construction project. Most of the site management team were present, but two senior managers had gone home. It became apparent that there was a considerable gap in attitudes between senior and junior management, which prompted Bresnen to develop a new line of questioning following on from this unexpected lead. One of the undoubted strengths which qualitative research affords the practitioner, by virtue of its unstructured nature, is precisely this capacity to encounter the unexpected and possibly to change direction.

Scope of Findings

It is common to conceive of the quantitative/qualitative dichotomy in terms of respective commitments to *nomothetic* and *ideographic* modes of reasoning (Halfpenny, 1979). This distinction effectively refers to the scope of the findings which derive from a piece of research. A nomothetic approach seeks to establish general law-like findings which can be deemed to hold irrespective of time and place; an ideographic approach locates its findings in specific time-periods and locales. The former mode is taken to be indicative of the scientific approach, whereas ideographic reasoning is often more closely associated with the historian's method. By taking random, and hence representative, samples, survey research is taken to exhibit a nomothetic approach because of the investigator's ability to infer findings to larger populations. Thus, Hirschi (1969) took great pains to ensure that the data on the children he studied would be representative of the wider population of school children through a stratified random sampling procedure which took account of such population characteristics as race, sex, and school attended.

By contrast, the qualitative researcher frequently conducts research in a specific milieu (a case study) whose representativeness is unknown and probably unknowable, so that the generalizability of such findings is also unknown. Adler's (1985) subjects were acquired in an apparently much less rigorous manner than Hirschi's children. Her initial contacts were accidental and were her source of further contacts. Moreover, these subjects were mainly located in a limited geographical area, so that their broader representativeness may be questioned. Qualitative researchers often exhibit some unease over this point. Liebow (1967) conducted participant observation in relation to 'two dozen Negro men who share a corner in Washington's Second Precinct' (p. 11) and goes on to note:

To what extent this descriptive and interpretive material is applicable to Negro streetcorner men elsewhere in the city or in other

cities, or to lower-class men generally in this or any other society, is a matter for further and later study. (Liebow, 1967, p. 14)

The discussion about generalization in quantitative research in Chapter 2 suggests that the extent to which investigations within this tradition are nomothetic is often exaggerated. Surveys are often not based on random samples and, even when they are, they refer to highly restricted populations. For example, writing about the field of organization studies, Freeman (1986, p. 300) has observed: 'They rarely work with samples that are representative of even the restricted types of organizations they choose to study.' The fact that Hirschi's sample derives from a geographically restricted area — a county in the San Francisco–Oakland metropolitan area — is given much less attention in his book than his attempts to select a random sample of that region's population of school children. Further, the consistency of findings over time is rarely given much attention. Experimental research also suffers from a number of deficiencies in regard to the generalizability of findings stemming from such designs. Moreover, as the discussion in Chapter 4 on case study research implies, qualitative researchers are building up strategies for enhancing the generalizability of their research. Consequently, caution is necessary in treating the two research traditions as being strictly associated with nomothetic and ideographic findings.

Image of Social Reality

Quantitative research conveys a view of social reality which is static in that it tends to neglect the impact and role of change in social life. Surveys examine co-variation among variables at a particular juncture; experimental research usually entails the exploration of a restricted range of variables within a restricted time period. While both styles of research examine connections between variables, the proponents of qualitative research argue that quantitative research rarely examines the processes which link them (e.g. Blumer, 1956). They also charge that the 'independent' and 'dependent' variables fail to take into account the flow of events in which these variables are located. Quantitative researchers might argue that they do take such factors into account. For example, the notion of an 'intervening' variable, which is both a product of the independent variable and an influence on the dependent variable, might be interpreted as a device which examines intervening processes (Rosenberg, 1968). However, the suggestion is still open to the accusation that intervening processes are ignored (e.g. between the independent and intervening variables) and that the nexus of factors within which such chains of causality are grounded is rarely examined. For example, the causal chain in Hirschi (1969), quoted

in the Introduction, suggests that academic incompetence is causally related to delinquency via a sequential series of intervening variables (poor school performance, dislike of school and rejection of school's authority). It might legitimately be argued that the processes which account for the intermediate connections (e.g. rejection of school's authority and delinquent acts) are unexplored.

The qualitative researcher is in a better position to view the linkages between events and activities and to explore people's interpretations of the factors which produce such connections. This stance affords the qualitative researcher a much greater opportunity to study processes in social life. Adler's (1985) ethnographic research was concerned to demonstrate the nature of the 'career progressions' of the dealers and smugglers with whom she was in contact. She shows how dealers enter and climb to the top of these 'occupations' and how they and their experiences change with their ascendancy into upper-level activities. Similarly, Adler and Adler (1985) used participant observation and unstructured interviewing to study basketball players at an American university in order to examine the relationship between athletic participation and academic performance among college athletes. They note that the bulk of the literature implies that participation in college sports is associated with poor academic performance, although some studies are not consistent with this finding. Adler and Adler confirmed the negative relationship between athletic participation and school performance but show that most athletes come to college with a commitment to doing well in their academic studies. However, they encounter a number of experiences which conspire to deflate their academic motivation: athletic experiences (e.g. the time spent in training, playing and recovering), social experiences (e.g. the domination of their lives by interaction with other athletes) and classroom experiences (e.g. adverse attitudes towards them indicated by their professors) have a deleterious effect on their interest in academic work. Both of these studies inject a sense of process and transformation in social life which quantitative research can rarely address.

In addition to their respective tendencies to convey static and processual views of social life, quantitative and qualitative research differ in their view of the mutual relationship between the individual and social reality. There is a tendency for quantitative researchers to view social reality as external to actors and as a constraint on them, which can be attributed to the preference for treating the social order as though it were the same as the objects of the natural scientist. By contrast, the influence of perspectives like phenomenology, symbolic interactionism, and naturalism led qualitative researchers to suggest that 'we cannot take for granted,

as the natural scientist does, the availability of a preconstituted world of phenomena for investigation' but must 'examine the processes by which the social world is constructed' (Walsh, 1972, p. 19). Thus, whereas quantitative research tends to invoke a perspective which implies that social reality is static and beyond the actor, the image deriving from qualitative research gives a sense of that same reality in processual terms and as socially constructed. This point can be illustrated by reference to the study of organization structure. Quantitative research on this topic, like the Aston Studies (Pugh and Hickson, 1976; Pugh, 1988), depicted organization structure as something which is determined by forces such as an organization's size or its technology. In turn, organization structure was seen as affecting the behaviour and orientations of its members (Pugh and Payne, 1977; Pugh, 1988). This approach seems to view organization structure as external and as a constraint on the actor, and differs from the qualitative research on a psychiatric hospital by Strauss *et al.* (1963) which suggests that the organization's structure was a 'negotiated order'. This latter study suggests that the behaviour of the hospital's members was largely unaffected by a formal structure of rules and role prescriptions; instead, the various groupings within the hospital produced their own structure, which they negotiated and which was in a constant state of renegotiation.

Nature of the Data

The data emanating from quantitative studies are often depicted as hard, rigorous, and reliable. These adjectives suggest that such data exhibit considerable precision, have been collected by systematic procedures and may be readily checked by another investigator. These positive attributes are often taken to mean that quantitative data are more persuasive and hence more likely to gain the support of policy-makers. Okely (1987), for example, has described how she was under great pressure from her employers at a research centre, in which she was to conduct research on gypsies, to use survey methods, because they believed that such research provided the only means of influencing policy-makers. She writes: 'At the outset the declared ideal was to be a report "with a statistical table on every page" ' (p. 62). Such a view is indicative of the very considerable power of quantitative data, possibly because of their association with 'science', to impress by virtue of their apparent rigour.

Qualitative researchers routinely describe the data deriving from ethnographic work as 'rich' and 'deep', often drawing a contrast with quantitative data, which tend to be depicted as superficial. The denotation 'rich' is generally indicative of the attention to often intricate detail which many qualitative researchers provide. Their sustained contact with the people they study permits a

penetrating account, which can explore incidents in great detail and can illuminate the full extent of their subjects' accounts of a variety of phenomena. Further, the predilection of ethnographers for conveying social life in the language and style of their subjects adds to this sense of richness. In terms of conventional sampling, Liebow's (1967) street-corner men constitute an unacceptably small, non-random sample of unknown representativeness. But they provide, as in much qualitative research, the route to a vivid, detailed portrayal of a small sector of social life. Further, the potential of the attention to rich detail in qualitative research to policy-making and other 'applied' contexts is gaining increasing recognition (Finch, 1986). An interesting anecdote in this respect has been supplied by Okely (1987, p. 58):

> in the 1983 general election [in the UK], the Conservative party geared its campaign to the daily reactions of the floating voter in marginal seats, mainly in southern England. These potential supporters were the subject of in-depth qualitative interviews several times a week. Feedback from these data was used within days to adjust the emphasis in campaign issues.

To many qualitative researchers, quantitative research produces superficial data. They tend to view survey research, for example, as a source of surface information which relates to the social scientist's abstract categories. By contrast, the quantitative researcher may be suspicious of the limited generality of a study of two dozen men in one area of one city (Liebow, 1967) from which data were collected that may have been heavily influenced by the particular emphases and predispositions of the researcher.

A Question of Epistemology or Technique?

What *are* quantitative and qualitative research, as outlined in the preceding section? In the book thus far, there has been a strong suggestion that epistemological issues underpin the divide between them. By an 'epistemological issue' is meant a matter which has to do with the question of what is to pass as warrantable, and hence acceptable, knowledge. In suggesting that quantitative researchers are committed to a positivist approach to the study of society (Filmer *et al.*, 1972), the view is being taken that they subscribe to a distinctive epistemological position, since the implication is that only research which conforms to the canons of scientific method can be treated as contributing to the stock of knowledge. Similarly, by subscribing to positions, such as phenomenology, *verstehen*, and naturalism, which reject the imitation of the natural scientist's procedures and which advocate that greater attention be paid to

actors' interpretations, qualitative research can also be depicted as being underpinned by an epistemological standpoint.[1] The tendency among some writers (e.g. Filstead, 1979) to refer to quantitative and qualitative research as 'paradigms' (following T. S. Kuhn, 1970) underscores the fact that they are frequently conceived of as different epistemological positions. The tendency to view the two research traditions as reflecting different epistemological positions, and hence divergent paradigms, has led to an exaggeration of the differences between them. As a consequence of such thinking, quantitative and qualitative research are frequently depicted as mutually exclusive models of the research process.

The following is a representative version of the view that quantitative and qualitative research reflect different epistemological positions:

> Quantitative and qualitative methods are more than just differences between research strategies and data collection procedures. These approaches represent fundamentally different epistemological frameworks for conceptualizing the nature of knowing, social reality, and procedures for comprehending these phenomena. (Filstead, 1979, p. 45)

Similarly, Rist (1977, p. 62) suggests that each of the two research traditions rests on 'an interrelated set of assumptions about the social world'. The view that quantitative and qualitative research constitute different epistemological positions would seem to imply that researchers formulate their views about the proper foundation for the study of social reality and choose their methods of investigation in the light of that decision. This would imply that a researcher's personal commitment to the view that the natural sciences provide the only acceptable basis for generating knowledge would mean that his or her approach to conducting an investigation, as well as the methods of data collection, will be chosen in this light. Likewise, a view that the scientific method provides a poor basis for the study of people, coupled with a commensurate endorsement of a position like phenomenology, will propel an investigator in the direction of a qualitative approach. Alternatively, it might be suggested that a researcher who chooses to carry out a survey, for example, has to recognize that his or her decision to use that method carries with it a train of epistemological implications which need to be recognized at the outset, in case the selection does not fit with the researcher's broader intellectual proclivities.

One might question whether research is conducted in these ways, but the suggestion that the two research traditions are rooted in divergent epistemological implications seems to carry with it con-