British Journal of Management, Vol. 11, 91–102 (2000)

Building Grounded Theories of Management Action

David Partington
Cranfield School of Management, Cranfield, Bedford MK43 0AL, UK

This paper presents a structured approach to grounded theory-building. It is aimed at 'mode 2' (Gibbons *et al*., 1994) management researchers, in particular those who analyse recollections of past events, often recorded in interview data, to develop explanations of management action. Two characteristics of mode 2 enquiry – transdisciplinarity and an emphasis on tacit knowledge – make grounded theory potentially attractive to mode 2 researchers. However, the approach offered here differs in two important ways from the much-cited universal grounded theory model originated by Glaser and Strauss (1967) and later proceduralized by Strauss and Corbin (1990). First, it acknowledges that the form of theories of management action which will satisfy the contemporary demands of mode 2 research is different from the form of integrated sociological theory for which the original grounded theory approach was developed. Second, it takes account of differences between the ontological assumptions underlying the use of retrospective data for analysing management action, and those associated with participant observation, the pivotal strategy of grounded theory's symbolic interactionist roots. The result is a simplified, more direct approach which works for the specific purpose of generating useful, consensually valid theory.

Introduction

We are in the midst of profound changes to the ways in which knowledge is produced in contemporary society. This shift in mode of knowledge production is described by Gibbons *et al*. (1994), who contrast traditional 'mode 1' knowledge, generated in a context of established institutions and disciplines, with 'mode 2' knowledge, created in a context of application. The principal features of mode 2 research are: it is transdisciplinary – beyond the scope of any one contributing discipline; it is conducted by people who apply a broad set of skills and experiences in a variety of university and non-university settings rather than exclusively by functionally constrained academics; it takes place within a non-hierarchical, transient structure rather than within a stable hierarchy; it arises not so much from a desire for academic progress, but more from the concerns of society.

In the field of management, the mode 2 knowledge-production system brings together the 'supply side' of knowledge, including universities, with the 'demand side', including businesses (Gibbons *et al*., 1994, p. 7). The whole system depends for its effectiveness on a rapid interplay between management theory and practice (Tranfield and Starkey, 1998). Working together in a mutually transdisciplinary frame, academics and managers attempt to learn from one another in a virtuous cycle of understanding, explication and action. Academics learn from managers, processing deeds and words into normative benchmarks and blueprints for management practice. In parallel, managers learn from academics, developing and applying practically derived theories.

Two themes which directly relate to this interdependence of theorists and practitioners may be traced in organizational literature. First, there is a persistent call from a significant minority of writers for more inductive, theory-building studies, using empirical data to build theories which are useful, relevant and up-to-date. Second, there is a shift towards management theories which place at centre stage the active role of managers.

In the first of these two themes, some calls for more theory-building research come from organization theorists who question the relevance of their own field. Daft and Lewin, for example, ponder the apparent practical uselessness of much organization theory, and ask whether the field of organization studies is not irrelevant. They report the lack of relationship in theories of organization between usefulness and validity, observing that 'the body of knowledge published in [organizational] academic journals has practically no audience in business or government' (1990, p. 1). They suggest that, if progress is to be made, the practical needs of businesses must not be ignored.

Underlying this practical concern is a more fundamental methodological issue, where the dominance of the quantitative, deductive, theory-testing research paradigm in management research is challenged on scientific grounds. Writers such as Mintzberg (1979), Eisenhardt (1989), Parkhe (1993), and Burrell (1996) argue that the undeveloped, evolving status of research into organizations makes it appropriate for researchers to put more effort into building new theories from empirical data. They point to the tendency for researchers to move too soon towards testing the statistical significance of relationships between conceptual variables in theoretically based arguments.

In the second theme, the behavioural sciences have seen a shift 'of near-revolutionary proportions' (Ilgen and Klein, 1988, p. 328) towards cognitive perspectives – those which give central attention to managers' conscious deliberations. Cognitive perspectives emphasize the *stimulus-organism-response* (S-O-R) model, which casts individuals as processors of information. In management research, this orientation emphasizes the active, mediating role of the manager between environmental stimulus and behavioural response. The S-O-R perspective, which differs from the mechanistic, passive, behaviourist *stimulus-response* (S-R) model, 'affords cognitive processes a major role in the behavioural sequence' (Ilgen and Klein, 1988, p. 329).

In common with the persistence of calls for more theory-building research, the rise of the S-O-R perspective is attributed, at least in part, to management concerns for useful theory. Tenbrunsel *et al*. (1996, p. 313), for example, assert that this shift has arisen from the pressure to develop theories which address the activities and interests of managers and which 'provide managers with more levers for change'.

Combining these two themes, it is reasonable to suppose that attempts at theory building within the S-O-R perspective have the potential to produce useful, relevant output. Further, one might expect that theoretical advance on the subject of building transdisciplinary S-O-R theories of cause and effect would be a central concern of management-research methodologists. The use of cognitive or cause mapping is relatively well-advanced in these respects, and is normally coloured by two distinctive characteristics. First, many causal mappers make claims to validity and reliability on the basis of following an established, legitimized, structured method for collecting and mapping data, sometimes using proprietary mapping software. Second, they typically employ a particular a priori theory (for example attribution theory, categorization theory, personal construct theory) as an explanation for causal representation. In this way theories from the established discipline of psychology are used to elicit theories of strategic processes, for the purpose of understanding or intervention (Eden, 1992).

Outside the cognitive-mapping school there is little dedicated methodological guidance for builders of theories of management action, and few exemplars of research conduct beyond the level of procedural detail. In much qualitative management research, important ontological (what counts for reality) and epistemological (how knowledge of that reality may be established) issues are often either artfully avoided, taken for granted or ignored. In particular the researchers' underlying purpose is often secondary to considerations of method. Undeniably, a good understanding of appropriate data elicitation and analysis techniques is essential. It is, however, important for researchers to understand and acknowledge how the assumptions which underlie their purpose match their approach.

Of particular concern in this paper is that the widely mentioned theory-building approach known as *grounded theory* has seen relatively little productive discussion in management literature. Some writers on qualitative research have argued for more consistency of approach, and yet contemporary exemplars of grounded theory research are inevitably shaped by the specific purposes of the researcher, and by the nature of the data used.

Claims to have used grounded theory approaches are often vaguely expressed. There remain significant opportunities to progress understanding of how established grounded theory processes might be developed and applied in specific contexts.

Some aspects of grounded theory-building methodology match well the needs of contemporary mode 2 management research. Two features of mode 2 in particular reinforce this fit. First, *transdiciplinary* research is less likely to be based on the existing, highly-developed theoretical frameworks from bounded disciplinary traditions, which tend to characterize mode 1. By their nature, grounded theories are not necessarily reliant on established theoretical perspectives. Second, mode 2 emphasizes *tacit knowledge*, which has not yet been codified, written down and stored. The grounded theory approach suits the purpose of transforming tacit knowledge into codified knowledge.

In other respects contrasts between the grounded theory approach and the purposes of mode 2 management research are apparent. In order to capitalize on the potential benefits, two mismatches, both linked to grounded theory's origins in symbolic interactionism, need resolving through theoretical discussion. First, the form and purpose of theoretical mode 2 output is different from that of the symbolic interactionist tradition. Second, there is a widespread use in qualitative management research of retrospective accounts, especially documentary records and interviews with managers. Such data has a different ontological status – it is based on a different level of reality – from *observations* of behaviour.

In the following sections the origins of grounded theory and the progressive proceduralization of its processes over the years are discussed. Grounded theory methodology and methods are then examined in the context of the S-O-R perspective, taking into account the assumptions the latter entails. Mismatches and complications inherent in importing the full-blown grounded theory approach are identified and resolved by applying a simplified analytical framework within a critical realist perspective. A cohesive strategy is offered for qualitative researchers who use recollections of action, notably recorded as interview data, to build theories of management action. An example of such a theory from a completed study is presented.

The grounded theory approach

The approach to discovering theory from data known as *grounded theory* is much-cited but little-understood. In order to clarify its present status in management research it is worth tracing its short history from its origins in the pragmatist Chicago School tradition of symbolic interactionist sociology. The term 'grounded theory' is commonly associated with its founders Glaser and Strauss, who felt a need to provide a counterbalance to the dominance of the 'doctrinaire' concern in sociology with the rigorous verification of logically derived theories, which had allowed the persistence of a perceived 'embarrassing gap between theory and empirical research' (Glaser and Strauss, 1967, p. vii). Grounded theories, in contrast, were derived directly from empirical data. Glaser and Strauss offered four criteria which theory must satisfy in order to be considered useful, which today strike a chord with the aims of mode 2 research: they would *fit* the real world; they would *work* across a range of contexts; they would be *relevant* to the people concerned; and they would be readily *modifiable* (Glaser and Strauss, 1971, p. 176).

The twin foundations of grounded theory are *theoretical sampling*, whereby the process of data collection is controlled by the emerging theory, together with the *constant comparison* method of joint data coding and analysis. Using the terminology of Glaser and Strauss the process may be summarized as follows.

Incidents of phenomena in the data are *coded* into *categories*. By comparing each incident with previous incidents in the same category, the researcher develops theoretical *properties* of categories and the *dimensions* of those properties. As the study progresses, the focus changes from comparing incidents with one another to comparing incidents with properties of the category that resulted from initial comparisons of incidents. The theoretical sampling and constant comparison processes lead towards the *theoretical saturation* of a reduced set of categories within the boundaries of the emerging theory. *Memos* – records of ideas relating to categories – and the categories themselves, form the basis of the written theory. Explored in different field settings and broader contexts, *substantive theory* may be developed into more abstract, generalized *formal theory*. Although Glaser and Strauss state that theories

so generated may be presented 'either as a well-codified set of propositions or in a running theoretical discussion' (1967, p. 31), it is the latter form, characterized by richly descriptive interpretation, which dominates their own work.

The proceduralization of grounded theory

In setting out and illustrating the grounded theory approach in these terms, Glaser and Strauss emphasized that their principal aim was 'to stimulate others to codify and publish their own methods for generating theory' (1967, p. 8). This idea relates to one of the recurring strands in grounded theory debate, namely the extent to which it is desirable or possible to pin down and formalize the approach as a general procedure. Glaser and Strauss were clearly aware of the dilemma of describing in the linear format of a practically applicable research monograph what they knew to be a highly personal, iterative procedure. This awareness is evident in their repeated statements of the need for intangible qualities such as insight and 'theoretical sensitivity' (Glaser and Strauss 1967, p. 46). For Glaser and Strauss, that essential element in a sociologist's armoury comes not from the following of procedures, but from a combination of the sociologist's innate ability to conceptualize and formulate theories, from his or her personality and temperament and from knowledge of his or her area of research.

Despite Glaser and Strauss's earlier acknowledgement of the need for open-mindedness, and their desire 'to stimulate rather than freeze thinking' (Glaser and Strauss, 1967, p. 9), the two men later became somewhat divided on the question of whether, and how, grounded theory processes could be formalized as a set of techniques. Their earlier joint publications were followed by individual contributions, each presenting developments of their own ideas. Glaser was less keen to see grounded theorists following an orthodoxy of approach, preferring to direct his attention to ways of enhancing researchers' latent creativity (see Glaser, 1978). Strauss, on the other hand, was more inclined towards producing prescribed procedures for the benefit of users of the grounded theory approach (see Strauss, 1987). Strauss and Corbin's (1990) book, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques,* took the prescription of grounded theory methods a stage further, arguing that following procedural detail is useful for learning qualitative analysis. Their concern was to 'spell out the procedures and techniques . . . in greatest detail' and in 'step-by-step fashion' (Strauss and Corbin, 1990, p. 8).

In accordance with this aim, Strauss and Corbin present their recommended approach in a boldly proceduralized fashion, even though they are careful to qualify their discussion of techniques with clear warnings about the difficulty in practice of formulating good grounded theory. Many examples of attention to procedural detail may be found in their approach, including the subdivision of the coding process into three stages, labelled *open coding* (fragmenting data), *axial coding* (putting data back together in new ways using the paradigm model – see below) and *selective coding* (selecting the core category and relating it to other categories). Formal definitions are given for these and many other terms. They describe how such analytical devices as the *paradigm model* and the *conditional matrix* may be applied.

The *paradigm model* is at the core of Strauss and Corbin's method. It consists of a systematized cause-and-effect schema which the researcher uses to explicate relationships between categories and subcategories. It is presented in Figure 1 (Strauss and Corbin, 1990, p. 99).

To aid the identification of relationships between conditions, consequences, actions and interactions Strauss and Corbin further recommend the graphical tracing of *conditional paths* on a *conditional matrix*. The conditional matrix represents a set of *levels* drawn as eight concentric circles, each level 'corresponding to different aspects of the world' pertaining to a phenomenon (Strauss and Corbin, 1990, p. 161). Moving from the outer circle to the inner the levels are labelled as follows (Strauss and Corbin, 1990, p. 163):

(1) International
(2) National
(3) Community

(A) CAUSAL CONDITIONS → (B) PHENOMENON →
(C) CONTEXT → (D) INTERVENING CONDITIONS →
(E) ACTION/INTERACTION STRATEGIES →
(F) CONSEQUENCES.

Figure 1. Strauss and Corbin's paradigm model

(4) Organizational and Institutional
(5) Sub-Organizational and Sub-Institutional
(6) Group, Individual, Collective
(7) Interaction
(8) Action.

Strauss and Corbin's (1990) variant of grounded theory represents the state of the art in step-by-step grounded theory technique. It is packaged as a universal model for the analysis of qualitative data from all 'social science and professional' substantive disciplines (Strauss and Corbin, 1990, p. 7). It is openly based on Glaser and Strauss's (1967) original, less prescriptive approach to producing integrated interpretations of social worlds. It is, apparently, an attempt to present that original approach in a straightforward, proceduralized form, but without losing any of its comprehensiveness and intellectual complexity. This uncompromised intent has resulted in a step-by-step 'method' which many find difficult to follow in practice except in a loose, non-rigid, non-specifiable fashion which inevitably draws it back towards the original version.

Grounded theory in management research

The difficulty of applying universal grounded theory prescriptions is borne out by experience with doctoral students working in the field of organization and management who have attempted to follow the Strauss and Corbin approach but have abandoned it because of its bewildering complexity. Indeed, in published management research there is little evidence of the successful application of any precisely delineated, prescribed approach. Bryman (1988, p. 85) observes: 'In spite of the frequency with which Glaser and Strauss and the idea of grounded theory are cited in the literature, there are comparatively few instances of its application . . . .'

It is possible that for qualitative researchers operating outside the established norms of positivism – the 'scientific method' – there is a seductive appeal in the availability of a formal, step-by-step procedure for generating theory from data. Such a procedure might hold the promise of limiting some of the dangers of trusting in a highly uncertain creative process to produce results. Further, the formalization of qualitative approaches might also be seen as offering a legitimizing device with which to counter criticisms of lack of rigour of qualitative studies from researchers operating within the more established rules of positivism. Both these possibilities add weight to Strauss and Corbin's argument that spelling out qualitative procedures and techniques is useful, particularly for novice researchers.

A further argument which supports the need for greater consistency of approach to qualitative research derives from the observation that, if we are to build on the work of others we need common, explicit, practical methodological ground. Addressing this issue, Orton (1997) refers to Weick's influential research on sensemaking processes in organizations (specifically Weick, 1993). Orton cites Pfeffer's (1995) suggestion that, admirable though it may be, Weick's strongly creative, individual style makes it difficult for others to pick up and develop his work. In an attempt to pin down and explicate methodological issues, Orton analyses his own techniques and presents them as a series of 29 separate stages in an iterative grounded theory process, specifically applicable in the context of organization post-mortems using library data.

The importance of attention to research context and data sources is exposed and highlighted in any attempt to apply Strauss and Corbin's procedure. Their aim of providing a recipe to satisfy the needs of qualitative researchers from all social science disciplines whilst remaining true to the distinctive grounded epistemology of symbolic interactionism has resulted in a procedure that is, apparently, over-complicated. Orton's study illustrates that, in order to use the grounded theory approach in a context of specific aims and assumptions, it is necessary to consider their implications. An examination of published exemplars of grounded theory studies in the field of organization and management shows that, although the rules of the game for presenting such work are becoming clearer and more established, there is a need to take into account the theoretical aims, assumptions and data sources in any application. The principal features of four such exemplars are shown in Table 1.

In each of these four exemplars the output of the studies is of mode 1 type, primarily aimed at an academic audience. The purpose of development into theories with a direct, practical use was a secondary consideration. As a result, although the theories generated by these studies contribute to our understanding of social processes, they

Table 1. Four management grounded theory exemplars

Paper	Stated purpose	Research design basis	Primary data source	Theoretical output
Brown and Eisenhardt (1997)	Exploration; extend thinking	Multiple case studies	Interviews	Insights linking successful product development with organizational structures and processes
Gersick (1994)	Stimulate further research	Single case study	Interviews	Managers use two distinct pacing mechanisms for proactive change
Gioia and Chittipeddi (1991)	Exploration	Single case study	Interviews, diaries, reports	Initiation of change and CEO's role in phases
Kram and Isabella (1985)	Exploration	Pairs of individuals	Interviews	Continuum of peer relationships fulfilling different functions and meeting different needs

are unlikely to be of direct interest to managers. In the next section I show how examination of the distinctive characteristics of a specific research aim can usefully transform Strauss and Corbin's model into a procedure which is directly applicable to the development of S-O-R theories in mode 2 management research.

Grounded S-O-R theory

On one level, S-O-R theories are concerned with how people's understanding of their environment leads to action. On the face of it, the assumptions behind grounded theory's symbolic interactionist origins match this consideration. The principal characteristic of symbolic interactionism is a concern for understanding social processes and interactions from the social actor's point of view. For symbolic interactionists 'a stimulus to act is depicted as undergoing a process of interpretation before a response (an act) is forthcoming' (Bryman, 1988, p. 54). In this important interpretivist respect it aligns with the broad aim of S-O-R theories. Beneath the surface of this alignment, however, two issues need to be taken into account when importing the grounded theory approach.

The form of the theory

The first issue arises from the effect of the simple, central role of causality in S-O-R theory, and the contrasting form of symbolic interactionist theory. The constructivist philosophical assumptions of symbolic interactionism exerted a powerful sway over the development of the grounded theory approach. This influence is amply evident in the form of Glaser and Strauss's research publications (see, for example, Glaser and Strauss, 1964; 1965a; 1965b; 1971). Their concern is for particulars rather than abstractions, and for open systems of thought rather than closed absolutes. Their characteristic style is narration of carefully constructed, data-driven discussional or propositional theories. The form of published symbolic interactionist grounded theories by other researchers is similarly characterized by richness and complexity (for more recent examples see the work of self-proclaimed symbolic interactionists, Baszanger, 1997; Clarke, 1997; Fujimura, 1997). The 'theory' is rarely summed up as an easily digestible causal explanation, and is often expounded over many pages of text. Indeed, Bryman (1988, p. 85) questions whether much of this kind of grounded theory, which concentrates on the generation of categories, is really theory at all.

The complexity of the symbolic interactionist view of the role of causality in theory is to be seen in Strauss and Corbin's paradigm model, where causal conditions are linked to action not through cognition but more indirectly via 'phenomenon', 'context' and 'intervening conditions', each of which may include elements of cognition. Further, the eight-layered conditional matrix is clearly designed to cover all the components of the paradigm model, not only in the reactions of individual responses to stimulus information in organizations, but also in the full kaleidoscopic range of sociological contexts. Because mode 2 management researchers focus on the concerns of managers, the demand is for theories in the form of assimilable causal models and classifications in a narrowed version of the conditional matrix. As Tenbrunsel *et al.* (1996) observe, the purpose of these theories is to convey truths which, when learned by managers, will change those managers' behaviour in a prescribed direction. Their desired form derives from the simple S-O-R model.

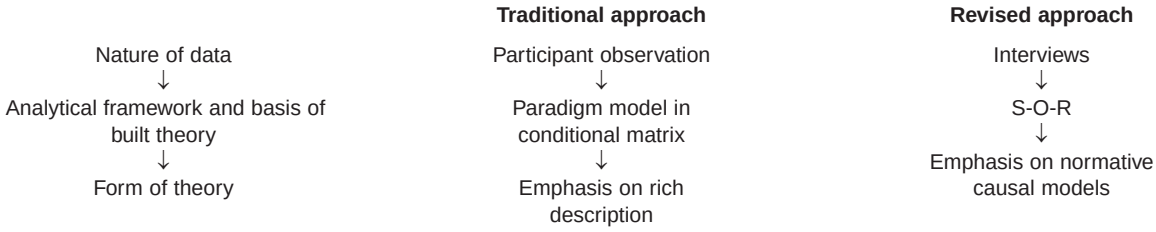

Figure 2. Traditional and revised approaches to grounded theory

The nature of the data

The second issue arises when retrospective data, especially interviews with managers, are used as the basis for building causal theories. Symbolic interactionism rests on the premises that: (1) action is taken on the basis of meaning, of how we define a situation and how we think others will view our actions; that (2) meaning comes from social interaction; and that (3) meanings are handled in and modified through an interpretive process (Blumer, 1969, p. 2). The job of the researcher is to catch the process of interpretation by which actors construct their actions. For this reason the 'pivotal strategy' (Rock, 1979, p. 178) of symbolic interactionism is participant observation, following social processes over time to capture actors' definitions of self, of situation, and of the interaction between the two that leads to action. A problem for grounded theorists who use interview data in management cognition studies is that such data are not based on observed events, but on informants' second-hand accounts of those events. The issue here is not whether respondents' answers will be deliberately or unwittingly biased to be more 'logical' or 'socially desirable' (Eiser, 1980, p. 8). Such methodological concerns, although relevant and legitimate, are outside the scope of this paper. Here, the specific concern with interview data is that the 'reality' which the interviewer seeks to elicit is a causal S-O-R mechanism. This reality is a step further away from the intermediate reality of the interviewer's words and two steps further away from the immediate reality of that which is observable by the interviewer. The position is summarized in Figure 2.

Taking into account these issues, it is possible to develop an improved grounded theory framework which matches the needs of S-O-R research based on retrospective data, first by simplifying the Strauss and Corbin model, and second by aligning it more centrally with causal aims.

First, the framework may be made more accessible by shedding some of the complexities necessary for a single framework to embrace the study of interpreted behaviour of people in all social science disciplines and in all social contexts. The structured social context of organizations and the central focus on management action enable significant simplifications to the paradigm model and the conditional matrix. The simplified paradigm model is shown in Figure 3. In this stripped-down form it represents the S-O-R model of cognition.

In the same way the conditional matrix may be simplified from eight concentric circles to four, labelled as follows:

(1) External organization context
(2) Internal organization context
(3) Individual and collective managerial cognition
(4) Action.

The paradigm model (an S-O-R model of causal tendency) and the conditional matrix (a graphical device for mapping and analysing data) are thus simplified and aligned.

Second, an ontology is needed which is able to accommodate the aim of developing causal theory while acknowledging the *lack* of absolute causal certainty which characterizes social processes. Interview-based causal-theory-building

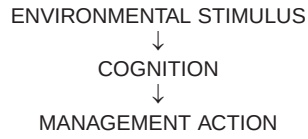

Figure 3. Simplified paradigm model

research needs to be anchored in a theory of reality which allows the specification and refinement of explanations of cause and effect which:

(1) exist in the form of 'mechanisms' which may not be consciously perceived by research subjects or theoretically preconceived by researchers, which therefore may act independently of thought and which are only accessible through the creative speculation by the researcher of plausible alternatives whose 'truth' is ultimately dependent on consensual validation by informants;
(2) from data which do not necessarily explicitly link the elements of the paradigm model (for example when even the stimuli are sometimes unperceived by the informant, let alone the underlying causal mechanism);
(3) from data which are not based on direct observation by the researcher.

What theory of reality matches these requirements? Ontological choice has been variously represented as a dichotomy between positivism and phenomenology (Easterby-Smith, Thorpe and Lowe, 1991), between external reality and the product of individual consciousness (Burrell and Morgan, 1979) and between objectivism and subjectivism (Morgan and Smircich, 1980). The polar extremes of each pair are essentially the same:

- Positivism: Reality exists externally and independently of the observer, and knowledge of reality is obtained by the measurement of its properties using objective methods. The researcher's task is to identify 'fundamental laws' (Easterby-Smith, Thorpe and Lowe, 1991, p. 23).
- Phenomenology: Reality is socially constructed, and consists of individuals' interpretation of their circumstances. Knowledge comes from the penetration by the researcher of the meanings that make up the individuals' views of reality. The researcher's role is to reconstruct those meanings.

In their pure forms neither of these extreme positions is suited to the purposes described in this paper. The positivist view of reality is inappropriate because management actions are not always observable in an objective way, and because social processes are rarely reducible to absolute laws. The pure interpretivist view is ill-suited because it does not allow the researcher to add his or her own theories through the speculation of social mechanisms and causal tendencies.

A third theory of reality which matches the stated requirements is Bhaskar's (1975) critical realist ontology. Bhaskar argues that reality exists in three overlapping domains: the *empirical* – experiences or observed events, the *actual* – events whether observed or not and the *real* – the underlying tendencies or mechanisms which may in a given situation give rise to events or may lie dormant, being cancelled out by other forces.

For research into management action, adopting such a multi-level ontological perspective allows the assumption that contexts/stimuli, meanings/cognitive processes and responses/behaviours are real, and that while some of their elements are revealed as observable events, some may be accessible only through the subjective accounts of managers and other organizational actors and still others may only be uncovered through researcher speculation over apparent causal tendencies, demanding further enquiry and verification. From this perspective researcher interpretations are 'hypotheses, in the sense that they are potentially corrigible by further discoveries' (Outhwaite, 1987, p. 20). Bhaskar (1975) sums up this philosophy of science as follows:

> 'Roughly the theory advanced here is that statements of laws are tendency statements. Tendencies may be possessed unexercised, exercised unrealized, and realized unperceived by men [sic]; they may also be transformed. (Bhaskar, 1975, p. 18)

The three overlapping domains may be represented by Figure 4.

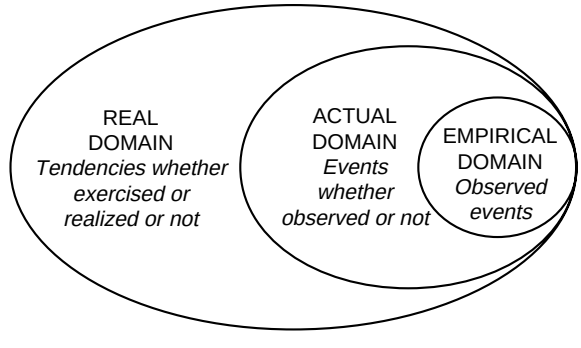

Figure 4. Three overlapping domains of reality in the critical realist ontology

Outhwaite provides a simple, familiar example of the three domains and the distinctions between them:

> 'My watch has a mechanism in virtue of which it has the power to, as we say, tell the time. But for this to happen there are three main conditions. First, the mechanism must have its causal powers intact: It must not be, for example, "broken". Second, the mechanism must be activated: I must remember to keep my watch wound up and set to the correct time zone. And third, although the watch will, if these conditions are satisfied, "tell the time" 24 hours a day whether or not I observe it, it will only tell *me* the time if I *observe the event* of the hands pointing to 11:15, an event produced by a latent structure or *mechanism*.' (Outhwaite, 1983, p. 322, emphasis in original)

In this example the *mechanism* is there, whether or not it is activated to produce the *event* of the watch indicating the time, whether or not this is *experienced*. This logic may be extended to the context of interview-based research into management action. The *mechanism* is the existence of external and internal forces or stimuli which, provided they or their effects are attended to, may lead to a purposeful response. Without such attention the mechanism lies dormant. With it, the response is enacted in the form of a series of *events*, whether or not these are *experienced* by the researcher. The events, and their links to the stimuli which caused them, are discovered through analysis of observational, archival, and, particularly, interview data. As Tsoukas (1989) suggests, the researcher's job in the critical realist ontology is to merge the real and the actual domains through repeated speculation and enquiry. In this case, the *speculation* will involve asking what plausible, understandable cognitive mechanisms are intervening between stimulus and action. The *enquiry* will be the unfolding study and the search for consensually valid explanations.

Application

In the introduction to this paper I suggested that two particular aspects of applying the grounded theory approach using retrospective data are likely to make it an attractive strategy for mode 2 management researchers. First, the transdisciplinary nature of mode 2 research means that pre-existing theoretical frameworks are likely to be fragmented or rudimentary. With the grounded theory approach this is not a disadvantage, since the purpose of the approach is to build new theories from data in context. Second, mode 2 research is often aimed at capturing tacit knowledge. The retrospective, reflexive accounts of managers and other organizational actors will be an important source of this knowledge.

Aside from these two attractions, I have described two potential problems with applying the existing grounded theory approach in this context, and have argued that both may be overcome. Mode 2 researchers seeking to build causal S-O-R theories of management action from retrospective data may use the guiding structure of three linked models: the simplified paradigm model, the simplified conditional matrix and the three overlapping domains of reality in the critical realist ontology. In this way, two potential problems of applying the existing grounded theory approach to mode 2 purposes are addressed.

In practice, the three models may be applied to the established procedures of grounded theory through the following steps:

- Using the established procedures of grounded theory (summarized previously), and the basic elements of the simplified paradigm model (Figure 3), code each instance of active environmental stimulus (signified by management attention) into categories, each with properties and dimensions, maintaining a flexible working definition of each category.
- Similarly code each instance of action (or intent).
- Using the concentric circles of the simplified conditional matrix drawn on a large sheet of paper, make a freehand graphical representation of all instances of stimulus and action. Draw links between them.
- Speculate as to possible underlying mechanisms which could offer a theoretical explanation of the cognitive processes which intervene between, and explain, links between instances of stimulus and response. Seek explanations which informants find appealing and valid.
- Develop the theory in contrasting contexts, continually testing and modifying the coding scheme. Draw into focus a cognitive process which offers a consensually valid and informative link between stimulus and action.

- Write the theory in the form three stages, each representing a progressively higher level of theoretical abstraction: (1) case narratives with illustrative data examples; (2) summary within-case and cross-case tabulations; (3) theoretical propositions and summary process models.

Developed in this way, the models are designed to enable understanding of some or all of the following: (1) what key features of an organization's external and internal context are part of the underlying causal mechanisms which tend to encourage, discourage, enable or inhibit action?; (2) how do these mechanisms act, and how may they be generalized in contrasting contexts?; (3) where does an organization stand on a continuum of best practice in relation to a specific routine or process?; (4) what steps should be followed and what barriers will need to overcome if there is to be progress along the continuum?

By contrast with the mode 1 grounded theory exemplars listed in Table 1, a study which exemplifies the mode 2 approach is Bessant's (1998) study of continuous improvement capability in manufacturing. A further example of the output of a completed study which followed the approach described in this paper is presented below. The study (Partington, 1999) built a grounded S-O-R theory explaining the actions of managers who sought to implement initiatives of planned organizational change. Using interviews with managers as the main source of data, the basis of the research design was a series of case studies of the implementation of change initiatives in four similar-sized organization units in contrasting sectors: a public hospital, a national newspaper group, an engineering construction contractor and a manufacturer of household appliances. Following mode 2 principles, one of the main features of the study was the involvement of informants in the validation and application of its findings. The theory generated by the study, which maps directly onto the three main elements of the S-O-R paradigm model (Figure 3), may be summarized as follows:

Management action: Managers who implement planned organizational change initiatives employ a bounded repertoire of implementation processes. These may be reduced to a set of six categories which are employed variably, to a greater or lesser extent, over the life of a change initiative. The categories are:

(a) Use of *external agents* of change
(b) Planning and control *formality*
(c) Control of the *pace* of change
(d) Staff *participation* in decisions
(e) *Justification* of actions
(f) *Definition* of individuals' *roles*

Cognition: The extent of each of the six categories of action at any time may be considered as an expression of change managers' possession or pursuit of *personal control* over their environment. Personal control is defined by Greenberger and Strasser (1986, p. 165) as 'an individual's beliefs, at a given point in time, in his or her ability to effect a change, in a desired direction, on the environment'. The construct represents an intermediate set of cognitive variables intervening between environmental stimulus and management action. The study found that personal control has five dimensions:

(a) *autonomy*
(b) *resources*
(c) *self-efficacy*
(d) *opportunity*
(e) the expected *cooperation* of staff

Environmental stimulus: Personal control is partly determined by managers' attention to selected key characteristics of their organization. In the bounded context of the four organizations studied, stimulus derived from managers' attention to some or all of seven such generalized characteristics, listed below in the form of continua. Attention to positive or negative features of the characteristic revealed the underlying source of each instance of action.

(a) *Public.....OWNERSHIP.....Private*
(b) *Traditional .....SELF-IMAGE.....Modern*
(c) *Member.....GROUP MEMBERSHIP.....Independent*
(d) *Isomorphic .....CONFORMITY.....Differentiating*
(e) *Stable.....HISTORY.....Threatened*
(f) *Project.....ORIENTATION.....Process*
(g) *High.....TECHNICAL EXPERTISE.....Low*

From a practical viewpoint, the theorized relationship between environmental stimulus and

management action, and the intermediate role of personal control, have potentially important consequences for managers. There is considerable support in the literature for the notion that feelings of greater personal control are associated with more effective decision-making. If, through their involvement in developing such theories, managers are able to understand the positive and negative features of their environment which give rise to higher or lower feelings of control, they may take steps to enhance the positive and reduce the negative.

Conclusion

The aims, assumptions and procedures of traditional grounded theory have been considered in the light of the aims and assumptions of interview-based mode 2 management research, specifically that which seeks to build theories of management action. A framework for analysis is offered which resolves contrasts between the two traditions and which emphasizes and takes advantage of those elements of grounded theory which are useful in the context of mode 2. The result is a simplified approach which may prove helpful to mode 2 qualitative researchers.

This paper builds on the idea that specifiable models of grounded theory-building are possible, provided that methodological considerations are taken into account. In conclusion I suggest that 'grounded theory' should not be wielded as a convenient term offered as sufficient explanation of a researcher's data processing approach and theoretical assumptions, since it can never be a universally applicable off-the-shelf package. Ultimately, qualitative researchers attracted by guiding and legitimizing devices cannot escape the undiminished need for sensitivity, creativity, patience, perseverance, courage and luck. If, however, a researcher is willing to address the methodological implications of applying grounded theory in *this* study, with *this* purpose, with *these* assumptions, using *this* data, the study is more likely to reach a successful conclusion. There is almost limitless scope for further development of ideas about how qualitative research procedures may be developed and matched to specific purposes.

References

Baszanger, I. (1997). 'Deciphering Chronic Pain'. In: A. L. Strauss and J. M. Corbin (eds), *Grounded Theory in Practice*. Sage, London.

Bessant, J. (1998). 'Developing Continuous Improvement Capability', *International Journal of Innovation Management*, **2**(4), pp. 409–429.

Bhaskar, R. (1975). *A Realist Theory of Science.* Leeds Books, Leeds.

Blumer, H. (1969). *Symbolic Interactionism*. Prentice-Hall, Englewood Cliffs, NJ.

Brown, S. L. and K. M. Eisenhardt (1997). 'The Art of Continuous Change: Linking Complexity Theory and Time-paced Evolution in Relentlessly Shifting Organizations', *Administrative Science Quarterly*, **42**, pp. 1–34.

Bryman, A. (1988). *Quantity and Quality in Social Research.* Routledge, London.

Burrell, G. (1996). 'Normal Science, Paradigms, Metaphors, Discourses and Genealogies of Analysis'. In: S. R. Clegg, C. Hardy and W. R. Nord (eds), *Handbook of Organization Studies*. Sage, London.

Burrell, G. and G. Morgan (1979). *Sociological Paradigms and Organizational Analysis.* Heinemann, London.

Clarke, A. E. (1997). 'A Social Worlds Research Adventure: The Case of Reproductive Science'. In: A. L. Strauss and J. M. Corbin (eds), *Grounded Theory in Practice*. Sage, London.

Daft, R. L. and A. Y. Lewin (1990). 'Can Organization Studies Begin to Break Out of the Normal Science Straitjacket', *Organization Science,* **1**(1), pp. 1–9.

Easterby-Smith, M., R. Thorpe and A. Lowe (1991). *Management Research: An Introduction*. Sage, London.

Eden, C. (1992). 'On the Nature of Cognitive Maps', *Journal of Management Studies*, **29**(3), pp. 261–265.

Eisenhardt, K. M. (1989). 'Building Theories from Case Study Research', *Academy of Management Review,* **14**(4), pp. 532–550.

Eiser, J. R. (1980). *Cognitive Social Psychology: A Guidebook to Theory and Research*. McGraw-Hill, London.

Fujimura, J. H. (1997). 'The Molecular Biological Bandwagon in Cancer Research: Where Social Worlds Meet'. In: A. L. Strauss and J. M. Corbin (eds), *Grounded Theory in Practice*. Sage, London.

Gersick, C. J. G. (1994). 'Pacing Strategic Change: The Case of a New Venture', *Academy of Management Journal*, **37**(1), pp. 9–45.

Gibbons, M., C. Limoges, H. Nowotny, S. Schwartzman, P. Scott and M. Trow (1994). *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. Sage, London.

Gioia, D. A. and K. Chittipeddi (1991). 'Sensemaking and Sensegiving in Strategic Change Initiation', *Strategic Management Journal*, **12**, pp. 433–448.

Glaser, B. G. (1978). *Theoretical Sensitivity: Advances in the Methodology of Grounded Theory.* Sociology Press, Mill Valley, CA.

Glaser, B. G. and A. L. Strauss (1964). 'The Social Loss of Dying Patients', *American Journal of Nursing*, **64**, pp. 119–122.

Glaser, B. G. and A. L. Strauss (1965a). *Awareness of Dying*. Aldine, Chicago.

Glaser, B. G. and A. L. Strauss (1965b). 'Temporal Aspects of Dying as a Non-Scheduled Status Passage', *American Journal of Sociology*, **71**, pp. 48–59.

Glaser, B. G. and A. L. Strauss (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Aldine, New York.

Glaser, B. G. and A. L. Strauss (1971). *Status Passage*. Routledge & Kegan Paul, London.

Greenberger, D. B. and S. Strasser (1986). 'Development and Application of a Model of Personal Control in Organizations', *Academy of Management Review*, **11**(1), pp. 164–177.

Ilgen, D. R. and H. J. Klein (1988). 'Organizational Behaviour', *Annual Review of Psychology*, **40**, pp. 327–351.

Kram, K. E. and L. A. Isabella (1985). 'Mentoring Alternatives: The Role of Peer Relationships in Career Development', *Academy of Management Journal*, **28**(1), pp. 110–132.

Mintzberg, H. (1979). 'An Emerging Strategy of "Direct" Research', *Administrative Science Quarterly*, **24**(4), pp. 582–589.

Morgan, G. and L. Smircich (1980). 'The Case for Qualitative Research', *Academy of Management Review*, **5**, pp. 491–500.

Orton, J. D. (1997). 'From Inductive to Deductive Grounded Theory: Zipping the Gap Between Process Theory and Process Data', *Scandinavian Journal of Management*, **13**(4), pp. 419–438.

Outhwaite, W. (1983). 'Towards a Realist Perspective'. In: G. Morgan (ed.), *Beyond Method: Strategies for Social Research.* Sage, Beverly Hills, CA.

Outhwaite, W. (1987). *New Philosophies of Social Science: Realism, Hermeneutics and Critical Theory.* Macmillan, Basingstoke.

Parkhe, A. (1993). '"Messy" Research, Methodological Predispositions, and Theory Development in International Joint Ventures', *Academy of Management Review*, **18**(2), pp. 227–268.

Partington, D. (1999). 'Managerial Action and Personal Control in the Implementation of Planned Change'. Paper presented to Academy of Management, Organization Theory Division, Chicago, August.

Pfeffer, J. (1995). 'Mortality, Reproducibility, and the Persistence of Styles of Theory'. *Organization Science*, **6**, pp. 681–686.

Rock, P. (1979). *The Making of Symbolic Interactionism*. Macmillan, London.

Strauss, A. L. (1987). *Qualitative Analysis for Social Scientists*, Cambridge University Press, Cambridge.

Strauss, A. L. and J. M. Corbin (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques.* Sage, Beverly Hills, CA.

Tenbrunsel, A. E., T. L. Galvin, M. A. Neale and M. H. Bazerman (1996). 'Cognitions in Organizations'. In: S. R. Clegg, C. Hardy and W. R. Nord (eds), *Handbook of Organization Studies*. Sage, London.

Tranfield, D. and K. Starkey (1998). 'The Nature, Social Organization and Promotion of Management Research: Towards Policy', *British Journal of Management*, **9**, pp. 341–353.

Tsoukas, H. (1989). 'The Validity of Ideographic Research Explanations', *Academy of Management Review*, **14**(4), pp. 551–561.

Weick, K. E. (1993). 'The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster', *Administrative Science Quarterly*, **38**, pp. 628–652.