes that occurred in the same or in other countries. Likewise, web sphere analysis can also explore micro units (e.g. elements of web spheres), such as texts, features and/or links (Schneider and Foot, 2004).

Complementary Explorative Data Analysis (CEDA) is another procedure, proposed by Sudweeks and Simoff (1999) as a possible approach to Internet research. Characteristic

to this method is that it integrates qualitative and quantitative procedures, as employed in the field of artificial intelligence. As noted by its designers, (Sudweeks and Simoff, 1999: 29) 'CEDA incorporates complementary use of both methods, depending on the particular research stage or the initial assumptions that need to be taken into consideration, thereby accommodating the unique features of Internet research.' The main stages of the research process of CEDA are listed below.

- 1 Identification of domain specifics.
- 2 Selection of the research methods and the scope of the research.
- 3 Data collection and selection of the data sets.
- 4 Complementary exploratory data analysis.
- 5 Linking qualitative and quantitative results.
- 6 Interpretation and presentation.

This procedure does not vary significantly from the traditional models of research, with the exception that it operates within a virtual domain. An important characteristic of CEDA is the combination of 'quantitative measurements and qualitative observations' which allows the researcher to combine the strengths of both research models, for example the extraction of reliable patterns and the capture of the essence of phenomena. The essential part of CEDA is the capacity to conduct complementary analysis, the parallel and interconnected research, which allows the researcher to link the results of its components (Sudweeks and Simoff, 1999: 40–41). Further, and most importantly, the processing and analysis of the findings interconnects its parts and can lead to 'revision of the identified domain specifics and changes in the combination of analysis methods within the Internet research schema' (p. 41).

5.6 Advantages and limitations

Like any other research procedure, Internet research is perceived by researchers and writers on the subject in a similar way to that of traditional research. Hence, the users of this type of research have expressed their experiences with Internet research and have listed a set of advantages and limitations. In summary, the type of advantages and limitations of Internet research mentioned by those who have had experience with this type of research are as shown below.

Advantages of Internet research:

- 1 Internet research is less labour-intensive than other methods.
- 2 Internet research permits relatively large samples.
- 3 Internet research is relatively economical.
- 4 Internet research produces quick results.
- 5 Internet research allows more open communication, since the respondent is not confronted with the interviewer.
- 6 Internet research offers more anonymity than other techniques, particularly when random-digit-dialling techniques are used.

Limitations of Internet interviewing:

- 1 Internet research shows high refusal rate.
- 2 Internet research allows limited access to research topics.
- 3 Internet research shows relative inability to control the interview fully.
- 4 Internet research reports limited access to target population (people without Internet connection are not accessible).
- 5 Internet research is marked by high temporality of Web content in its transience and construction.

The number of limitations raises relevant questions regarding the planning of the research design. This certainly is important because limitations will be reflected in the validity, reliability and especially the generalizability of the findings. Nevertheless, being aware of these shortcomings and taking them into consideration during the interpretations of the findings will reduce their impact on the quality of the research.

5.7 Summary

Internet research is another form of addressing issues in a particular domain and has already attracted the interest not only of researchers and scholars but also of professionals and users of the web as well as funding agencies. Internet research is a promising procedure that offers a domain for analysis that is not different at this time in history from the telephone a few generations ago. In most cases, traditional/classical methods can address the many areas of Internet research in a single- or multiple-format procedure, however, where old methods do not fit the new design, adaptation of existing methods, re-arrangement of research procedures or construction of new methods will be options.

6

Critical research

There have been long controversies about the status of critical research. The basis of these controversies is whether there is a critical methodology that would clearly identify it as a separate form of inquiry. As we shall see later, this issue has not been settled yet, but many writers on the subject come down against it.

Critical researchers see the world as being divided and in constant tension, dominated by the powerful who oppress the people and use the state and its institutions as tools to achieve their purpose. For Marxists, for instance, the state is seen as the extended hand of capitalism. The state, the media, the sciences and the research institutions – to name only a few – not only oppress people but also brainwash them into taking this oppression for granted or to accepting that change is either impossible or too costly. They work for the powerful.

A critical social science 'explains social order so that it becomes the catalyst that leads to the transformation of the social order' (Fay, 1987: 27); it explains social reality, criticizes it and empowers people to overthrow it (ibid.: 23). The methods used in this context may be quantitative, qualitative or both. Researchers are guided, however, by critical paradigms

that guide the choice of methods they use, and use their findings to emancipate people and to influence social policies.

In summary, critical science sees in social research a tool that can assist in the removal of false beliefs and ideas about society and social reality, perceives humans as being creative and compassionate, and is critical of the power systems and inequality structures that dominate and oppress people in societies. Whether this type of science is useful, or becomes another tool to patronize people and to deliver them into the hands of new controllers and experts, is another issue (May, 2001).

Nevertheless, there is also the view that, (a) critical research is extremely diverse in its theoretical structure, which makes it difficult to set all views under one epistemology and one methodology (critical realism, and critical discourse analysis are two examples); (b) most aspects of the research procedures employed by critical researchers fall within the parameters of quantitative and qualitative methodology, hence a separate methodology for this group of researchers appears to be impossible; (c) the critical element of this research model lies – in most cases at least – in the manner in which research topics are chosen and findings are treated rather than in the way in which knowledge is acquired; and that (d) critical analysis of the findings, and personal engagement aiming to ensure that the findings are implemented, are not a monopoly of critical researchers. Quantitative and qualitative researchers can be equally ‘critical’, and often are.



Main points

- It is important to distinguish between perspectives, paradigms, methodologies and methods.
- A methodology is a model entailing the theoretical principles and frameworks that provide the guidelines about how research is to be conducted.
- A method is a tool or an instrument employed by researchers to collect data.
- The main methodologies in the social sciences are the quantitative and the qualitative kinds.
- Methodologies vary fundamentally from each other, but they are not incompatible. They use the same or similar methods.
- Quantitative methodology takes a strict, objective, neutral and ‘scientific’ stance and employs a perspective which resembles that of the natural sciences.
- Quantitative methodology has been criticized, among other things, for the way in which it perceives reality, people and research; the methods it uses; the politics it supports; and the relationship it establishes with the researched.
- Qualitative methodology adopts a subjective perception of reality and employs a naturalistic type of inquiry. Its central principles are openness, the process-nature of the research and the object, reflexivity of object and analysis, explication and flexibility.
- Qualitative methodology has been criticized, among other things, for not meeting the research standards relating to reliability, representativeness, generalizability, objectivity and detachment, ethics and the value of collected data.

- Quantitative and qualitative methodology are equally valuable and useful in their own context. They are complementary and not mutually exclusive.
- Mixed-method research is gradually becoming a common procedure of social research. It combines the strengths of quantitative and qualitative methodology and produces results of higher quality.



Where to from here?

Before you leave this chapter, visit the companion website for the fourth edition of *Social Research* at <http://www.palgrave.com/sociology/sarantakos4e> to review the main concepts introduced in this chapter and to test yourself on the major issues discussed.



Further reading

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