

# Process research in strategy formation: Theory, methodology and relevance

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This paper develops a view of the strategy formation process, drawing on a review of contributions that are based on a process approach, and more specifically the work of Henry Mintzberg, Andrew Pettigrew and Andrew Van de Ven. This view is meant to provide a way to bridge the content–process gap in strategic management by addressing the aspects of process theory and process methodology. Structuration is found to provide a useful theoretical basis for strategy formation research. Process methodology is found to be about discovering valid generative mechanisms that explain regular patterns in event sequences. Strategy formation research can then be made relevant for management practice by providing insight with regard to generative mechanisms and associated process trajectories of continuity and change, to allow for judgements on the favourability of the course of the process as well as the necessity to intervene or to let the process run its course.

## Introduction

Every strategy scholar must be familiar with Mintzberg and Waters' (1985) image of strategy formation in which a realized strategy was presented as a convergence of intended strategy and emergent strategy. This representation of the strategy process is now universally included in strategy textbooks. It is perfectly understandable that this image has become so popular, because it conveys the message, by including intended strategy, that management is in charge of the process, but it also makes reference to the probably almost universal experience of strategy practitioners,

by way of including emergent strategy, that there are so many things that can intervene. The Mintzberg and Waters paper is part of a research stream that seeks to find an answer to the question of how a strategy actually comes about. It diverged from the main strategy research seam, which was and still is occupied with strategy content, to concentrate on the strategic management process. More than 20 years later, this research effort has resulted in a large variety of contributions to the strategic management literature.

The Mintzberg and Waters (1985) image of the strategy process, as well as the many case studies that have been conducted (e.g. Bower

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1970; Burgelman 1983a,b,c; Grinyer and Spender 1979; Hinings and Greenwood 1988; Johnson 1987; Lewis 1988; Pettigrew 1985a; Quinn 1980; Stein 1993; Sminia 1994; Whipp and Clark 1986), all indicate that strategic management rarely conforms to the ideal of rational decision-making and subsequent planned change. A large achievement of these research efforts has been to refute earlier assumptions about how the strategy process was thought to take place as a linear progression from initial aspiration to final result. Instead, these extensive descriptions resulted in an understanding of strategy formation as a complex and meandering process. It has even been suggested that, although the strategy process may include strategic decision-making as an activity, it is too limited as a representation of the full strategy formation process. Strategy formation, it has been suggested, needs to be seen as a process of change instead (Chia 1994; Hendry 2000; Langley *et al.* 1995; Laroche 1995; Mintzberg *et al.* 1990).

Does this mean that we are in a position now that allows us to understand fully the strategy formation process and explain how and why a particular strategy has been realized? A number of reviews and overviews of this subfield are available (e.g. Chaffee 1985; Eisenhardt and Zbaracki 1992; Elbanna 2006; Huff and Reger 1987; Hutschenreuter and Kleindienst 2006; Johnson 1987; Mintzberg 1990a; Mintzberg *et al.* 1998; Pettigrew *et al.* 2002; Whipp 1996; Whittington 1993). Looking at these, there is an embarrassment of riches. There appear to be many ways of understanding the process and explaining the outcome. Mintzberg (1990a; Mintzberg *et al.* 1998) offers no less than ten schools of thought on the matter. The first three, which he refers to as being prescriptive, are the design school, the planning school and the positioning school. They share a representation of strategy process as rational decision-making. To describe the remaining descriptive schools of thought, he distinguishes between strategy formation as a visionary process, a cognitive process, a learning process, a political process, a cultural

process, a process driven by environmental pressures and a process that involves skipping between configurations. The implication is that a strategy formation researcher has to choose which school of thought is going to inform the project with the findings conforming to the school of thought that has been chosen. On a more general level, a distinction has been made between four types of process theories – a life cycle, a teleological, a dialectical and an evolutionary model – with each one again leading to a very distinct account of a strategy formation process (Garud and Van de Ven 2002; Poole *et al.* 2000; Van de Ven 1992; Van de Ven and Poole 1995).

However, judging from what has made it into the strategy textbooks, there appears to be a choice between only two perspectives. There are those who acknowledge that rational decision-making is an ideal type of process but see it as a benchmark and expect management somehow to mould their activities accordingly (e.g. Barney and Hesterly 2008; Grant 2007), while others offer a more descriptive understanding of the process (e.g. Johnson *et al.* 2008; Mintzberg *et al.* 2003). In the latter case, as a common denominator, strategy formation came to be seen as a process of ‘punctuated equilibrium’ (Romanelli and Tushman 1994), with longer periods of slow incremental change, during which the overall organization-level interpretative scheme remains intact, alternated with short but radical shifts when the organizations’ more fundamental core assumptions become subject to change (Hinings and Greenwood 1988; Johnson 1987, 1988).

This apparent discord among strategy process views in the leading textbooks is indicative of a persistent problem with strategy formation research (Chakravarthy and White 2002; Elbanna 2006; Mintzberg 1990; Mintzberg *et al.* 1998; Pettigrew 1992; Pettigrew *et al.* 2002; Whipp 1996). On the one hand, although strategy process research has led to a variety of accounts that describe how and why firms have arrived at a particular strategy, little reference is made to questions of whether this was the right strategy for the firm, how a possibly better

strategy could have been realized, or to put it briefly, how actually to perform strategic management in the best way possible. In other words, the findings in strategy process research have been too descriptive. On the other hand, a representation of strategy formation as a process of rational decision-making fits very well with strategy content research, assuming as it does that it provides strategists with the means and the information with which strategic decisions can be made. Although it is difficult to dispute rational decision-making as a benchmark against which the quality of a strategy formation process can be judged, empirical research indicates that it appears to be virtually impossible to put into practice. In other words, it is too unrealistic.

The basic purpose underlying the literature review in this paper is to develop a view of the strategy formation process that provides a realistic understanding of the course of the process and explains why and how a particular strategy has been realized, but also provides strategists with some means of assessing whether alternative courses would have led to different and better outcomes. It refuses to settle for this multi-theory approach to the process and aims to put forward an approach that at least attempts to bridge the process–content gap. Derived from the Mintzberg and Waters (1985) image, strategy formation is defined as the collusion over time of deliberate managerial intentions (often in the form of strategic choices), the subsequent implementation efforts and the unanticipated emerging developments, which together result in resources being allocated, strategic positions being taken up, and performance being achieved. The term of ‘strategy formation’ is retained instead of the more generic wording of ‘strategy process’ to emphasize that the subject matter is the realized strategy as well as the process by which it is realized. The ambition is to provide a way forward for strategy formation research, indicating where gaps exist and more particular questions need to be answered, but also how research in strategy formation needs to be conducted, all to move from basic description

to a form of normative prescription; from understanding how a strategy is realized to explaining how to realize a successful strategy.

### Organization of the Paper

Starting with a premise that strategy formation is a process, it needs to be clear what is meant by process. Van de Ven (1992; Van de Ven and Poole 1995, 2005; Poole *et al.* 2000) distinguishes between three meanings of process, with each definition associated with a particular type of process research. The first type of research is what they describe as a variance approach to process, in which ‘process’ is considered to be the logic by which independent variables are taken to be contributing factors to a certain outcome or dependent variable. The process as such is not part of the research, but is simply taken to be there to account for the assumed cause and effect relationships. The second type uses ‘process’ as a category of concepts represented by some process variables that are inserted into a cause and effect model. In this case, the process effects are part of the research but still resemble a variance approach. In a way, this is a static representation of a process and does little to account for the changeable nature and transience of the research object. It is the third definition of process that is seen as being at the heart of strategy formation in this paper. It sees ‘process’ as a developmental event sequence (Langley 1999; Miles and Huberman 1994; Poole *et al.* 2000). In contrast to a variance approach, this process approach to process does not work with variables that provide explanations in terms of relationships between independent and dependent variables, but works instead in terms of events that lead to an outcome. Events are taken to contribute somehow to the continuity and change of the object under study and are at the heart of any process explanation (Peterson 1998).

So research in strategy formation is taken to require a process approach that is very distinct from the more widespread variance approach in organization and management research

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(Abbott 1984, 1988, 1990, 1992a, 2001; Abell 1987; Farjoun 2002; Gorski 2004; Langley 2007; Mohr 1982; Poole *et al.* 2000; Scott 1994; Van de Ven and Poole 1989, 1990, 1995, 2005). A process approach recognizes the transience of a research object such as strategy. As Miller and Friesen (1982, 1020) had already noted, 'strategy can best be understood by tracking it over time; by looking at behaviour rather than condition; by studying "what happens in response to what"'. A specific feature of process research which makes it different from variance studies is that the unit of analysis is taken to change in content and/or shape over time (Monge 1990; Poole *et al.* 2000), and this is central to the research question of understanding and explaining the course and the outcome of a strategy formation process here.

Process research usually takes on the form of producing a 'story' with regard to what is being investigated, to provide an answer to the research question (Langley 1999). It is the particular reading of process or the process theory that is in use which informs how this 'story' will be constructed. The reviews and overviews of strategy process research mentioned earlier already indicated the multitude of choices that a budding strategy formation researcher has in analysing the realization of strategy. There is also a close linkage between the basic beliefs and assumptions about the phenomenon under study and the manner in which this phenomenon is studied (Morgan 1980). However, process methodology and methods are less well established than the methodology and methods associated with the variance approach, possibly accounting for the difficulties that are often encountered with getting process research published (Bengtsson *et al.* 1997; Smith 2002). Some overviews are available (Langley 1999; McPhee 1990; Ropo *et al.* 1997; Van de Ven and Huber 1990<sup>2</sup>), but there is variety here as well, mainly because of differences in underlying research orientations. More recently, the argument has even been put forward that, if change is seen as the basic manifestation of (social) reality, existing

research practices need to be completely overhauled (Nayak 2008; Tsoukas and Chia 2002).

Developing a view of the strategy formation process is a matter of process theory as well as process methodology, with both aspects being closely intertwined. This view has to address the questions of both how an outcome is realized, as well as why it was this particular outcome that has been realized. When it comes to analysing a particular process, each one of these two questions is both empirical as well as theoretical. The 'how' question basically is a matter of establishing the course of the process. From a process research perspective, this boils down to (re)constructing a chronology of events. Deciding where to start, where to stop and what to look for will be a compromise between what the data will tell about the process under investigation and what theoretically can be expected to be part of the process. The 'why' question is about establishing what has led to what, about putting some form of causality into the course of events. Again, this will be a compromise between what the data will tell about critical events or event sequences and what causal patterns can be expected to operate. If this view is going to understand and explain the realization of strategy, it will need to provide guidance with regard to making these compromises.

This view of the strategy formation process will be developed by reviewing a selection of contributions to the strategy process sub-field. Because the paper aims to address the aspects of both process theory and process methodology, it concentrates on those contributions that not only are recognized as having adopted a process approach but are also accompanied by more reflective and methodological accounts about how and why the research was done in the way it was. That is probably why these contributions have proven to be so influential. First, Henry Mintzberg's 'tracking strategy' approach will be looked at. Then, we venture on to Andrew Pettigrew's work that went under the label of 'contextualism'. After that, Andrew Van de Ven's 'Minnesota studies' will

be scrutinized. Strictly speaking, these studies are about innovation and not about strategy formation but, as will also be argued later, Van de Ven presented innovation as a general management problem and, often in his work, interchanged innovation with strategic change.

As has been explained, each of the research efforts that will be reviewed here will be examined with regard to the two aspects of process theory and process methodology. Because one of the purposes of this paper is to make strategy process research more prescriptive, these three contributions will be gauged as to whether and what contribution they have made to management practice as well. The review will be done by way of four queries. Although all three efforts share a general research question referring to the 'how' of process to understand the course and explain the outcome, the first query asks about the more specific research question or set of questions that has been addressed, as well as what answers have been provided. Furthermore, although they all share a similar definition of process: what is being expected is that they each work with a more specific understanding or theory of process that has informed the particular answer that has been provided. The second query, therefore, deals with the underlying theoretical roots of each of the research efforts. These two queries together will shed light on the process theory part of this quest.

The third query is concerned with the second aspect: that of process methodology. This will be addressed by investigating the methodology and methods with which each of these efforts have engaged the actual processes they investigated. The research always was longitudinal, and there is a strong prevalence for the qualitative case study, although quantification has been present as well, but there are differences in underlying research orientation and the nature of the explanation. With regard to this query, use will be made of a basic vocabulary derived from Johnson *et al.* (2006) to compare different approaches to management research. Their classification is particularly suited to this review, because it

treats the ontological position as separate from the epistemological position. With answers about the particular research questions, the underlying process theory as well as the research orientation and the nature of the explanation in place, we can then turn towards the question of usefulness for management practice.

Before we begin, the Johnson's *et al.* (2006) typology of management research will be explained in more detail. They distinguish between four approaches, which they have labelled positivism, neo-empiricism, critical realism and postmodernism. Positivism basically uses a falsificationist hypothetico-deductive methodology with the aim of '*erklären*'. The ontological position is best described as realist. As such, it fits rather well with the variance approach described earlier. Research quality is concerned with internal validity, external validity and reliability, with human action being taken as determined by (measurable) external forces.

Neo-empiricism shares both the methodological considerations about objectivity as well as the realist understanding of social reality with positivism but differs with regard to the research aim, which is geared towards '*verstehen*'. Human action here is being understood as driven by interpretation and subsequent choice instead of outside forces. Neo-empiricism is more concerned with induction and understanding what is typical and unique about a particular situation than what is general and widespread among a population. There is more concern about internal validity than with external validity, with internal validity understood as credibility, authenticity and offering local understanding. If external validity is a concern, it is judged in terms of transferability to comparable situations with the result expected to be a generic logic that can be demonstrated with a single case study, rather than in terms of statistical generalization.

Critical theory differs from neo-empiricism by rejecting the possibility of an objective methodology, but the assumption that there is a (social) reality out there remains in place.

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The epistemological position, therefore, is more subjectivist, but the orientation towards social reality remains a realist one. The critical realist expects that any description will reflect interests and power arrangements. Research quality, then, is judged on the basis of the effort that has been put into the production of an account that is free from specific interests and values, or at least recognizes which interests and values it represents. Often, the research effort is inspired by and judged on the basis of its emancipatory potential.

Finally, Johnson *et al.* (2006) describe a postmodern approach to management research. Here, not only the possibility of objective knowledge is rejected, but the existence of a (social) reality outside the observer is questioned as well. One could easily argue that, on this basis, scientific research becomes a meaningless enterprise because any possibility of grounding the research outcomes in anything seems to have been lost. Nevertheless, Johnson *et al.* argue that researchers who subscribe to this view do employ certain criteria to distinguish between good and bad research practice. The quality of research is judged by looking at how much of an alternative view has been produced when compared with the taken-for-granted and familiar.

### Tracking Strategy

Henry Mintzberg was one of the first to start asking 'how' questions with regard to strategic management. He had set himself the task of formulating a theory of business policy (Mintzberg 1977).<sup>3</sup> This theory had to be quite comprehensive by providing answers to questions about managerial work, organizational structure, organizational power, strategic decision-making, organizational strategy formation and strategic analysis. The nature of managerial work had been the subject of his PhD thesis (Mintzberg 1968) and had already been published (Mintzberg 1973, 1975). Organization structure and organization power were dealt with in Mintzberg (1979a) and Mintzberg (1983), respectively. How organiz-

ations actually go about making strategic decisions had been answered in Mintzberg *et al.* (1976). This had resulted in a model of unstructured decision-making that consisted of identification, development and selection phases, with each phase in turn consisting of a number of identifiable routines. An actual strategic decision was found to follow a unique path through this model, depending on the influence of specific dynamic factors and on interrupts. However, there was a realization that making a strategic decision does not automatically mean that this decision is going to be implemented, and therefore he treated the formation of organizational strategies as a separate subject, to be investigated under the banner of 'tracking strategy'.

Tracking a strategy involved extensive case studies<sup>4</sup> of single organizations with the aim of describing strategy as a pattern in a stream of actions over a long time period (Mintzberg and Waters 1985). Initially, this pattern definition referred to a stream of decisions (Mintzberg 1978) but, following the realization that a strategic decision does not turn into a realized strategy automatically, this definition was altered. This also led to a proposed conceptualization of the process of strategy formation as a change process rather than a choice process (Langley *et al.* 1995; Mintzberg *et al.* 1990). It is this definition of strategy formation that has led to the process being modelled as a conjunction of intended strategy and emergent strategy (Mintzberg and Waters 1985).

Mintzberg (1979b) insisted the case studies needed to be as descriptive as possible to be able to come close to what was actually going on. This was informed by a criticism of much of the then current research in strategic management which, he argued, was predominantly prescriptive. He had already done his research into managerial work (Mintzberg 1968, 1973, 1975) and strategic decision-making (Mintzberg *et al.* 1976) in a similar fashion. Mintzberg (1979b) advocated using uncomplicated data-collection methods such as observation, (periodic semi-structured) interviews and document

analysis. Because he claimed little was known about the actual process, the research had to be inductive in nature. In this fashion, he found anecdotal data just as informative as systematic data. The subsequent descriptions had to be formulated in real organizational terms and therefore remained relatively concrete. For instance, he described the pattern of activities that characterized Air Canada by way of the aircraft types they had been operating (Mintzberg *et al.* 1986). His ultimate aim, however, was to synthesize and integrate the findings into configurations.

Mintzberg favoured a configurational approach to management and organization theory (Miller and Mintzberg 1984; Mintzberg 1990a; Mintzberg *et al.* 1998). Configurations are generic types of constellations of mutually supportive elements. His work on organizational structure (Mintzberg 1979a) introduced the five basic configurations of simple structure, machine bureaucracy, professional bureaucracy, adhocracy and divisionalized form, with the work on power (Mintzberg 1983) adding the missionary configuration. When it came to summarizing the results of the tracking strategy case studies at a more abstract level, it resulted in a typology of strategy processes (Mintzberg and Waters 1985) which had to be fitted with the earlier defined structure configurations (Mintzberg 1990a; Quinn *et al.* 1988<sup>5</sup>).

In this way, it can be argued, Mintzberg's theorizing lost much of its process flavour, as he more or less admitted himself, by concentrating more on the forms than the forces (Mintzberg 1991a). The forms refer to the ideal type descriptions of organization structures and strategy processes which basically conceptualize organizational phenomena as steady states. The process itself or what is happening is due to the interplay of seven basic forces that he had also identified.<sup>6</sup> In Mintzberg (1990a) and also in his introduction to Mintzberg (1991a) in Mintzberg and Quinn (1991), he explained that, when it comes to theorizing, he was more of a 'lumper' than a 'splitter', being more inclined to fit parts together into coherent wholes than to deal with the flux of

constituting parts that are continuously changing shape and are being pushed and pulled around. He sees strategic change happening by way of organizations quantum leaping between configurations to regain some form of fit between external demands and internal capabilities after that fit had been lost (Miller and Mintzberg 1984; Mintzberg 1990a), with continuity being best described as organizations adhering to a particular configuration over time. His work on strategic analysis meanwhile saw him taking a stand against the practice of strategic planning (Mintzberg 1994a,b),<sup>7</sup> preferring a metaphorical description of strategic management as a craft instead (Mintzberg 1987). Siggelkow (2001, 2002; Siggelkow and Levinthal 2003, 2005) recently picked up on this approach, doing longitudinal case studies as well as simulations on problems of external and internal fit over time.

Methodologically, Mintzberg's research can be qualified as fitting empirical realism. The inductive approach was justified by a lack of theory about the strategy formation process. The aim was to come up with descriptions of processes that are as real as possible, which eventually would fit and extend the organization structure configurations defined earlier. This then should add up to an overall theory of business policy that would include a representation of the social reality of strategy formation. With regard to strategy content, what was being emphasized was the importance of configurational fit for firm performance, continuing a line of reasoning that had started with Miles and Snow (1978) and Miller and Friesen (1984). Coming to the management part, although his earlier research presented a picture of managerial work in which a manager was being subjected to a relentless stream of daily chores (Mintzberg 1968, 1973, 1975), he developed some guidelines based on his metaphorical view of crafting strategy in which the (strategic) manager was compared to a potter who shapes the bowl as she/he goes along (Mintzberg 1987). This later developed into an elaboration of the notion of visionary leadership as an iterative set of activities that

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have to be practised alongside procedural planning and inductive learning (Mintzberg 1994c; Mintzberg and Westley 1992; Westley and Mintzberg 1989). Overall, the management contribution to the strategy process is to 'maintain a healthy vitality which balances continuity and change, stability and learning' (Mintzberg and Westley 1992, 52).

It can be questioned to what extent his configurational approach actually can be considered a process theory. Concentrating on fitting parts into coherent wholes provides insight into the process outcome but gives little clue as to how events have contributed to a particular result. A process approach should have been more concerned with the underlying forces instead, and how these operate through a chronology of events. Nevertheless, Mintzberg can be credited with putting the overall research question of how a strategy is actually realized manifestly on the strategic management research agenda.

### Contextualism

Andrew Pettigrew's seminal work on ICI (Pettigrew 1985a) introduced the contextualist approach to the study of strategy formation. The roots of this approach can be found in his earlier studies of strategic decision-making (Pettigrew 1973, 1979). The initial purpose of the ICI study had been to explain the different fortunes of Organization Development initiatives within the various divisions of ICI, but it became a more general study of strategic change, aimed at explaining why similar change initiatives met with such dissimilar outcomes. The then current theories of organizational change were criticized as being ahistorical, aprocessual and acontextual (Pettigrew 1985a,b, 1990). Indeed, the explanation was found in the context, the process and the history of ICI. This distinct approach to strategic management research formed the foundation for the Centre for Corporate Strategy and Change (CCSC) at the University of Warwick. Subsequent research projects in firm competitiveness dealt with the question of why firms in similar circumstances

met with different levels of success and whether this was due to the manner in which they had dealt with change (Pettigrew and Whipp 1991) while a study of the British National Health Service (NHS) focused on the question of why change processes varied between localities dealing with the same issue or between different issues at the same locality (Pettigrew *et al.* 1992). More recently, CCSC was involved in a worldwide research project on innovative forms of organizing (Pettigrew and Fenton 2000; Pettigrew *et al.* 2003; Whittington *et al.* 1999).

The notion of contextualism originates from Pepper (1942; Pettigrew 1985b, 1990). The basic underlying justification of any truth claim, according to Pepper, cannot be based on empirical observation and therefore has to be a hypothesis. He distinguished between four different 'world hypotheses'. These are formism, mechanism, contextualism and organicism.<sup>8</sup> Each one has its own distinct way of corroborating evidence into knowledge. Contextualism sees the world as a collection of events in their unique setting. It acknowledges the local character of truth, in both time and space, with corroboration taking place by way of qualitative confirmation. It follows that Pettigrew sees process as a sequence of events which consists of both continuity and change (Pettigrew 1985b, 1990, 1992, 1997a). Explaining an outcome boils down to identifying an underlying logic that produces a specific recurrent process pattern (Pettigrew 1990).

In its most abstract sense, Pettigrew (1985a,b, 1990, 1992) relies on structuration-like theories and, specifically, on Giddens (1979), Sewell (1992) and Sztompka (1991) to provide the recurrent pattern in the process. Structuration-like theory sees social process resulting from actions that are bound by the social structure but also have the effect of reproducing and changing the social structure. Finding specific explanations that provided answers to Pettigrew's research questions resulted in more concrete 'generative mechanisms' (Tsoukas 1989) that fit this more general reading of

social process. In the case of the competitiveness study, the question of why firms in similar circumstances performed differently was explained by a pattern of five interrelated factors for managing change (Pettigrew and Whipp 1991). These factors of environmental assessment, leading change, linking strategic and operational change, human resources as assets and liabilities, and coherence, were found to conspire into self-reinforcing loops that lead to either competitive success or failure, depending on how each of these factors takes shape and is shaped during the course of the process. In the NHS study, a similar 'generative mechanism' referring to receptive contexts of change provided the answer to the question of why change processes vary between issues and locations (Pettigrew *et al.* 1992). This time there were eight factors of quality and coherence of policy, environmental pressure, change agenda and its locale, simplicity and clarity of goals and priorities, co-operative inter-organization networks, managerial clinical relations, and key people leading change. The research into innovative forms of organizing produced an emerging mechanism of changing structures, boundaries and processes that appears to drive and is being driven into organizational innovation (Pettigrew and Fenton 2000; Pettigrew *et al.* 2003).

Contextualism does not come with a clear-cut methodology that allows for the development of a set of well-defined methods, measures and techniques. Research designs take on the form of retrospective and real-time longitudinal case studies, mostly relying on qualitative data from multiple sources but also including quantitative measures when appropriate (Pettigrew 1985b, 1990), and, in particular, the later study on innovative forms of organizing saw an extensive use of quantitative methods (Pettigrew *et al.* 2003). Pettigrew (1985b), as others have done, emphasizes the craft aspects of empirical research. The actual research activities, such as deciding what process is going to be investigated (and making decisions on its beginning and its ending), formulating a research question and gathering and analysing

data, involve both induction and deduction (Pettigrew 1990, 1997a). A purely inductive approach, going into a case situation to record everything in sight, might seem to do justice to the contextual nature of a process but will most likely result in 'data asphyxiation' (Pettigrew 1990). Some amount of deduction is believed to help in guiding the researcher through the research without posing too much of a preconceived understanding on the particular course of events. Given that the basic process is believed to be one of structuration, there are certain presumptions in place. For one, it is assumed that actors will try to realize their aspirations by drawing on aspects of structure and context (Pettigrew 1985b). These actions are embedded in an organization (inner context) and socio-economic and political environment (outer context), with asymmetries between levels of context potentially being a source of change with history and temporal connectedness shaping the present and the future (Pettigrew 1990; Pettigrew *et al.* 2001). Already existing and more specific theories can provide an initial vocabulary to describe the various aspects that characterize the process (Pettigrew 1990). The focus needs to be on explaining an outcome at a certain moment in time. This outcome is assumed to be generated by a constellation of forces that takes on the form of a generative mechanism, which in turn has to be formulated in an active language (Pettigrew 1992, 1997a).

With the idea of temporality so firmly lodged in the contextualist approach, internal validity starts to refer to the degree to which results are 'true' for the particular place and moment in time to which they refer, at least to the participants in the process under investigation (Ferlie and McNulty 1997; Pettigrew 1985b). This refers to both the case description as well as the analysis. Multiple interpretations of the same course of events not only between people (analysts and participants alike), but also over time, are to be expected and can even be useful, because this variety is often associated with change, and it provides an opportunity for comparison. In its most

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extreme form, contextualism and generalization do not match, because the local character of truth in both time and space precludes any form of general knowledge. However, to Pettigrew (1985b, 1997a; Pettigrew *et al.* 2001), the generative mechanisms are believed to have significance beyond the single case, and he even advocates a particular multiple case approach of comparing extreme or polar cases as a better way to single out the underlying common process logic (Pettigrew 1990; Pettigrew and Whipp 1991). Ferlie and McNulty (1997) offer an alternative definition of external validity in the sense that results have to appeal to user groups outside the research community.

With regard to the research methodology, Pettigrew's contextualism perhaps compares best with critical realism. He has characterized himself as a 'mediativist', seeing social circumstances as mediating between reality and accounts of reality, but not eliminating the effects of reality (Pettigrew 1997b). Indeed, in his work there is a sense that a social reality is present, and it is taken to operate by way of generative mechanisms, but any particular description of a process is considered to be subjective to some degree. This subjectivism is extended in the sense that it not only refers to the possible multiple interpretations of the actors involved, but any account is also particular to a certain moment in time. There is less of an urge to demonstrate that the situation reflects and purports the interests of those who are seen as being in power, although power and politics are very much part of the analysis. Theoretically, Pettigrew seems to work with levels of abstraction, with structuration-like theory at the most abstract level as a basic account of how the process of strategy formation can be understood. His research questions are aimed at providing theoretical accounts at a less abstract level that consists of, for instance, interrelated factors of change (Pettigrew and Whipp 1991) or a mechanism of changing structures, boundaries and processes (Pettigrew and Fenton 2000). These less abstract accounts are constructed, using but adapting existing theoretical vocabulary, to describe and explain

strategy formation process patterns and outcomes of the cases under investigation. These less abstract accounts are believed to have significance beyond the case, at least for purposes of comparison. The (fragmented) descriptions in any form of the actors that take part in the process themselves can be seen as the most concrete form of process accounts, and these serve, in all their subjectivity, as data to be used for abstraction and comparison with the more general accounts.

Initially, Pettigrew appeared to be of the view that strategy content is more a consequence of the strategy process than that it contributes to the course of events, judging from one of the conclusions of the ICI study that 'the content of strategic change is thus ultimately a product of a legitimisation process shaped by political/cultural considerations, though often expressed in rational/analytical terms' (Pettigrew 1985a, 443). He also concluded that the top management contribution to the realization of strategy is more one of creating strategic change than of providing strategy content, and he carefully described how subtleties in behaviour affect the course of the process, while being adamant in denying the possibility that advice on managing strategy processes can be reduced to a set of simple guidelines. He later went on to argue that the way in which a firm is able to deal with change affects performance (Pettigrew and Whipp 1991; Pettigrew *et al.* 1992), although with a content consideration such as competitive advantage figuring as a conditioning feature. In a way, this turned the argument around by putting strategy process forward as a subject of strategy content. Furthermore, the activity of management became more and more detached from the actor of the (top) manager, with leading change (as an activity) considered to be a better description than leadership (as a managerial attribute) to describe the management contribution to the process (Pettigrew and Whipp 1991). This emphasis on change brought a sense of indeterminism and ambiguity into the equation, and it is therefore not surprising that leading change became attached to a requirement of

managing duality, but with little guidance on the how and what as 'the experience of dualities and their management is likely to be highly context sensitive' (Pettigrew and Fenton 2000, 295).

### Minnesota Studies

In 1983, the Minnesota Innovation Research Program (MIRP) at the University of Minnesota was started. The central person in this endeavour was Andrew Van de Ven. Many of the results were first published in an edited volume (Van de Ven *et al.* 1989).<sup>9</sup> The research was not about strategy formation, but about the management of innovation. However, the overall problem was couched as a general management concern of how organizations can become innovative and sustain their innovativeness (Van de Ven 1986). Besides, innovation was elaborated as a change process, and a number of subsequent publications became aimed more at change and process research in general (Garud and Van de Ven 2002; Poole *et al.* 2000; Van de Ven 1992; Van de Ven and Poole 1995, 2005). The initial research problem of MIRP was aimed at understanding how innovations develop over time, what makes innovation processes become successful, and to what extent knowledge about innovation processes can be generalized (Van de Ven and Angle 1989).

The MIRP research strategy was based on the grounded theory approach, with an explicit reference to Glaser and Strauss (1967)<sup>10</sup> because, although innovation was a well-researched subject, the process as such had not received much attention. No less than 16 separate longitudinal case studies were embarked upon.<sup>11</sup> Data collection was both real-time and retrospective and included interviews, surveys and archival analysis. A coding guide was developed that centred on the concept of event as the basis for data collection and analysis (Poole *et al.* 2000; Van de Ven and Poole 1989, 1990). Raw data were recorded as incidents: basic descriptions about what happened and who had done something. These were then

coded into events, theoretical laden interpretations of what had occurred, to be put into chronological order. In MIRP, the codes referred to changes to ideas, people, transactions, context and outcomes. These terms were considered the basic (sensitizing) concepts describing an innovation process. Ultimately, the coding had to take on a quantitative form to prepare for statistical analysis.

The analysis was aimed at uncovering basic patterns in the chronology with regard to each of the five sensitizing concepts. These patterns were thought of as taking on the form either of a distinct phasing of the process or of recurring sequences of events that appear during the process. Additionally, progression was expected to take place in either a unitary or a multiple form, with the latter subdivided into parallel, divergent and convergent types of progression. In reporting on the methodology used in MIRP, there was only an announcement of the statistical techniques that were going to be used (Van de Ven and Poole 1989, 1990). These had to be especially aimed at establishing causal patterns among the various event tracks. At this stage, the results were described in a qualitative form, concentrating on the ideas track (Schroeder *et al.* 1989), the people track (Angle 1989), the transactions track (Ring and Van de Ven 1989)<sup>12</sup> or the outcomes track (Dornblaser *et al.* 1989). The context track did not have a separate chapter devoted to it. The overall conclusion of the MIRP was that the diversity and complexity of the process patterns that were found do not yet allow for the formulation of a general theory of innovation processes (Poole and Van de Ven 1989a).

Poole and Van de Ven (1989a) do embark upon the development of a metatheory of innovation processes using a typology of process models that distinguishes between a global and a local level of analysis, on the one hand, and motors of development or generative mechanism, on the other, and go on to suggest situations when which particular motor applies at what level. They also suggest paradox as a phenomenon that should be incorporated into

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theory building (Poole and Van de Ven 1989b). They concentrate on the agency–structure contradiction (which is fundamental to structuration-like theory) and suggest that a processual understanding of management and organization is capable of accommodating paradox and contradiction in one theoretical approach. The metatheory takes further shape with the identification of four distinct types of process theory (Garud and Van de Ven 2002; Poole *et al.* 2000; Van de Ven 1992; Van de Ven and Poole 1995). These are the life-cycle-type theory, the teleological-type theory, the dialectical-type theory and the evolutionary-type theory. The life-cycle model assumes that an entity, while maintaining its identity, goes through distinct stages of development following an internal logic that governs its progression. The teleological model assumes that an entity develops a common goal in an identifiable manner and then goes on to meet the requirements and constraints associated with this end state. The dialectical model believes process is fuelled by some form of contradiction, which results in conflict that must be resumed. Pettigrew's use of structuration-like theory puts his contextualist approach in the dialectical category (Pettigrew 1985a,b, 1990, 1992). The evolutionary model assumes that change is due to some form of external pressure accompanied by a mechanism of variation, selection and retention. Mintzberg's configurational approach perhaps fits best with the evolutionary model, judging from the basic idea that organizations change by way of quantum leaping between different configurations as a consequence of external pressures (Miller and Mintzberg 1984; Mintzberg 1990). Van de Ven ultimately seems to prefer an approach which encompasses every one of the four models (Garud and Van de Ven 2002; Poole and Van de Ven 1995; Poole *et al.* 2000).

Van de Ven also continues to pursue the use of statistical techniques to uncover causal patterns in the MIRP data. He demonstrates that a chaotic pattern can be found in the initial innovation development phase (Cheng and Van de Ven 1996) and subsequently

suggests that processes can follow a periodic, chaotic, pink noise (constrained randomness) or white noise (random) pattern (Dooley and Van de Ven 1999). A comparison of two basic patterns describing the adoption of new product technologies provides an explanation that one pattern leads to adoption and the other does not (Das and Van de Ven 2000). He demonstrates the fitting of homogeneous Markov models, phasic analysis, event time series regression analysis and event time series non-linear dynamical analysis, and suggests the utilization of event history analysis (Poole *et al.* 2000), all to test to what degree empirically found patterns are either random or not. If not, the patterns that are then found in the event data can be taken to support one of the four process theories, depending on the actual pattern that has been found (Van de Ven 1992; Van de Ven and Poole 1995; Poole *et al.* 2000).

At this point, the overall conclusion with regard to a general theory of innovation is that the process is an overly complex phenomenon in which the basic four process motors associated with the four basis theories of strategic change operate in a simultaneous fashion, although not necessarily just as powerful at the same time (Garud and Van de Ven 2002; Van de Ven and Poole 1995). The resulting overall process is best described as a complex non-linear dynamics. To Van de Ven, there are basically two ways in which further process research can be perpetuated (Van de Ven and Poole 2005). One way involves the construction of narratives of emergent actions and activities by which an outcome unfolds (e.g. Yu *et al.* 2005). The other way involves dynamic modelling of agent-based models or chaotic complex adaptive systems. The latter type of research, in particular, is very dependent on high standards of internal validity not only with regard to recording sufficient incidents that capture the process that is going to be analysed, but even more importantly with regard to the coding procedures that are adopted (Garud and Van de Ven 2002; Poole *et al.* 2000; Van de Ven and Poole 1990). A high level of variability about what incident is coded into which event

type makes subsequent statistical analysis effectively meaningless. External validity has more to do with analytical generalization than statistical generalization, to be accomplished by a sufficient degree of ‘pattern-matching’ (Campbell 1975; Garud and Van de Ven 2002; Yin 2004). Generality is measured in versatility or the degree to which the theoretical pattern encompasses a broad domain of processes without needing to be modified (Poole *et al.* 2000).

Notwithstanding that a general theory of innovation is still in the making, what does appear to be a firm conclusion of the Minnesota studies is that the success of an innovation is not really within the control of the innovators (Angle and Van de Ven 1989). So it cannot be planned for effectively. Failure or success is one attribute of an innovation that is being created over time, alongside all the other attributes of this innovation. An innovation is considered a success when it is institutionalized (or basically when it comes into some more permanent existence), and is considered a failure when the process is terminated before it has become institutionalized. Management activity is considered to be limited to a largely supportive role and, apparently, is not engaged in the innovation process itself. This role can take on the various forms of institutional leader (sets structures and settles disputes), sponsor (procures, advocates, champions), mentor (coaches, counsels, advises), entrepreneur (manages innovation unit or venture), and critic (challenges investments, goals, progress) (Angle and Van de Ven 1989; Van de Ven *et al.* 1999). Management’s contribution is one of building the organizational infrastructure in which innovation can take place.

In terms of Johnson *et al.* (2006), the Minnesota studies fit the empirical realism approach in qualitative research, but the ultimate purpose of the research seems to be aimed at *erklaren*. From the beginning (Van de Ven and Angle 1989), there is a clear concern for generalization with ultimately a change from qualitative mode to quantitative mode (Cheng and Van de Ven 1996; Das and Van de Ven 2000; Dooley

and Van de Ven 1999; Poole *et al.* 2000; Van de Ven and Poole 1989, 1990). The qualitative case studies were designed and executed with methodological criteria such as internal validity and reliability in mind, to be part of a larger effort that would lead from induction and initial theory construction to deduction and theory testing. The first set of research questions in terms of understanding the course and the outcome of process over time changed accordingly into questions regarding the (hypothesized) type of process pattern and the degree of fit with recorded sequences of events. Generalization, however, became less concerned with statistical generalization, as might be expected, and was aimed more at analytical generalization instead. Theoretically, the Minnesota studies were relatively uncomplicated at first, with a set of only five basic constructs agreed upon to guide coding. However, Van de Ven soon embarked on the development of a metatheory of process that, thus far, has resulted in extensive and useful overviews of types of process theories (Garud and Van de Ven 2002; Poole *et al.* 2000; Van de Ven 1992; Van de Ven and Poole 1995) from which hypothesized process patterns can be deduced. There is something of an irony here that the research orientation of the Minnesota studies led to an attention to research procedure that resulted in the development of a collection of clear process methods and an extensive overview of process theory, but also to a current research agenda that, at least methodologically, seems to revert partly back into the variance approach (Van de Ven and Poole 2005).

### Process Theory, Process Methodology and Managing Strategy Formation

We have looked at Mintzberg’s ‘Tracking strategy’ research, Pettigrew’s ‘Contextualism’ and Van de Ven’s ‘Minnesota studies’. Table 1 gives an overview of the findings. Taking these into account, we next develop a view of the strategy formation process that provides a realistic understanding of the course of the process and explains why and how a particular

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**Table 1.** Practices of process research

	Tracking Strategy	Contextualism	Minnesota studies
Principal author	Mintzberg	Pettigrew	Van de Ven
Research question	How is strategy realized?	How do context, process, and content combine and explain outcome?	How do innovations develop over time?
Process theory	Configuration theory	Structuration theory	Metatheory of innovation and change
Research orientation	Empirical realism	Critical realist	Empirical realism geared towards <i>erklaren</i>
Nature of explanation	Generalist	Contextualist	Generalist
Practical implications	Management to maintain configurational fit	Management to maintain capacity for change	Management to facilitate innovation activity

strategy has been realized, but also provides strategists with some means of assessing whether alternative courses would have led to different and better outcomes. To do so, both the aspects of process theory and process methodology need to be addressed to arrive at a way in which managing strategy can take shape.

### Process Theory

What would be a suitable underlying process theory? Mintzberg has developed a configurational approach to strategic management. Van de Ven wants to develop a metatheory to bridge the four general process theories referred to as the life cycle, teleological, dialectical and evolutionary models. Pettigrew relies on Van de Ven's dialectic approach and opts for structuration, referring as he does to Giddens (1979), Sewell (1992) and Sztompka (1991) to denote his basic understanding of process. Pozzebon (2004) found that a large number of strategy process researchers have relied on structuration-like theory as well infusing their research with an initial understanding of the process.

This is also the case in the most recent strand of strategy formation research, which is looking at the strategists themselves. Under the label of 'strategy-as-practice', the focus is on micro-processes to understand how managers' day-to-day interactions affect the strategic

direction of an organization (Jarzabkowski 2005; Jarzabkowski *et al.* 2007; Jarzabkowski and Spee 2009; Johnson *et al.* 2003; Whittington 1996, 2003).<sup>13</sup> Again, this involves longitudinal and real-time case studies. This time, the daily activities of practising managers are followed and recorded to assess how, for instance, the manner in which they have organized their interactions into strategic practices affects the overall strategy (Jarzabkowski 2003; Jarzabkowski and Wilson 2002), or how strategy is taking shape during periodic discussions (Sminia 2005) or can be derived from the different manners in which they engage in conversation (Samra-Fredricks 2000a,b, 2003). Within this strand of strategy formation research, structuration-like theories of process (Bourdieu 1990; Giddens 1979, 1984; Sztompka 1991) are combined with activity theory (Leontiev 1978; Vygotsky 1978), but interpretative sociology such as ethnomethodology (Garfinkel 1967) and symbolic interactionism (Goffman 1959, 1974, 1983) has been referred to as well.

Within the adjacent field of innovation and technological change, structuration-like theories are a popular choice, also providing a basic reading of how the process works (Pozzebon and Pinsonneault 2005). Research by Barley (1986, 1990a) on the introduction of a new technology in a hospital centred round the concept of 'scripts' or recurrent patterns of interaction that are maintained in

day-to-day activities but are subject to change with the introduction of a new technology.<sup>14</sup> This idea was later adapted to a more general structuration-based theory of institutionalization (Barley and Tolbert 1997; Orlikowski and Barley 2001). Leonard-Barton (1988, 1990) came to an understanding of technology implementation as ‘mutual adaptation’, in which both the technology and the organization are reinvented while implementation activity takes place. Orlikowski as well as DeSanctis developed more specific versions of Giddens’s structuration theory, dubbed ‘structuring of technologies in practice’ and ‘adaptive structuration theory’, respectively, with technology considered to be both subject and object in a structuration process (Orlikowski 1992, 2000; Orlikowski and Robey 1991; DeSanctis and Poole 1994). Pentland came up with the notion of ‘organizational grammar’, envisioning day-to-day interactions in an organization as being subject to an enabling and constraining rule structure that can be studied by uncovering the constitutive rule set (Pentland 1992, 1995a,b; Pentland and Reuter 1994). This was later elaborated in terms of narrative structures that can form the foundation for process theories (Pentland 1999; also see Woiceshyn 1997).

Structuration theory is very much associated with Giddens (1976, 1979, 1984), but variants exist under such labels as morphogenesis (Archer 1982), the theory of practice (Bourdieu 1977), the theory of structure (Sewell 1992) and the theory of social becoming (Sztompka 1991). The various strategy process, strategy-as-practice and innovation process authors mentioned above refer to combinations of these structuration variants; hence, this paper uses the term structuration-like theories. There are differences between each variant, but there is commonality with regard to the role of agency and structure. Structuration as a process of both continuity and change is based on the idea of the duality of social structure. On the one hand, agency is taken to be governed by a wide array of specific rules and resources that constitute the social structure. This binding effect of social structure is one side of the

duality. On the other hand, social structure is taken to be created and maintained by agency that builds up into regular patterns, which in turn settle into particular arrangements and practices. The duality of social structure is then found in the notion that structure both shapes the manner in which agency takes place and simultaneously comes forth from these interactions.

The appeal of structuration-like theories is understandable because of the inclusion of both agency and structure, so a researcher can accommodate both purposeful managerial activity such as (rational) decision-making as well as the enabling and constraining effects of structural features such as power, culture and cognition in her/his analysis. Furthermore, the duality of structure allows for the process to be understood as simultaneously encompassing continuity and change. It allows for an argumentation that continuity is the case whenever the process conforms to the social structure, while change, either incremental or radical, involves an alteration of (part of) the social structure. Therefore, working with a baseline understanding of strategy formation as a process of structuration provides common ground for future research which can then move on from the basic question of how a strategy is being realized to more specific questions with regard to how agency and structure parameters collude to result in particular outcomes.

Consequently, a purely inductive approach to process research that has had been widely advocated (Barley 1990b; Dawson 1997; Fox-Wolfgramm 1997; Langley 1999; Leonard-Barton 1990; Mintzberg 1979b; Orton 1997) seems to be less appropriate within the realm of strategy formation (Hinings 1997). The various overviews of strategy formation process theories (e.g. Johnson 1987; Mintzberg 1990; Mintzberg *et al.* 1999) provide a catalogue of agency and structure concepts, ready to be used in more deductive research designs. This would, however, require research procedures in which empirical evidence about event sequences has to be matched with theoretically

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derived process patterns in a way that allows for a form of theoretical-oriented explanation, that is 'of elucidating and testing a theory that identifies the main determinants of a broad class of outcomes and attaches special importance to specifying the mechanisms whereby those determinants bear on the outcome' (Hall 2006, 25). But before we can suggest a way forward here, we need to consider the aspect of process methodology.

### *Process Methodology*

The second aspect on which this paper tries to shed some light concerns how process research is to be carried out. This will also provide an indication of how theoretical-oriented explanation can take shape. For this, we need to look more closely at the research orientation that characterizes each of the contributors reviewed here. First, it must be said that not much of the postmodern type of research has been done on strategy formation processes. What can be found, however, are appraisals of the 'taken-for-grantedness' of core terms such as 'strategy', 'management' or 'decision-making' in research and management (Barry and Elmes 1997; Chia 1994; Grandy and Mills 2004; Hendry 2000; Knights and Morgan 1991; Tsoukas and Chia 2002). These postmodernist-inspired analyses of the field have resulted in alternative views of strategic management, not as being essential and instrumental to the future success of the firm, but as a discourse or narrative that is shaping and being shaped by its underlying assumptions. A postmodern analysis of a strategy formation process itself, on the other hand, could, for instance, deconstruct particular but taken-for-granted linkages between top management activities, competitive advantage and firm performance that circulate within a particular firm and point to alternative explanations of why this firm has been successful or not. With the current emphasis on the essential role of top management in accounting for success, or failure for that matter, with the associated generous remuneration packages,

there must be some room for studies that challenge these presumed causal relationships.

Much of what Mintzberg (1979a), Pettigrew (1985b, 1990, 1997a) and Van de Ven (2007; Huber and Van de Ven 1995; Poole *et al.* 2000; Van de Ven and Huber 1990; Van de Ven and Poole 1989, 1990, 1995, 2005) have written about process methods and methodology has also been put forward by others (Barley and Tolbert 1997; Langley 1999, 2007; Mahoney 2004; McPhee 1990; Pentland 1999; Pettigrew 1985b, 1990, 1997a; Ropo *et al.* 1997). What jumps out is that all share a conviction that a process approach requires a longitudinal research strategy. Most of the research has relied on a qualitative case study as well, in which a single organization has been the case. Multiple data sources are used to somehow construct what can be referred to as the 'story' of the case (Langley 1999). All agree that adherence to strict procedures of data gathering and analysis is required to safeguard internal validity. It is also this 'story' in one (abstracted) form or another that is supposed to provide the answer to the research question and explains what has been put forward as needing explanation. There are, however, considerable differences in how such a 'story' is constructed and what the status or truth claim of this 'story' is. How this 'story' takes shape in the eyes of the researcher is informed by the particular reading of process or process theory that is being used. On the whole, the differences can be traced back to an inherent dilemma with regard to the overall generalist vs contextualist orientation in process research. This dilemma is seen as adding to the differences in research orientation as derived from Johnson *et al.* (2006).

This generalist vs contextualist dilemma in process research has been debated among historical sociologists (e.g. Abbott 1992b; Büthe 2002; Gorski 2004; Griffin 1992, 1993; Quadagno and Knapp 1992), but has not yet surfaced as profoundly among organization and strategy scholars (Numagami 1998; Tsoukas and Hatch 2001). It seems obvious to treat this dilemma as resulting in two irreconcilable

positions, but the strategy process research reviewed here suggests that it can be seen as a matter of degree. At the extreme contextualist end, everything is in flux, and there is nothing against which any truth claim can be grounded, because there would already have been change as things had moved on. The postmodern type of process research would reside towards this end of the continuum, as well as some of the recent calls for change to be seen as the basic manifestation of (social) reality (Nayak 2008; Tsoukas and Chia 2002). At the extreme generalist end, process is simply seen as conforming to fixed flows and sequences that regulate how one event is followed by the next and automatically leads to a pre-programmed outcome. It is these law-like patternings that then can be discovered and described by way of a positivist type of research. Some of the contributions to strategic decision-making research come close to this type of thinking when claims are made that one type of decision-making leads to better results than another type (e.g. Hart and Banbury 1994; Nutt 1993, 2000).

Where a researcher positions herself or himself in this generalist vs contextualist dilemma affects what is being meant with external validity. Towards the contextualist end, any process is unique, and one cannot expect that similar processes will occur at any other space or time. Towards the generalist end, there is an expectation that process patterns and/or generative mechanisms are fairly common. This latter presumption allows for process research that is aimed at statistical generalization. External validity would mean that the pattern or generative mechanism that has been found is typical of the population of processes to which the sample belongs. However, at the contextual extreme, statistical generalization is a meaningless exercise (Numagami 1998). There remains a possibility for analytical generalization (Campbell 1975; Yin 2004). Following the logic of replication, the researcher can try to demonstrate whether and to what extent a theory is valid for a particular case, thereby demonstrating the overall

significance of the theory. Again, this is an exercise that has more relevance towards the generalist end of the dilemma. Towards the contextualist end, the findings are expected to emphasize the uniqueness of the case over the relevance of the theory. Nevertheless, some general usefulness resulting from these case studies can be found in the methodology and methods that were used in recording and making sense of the case.

The strategy formation research efforts reviewed in this paper take up particular intermediate positions. Pettigrew is situated more towards the contextualist end of the continuum. He takes structuration as a fixed point of reference. He can argue that the generative mechanisms that he proposes as an answer to his research questions are there by virtue of a specific arrangement of the social structure that both enables and limits human agency in a particular manner. Examples of these generative mechanisms are the five interrelated factors for managing change (Pettigrew and Whipp 1991), the similar receptive contexts of change (Pettigrew *et al.* 1992) and the mechanism of changing structures, boundaries and processes (Pettigrew and Fenton 2000). The Mintzberg *et al.* (1976) model of unstructured decision-making is also, in a way, a generative mechanism, as are the vicious circles identified in a merger process by Yu *et al.* (2005). The critical realist orientation of Pettigrew implies that there is some doubt about the stability of the social structure part that, in his research, is proposed as shaping the process of strategic change, and that his propositions have a somewhat temporary character. Van de Ven and Mintzberg have positioned themselves closer to the generalist end of the scale. They take the process patterns themselves, which they have set out to discover, as universal enough to be engaged with methods that follow principles of empirical realism and even, to some extent, positivism.

Coming back to theory-oriented explanation (Hall 2006) of matching empirical evidence with theoretically derived process patterns, a middle ground position on the contextualist–

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generalist continuum indicates a way forward for strategy formation research. It allows for the use of the many existing theoretical insights to propose generative mechanisms based on social structure features that are presumed to stay in place for some time. It is these proposed mechanisms that then can be scrutinized for their empirical relevance. Such a mechanism thus provides an initial answer to the 'why' question of a strategy formation process's outcome. A generative mechanism also indicates what events should be part of the chronology of the process and in what order they should occur, therefore also indicating an answer to the 'how' question. The generality of the generative mechanism in question, in a way, can be part of the research question by investigating the stability of the structural features on which it is based and/or assessing the historical uniqueness of the case(s) under investigation. But even the establishment of a generative mechanism that is unique in time and place and which has no further relevance beyond this case can be, as will be argued later, a worthwhile exercise for those who are involved in that case and have an interest in the firm and its strategy. Internal validity, therefore, is paramount in judging the quality of process research into the strategy process, with the relevance of external validity varying with the expected generality of the generative mechanism in question.

The notion of a generative mechanism also provides guidance with regard to the compromise between the empirical and theoretical considerations which has to take place when doing empirical research into an actual strategy formation process. A proposed generative mechanism provides the theoretical argumentation with regard to what event data at least need to be collected, while the data that become available indicate what at least should be incorporated in the generative mechanism. When an overshoot in either direction occurs during the analysis (event data that cannot be made to fit with the proposed mechanism, or features of the mechanism that cannot be matched with empirical data), the appropriate

conclusion must be drawn with regard to the validity of the proposed mechanism.

### *Managing Strategy Formation*

We now come to the third issue on which this review tries to shed light, and that is the issue of the practical relevance of the findings of strategy formation research. What has come to light is that an understanding of strategy process as (rational) decision-making is largely inadequate, because it does little justice to the complicated nature of actually doing strategic management. The rationalistic view of strategy process, however, does allow for a clear-cut idea of what management is contributing to the process (i.e. decisions) as well as allowing for an explicit link with the strategy content realm (by providing theory that suggests what the right decision would be). This link appears to have been lost when a more realistic account of strategy process appeared, resulting in numerous calls to reconnect the two (Chakravarthy and White 2002; Farjoun 2002; Helfat *et al.* 2007; Huff and Reger 1987; Porter 1991; Rumelt *et al.* 1994; Schendel 1992; Shanley and Peteraf 2006).

Each of the contributors reviewed in this paper made suggestions of what strategic management should be about based on their view of the process. Mintzberg put forward that managers should conduct their activities in a craft-like manner to achieve configurational fit between the strategy formation process, the organization and the environment. To Pettigrew, strategic management should be about dealing with and maintaining a capacity for change, with managers as skilful contributors to the sociopolitical process that brings this about, and with management activity as one of the contributors to maintaining a change capacity. To Van de Ven, a particular outcome of a process is not something one can plan for, and he saw the management role largely as just being supportive and to keep the process going until an outcome has been realized. What appears to be lacking is an elaborate answer to the 'how to' question. If

configurational fit is essential and if a capacity for change is so important, what does top management do to achieve and maintain it? Additionally, what configuration should one aim for? Maintaining a capacity for change is one thing, but coming to a judgement about the appropriateness of the direction of change or whether the process actually is going to lead to an innovation is what makes strategic management for performance possible. What at least can be expected are some recommendations that are derived from expectations about the course of the process to supplement the insights from the more traditional literature on strategy content. To put it briefly: What does (top) management contribute and is it possible to estimate what the right way forward is for a strategy formation process?

One reason for this shortcoming is the focus of strategy formation research on what is taking place inside the organization. It is not that the environment has been ignored, but it is mostly treated as exogenous to the process. An exception in that sense was Spender (1989), who demonstrated that the way in which management thinks to a large degree reflects more common industry-wide interpretative schemes. This idea was incorporated in the 'firm-in-sector perspective' (Child 1988; Child and Smith 1987; Smith *et al.* 1990). Continuity and change were explained as resulting from the interplay between the firm and the environment in terms of interpretative schemes, competitive conditions and co-operative relationships. Here, too, reference was made to Giddens's (1979) structuration theory to define the overall process as one in which agency and structure stand to each other in a mutual constitutive relationship. The inclusion of performance as part and parcel of the process implies that future research should also refer to what is happening outside the organization in conjunction with what is happening inside, in order to understand and explain the realization of strategy. A realized strategy is just as much brought about by the possibilities and limitations that are posed by

the (competitive) environment as by what happens within the bounds of the organization.

This suggests that, for instance, competitive positioning and competitive dynamics (Grimm and Smith 1997; Grimm *et al.* 2006; Smith *et al.* 1992, 2001) are equally part of the strategy formation process as strategic decision-making and organizational change. A promising lead is provided by recent research into organizational field change and institutional entrepreneurship (Beckert 1999; Dorado 2005; Garud *et al.* 2002; Hoffman 2001; Lawrence 1999; Lawrence *et al.* 2001; Lounsbury and Leblebici 2004; Lounsbury *et al.* 2003; Munir 2005; Sminia 2003). Attempts to understand how inter-organizational arrangements emerge, change and develop over time has given rise to a processual and often structuration-like elaboration of institutionalization which parallels strategy formation research to such a degree that it must be possible to connect the two. An analysis of a strategy formation process should include competitive moves and institutionalization at the level of an organizational field, as well as what goes on inside the organization. A process analysis that includes events from each of these levels will not only provide insight into how and why a strategy as well as firm performance has come about, but also provides guidance in assessing what intended course of action could lead to what outcome.

To include performance and the environment explicitly in an analysis of the realization of strategy, variance and process methodologies have been combined in one research effort. The project mentioned earlier on innovative forms of organizing (Pettigrew and Fenton 2000; Pettigrew *et al.* 2003; Whittington *et al.* 1999) not only consisted of contextualist case studies but also included a large-scale survey that attempted to explore relationships between performance outcomes and changes in organizational structures, boundaries and processes. Alternatively, use can also be made of the vast array of strategy theory that has its origin in the variance approach by adapting it to be used in a process analysis. The variance approach to strategic management predominantly takes

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performance as the dependent variable. Sustainable competitive advantage is then taken as the cause of success. For instance, according to the resource-based view, sustainable competitive advantage is being seen as dependent on the possession of resources that are valuable and rare, and cannot be imitated or substituted (Barney 1991; Lockett *et al.* 2009). The idea would be to measure these variables with a sample of firms and subsequently analyse them to see whether there is any covariance.

A processual approach would track these variables over a succession of events to assess whether continuity and change with regard to resource characteristics over time leads to differences in competitive advantage and performance, and what generative mechanism actually accounts for this effect to take place. The main difference in approach is that the variables in the variance approach are taken as characteristics of actors (firms), which are measured at a certain moment in time (or perhaps subsequent moments in time in the case of a longitudinal design), while the process approach would see them as characteristics of events, with continuity and change with regard to these variables recorded from event to event. In principle, any strategy theory rooted in the variance approach can be 'processualized' in this manner. When continuity and change in key variables, including performance, can be associated with a particular generative mechanism, the 'how to' question with regard to the realization of strategy can be addressed in terms of maintaining the activities that make up this generative mechanism.

By processualizing insights from the content realm and combining these with insights from the process realm, a form of process diagnosis may become possible that focuses on the unique and highly contextual situation of individual firms at a particular moment in time. Such a diagnosis parallels a research stream in historical sociology where research questions are focused on explaining why a particular outcome came about in a particular historical case (Griffin 1992, 1995; Heise 1989). For a practising manager, the emphasis then

would be put on making judgement calls on what kind of process she/he is part of, what kind of generative mechanism is operating and in what way, in order to be able to produce the next appropriate event or event sequence. This is a particular application of Hall's (2006) theory-oriented explanation type of process analysis, but the focus for strategists should not be on explaining the occurrence of a sequence of events in history as in historical sociology, but in gaining insight into how a firm has arrived at the current situation in the here and now. It will result in the formulation of a very likely unique generative mechanism that explains how a firm has arrived at the situation it finds itself in. This is what Griffin (1992) referred to as making colligations of narratives and events.

In a way, such an exercise establishes an understanding of the developmental path a firm has taken, which in turn accounts for its path dependence (Mahoney 2004). Such a strategy process diagnosis allows for an evaluation of whether the direction in which this path is leading the firm must be seen as favourable or unfavourable and to what extent a deviation from this path is possible. This also provides a new understanding of the contribution of (top) management to the strategy formation process in terms of intervening or not in this developmental path. For a processual analyst, it would not be so much top management as an actor or the roles that management can perform that is seen as taking a firm forward on a developmental path, but it is a management act that creates an event that either makes the process change direction or contributes to a further continuation along the current path. To conclude, it is this way of thinking that directs further research on the 'how to' question with regard to strategy formation towards methods of strategy process diagnosis, as well as assessing the effectiveness of management intervention events.

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## Notes

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- 2 The *Organization Science* special issue on longitudinal field research methods to which this paper is the introduction was later published as Huber and Van de Ven (1995).
- 3 This he also explained in the forewords of Mintzberg (1979a) and Mintzberg (1983).
- 4 These case studies included Volkswagenwerk and the US strategy in Vietnam (Mintzberg 1978), Steinberg (Mintzberg and Waters 1982), Canadian Lady (Mintzberg 1978; Mintzberg and Waters 1984), McGill University (Hardy *et al.* 1984), National Film Board of Canada (Mintzberg 1978; Mintzberg and McHugh 1985), Air Canada (Mintzberg *et al.* 1986). and Arcop (Mintzberg *et al.* 1988).
- 5 Quinn *et al.* (1988) is the first in a series of strategic management textbooks which includes Mintzberg and Quinn (1991) and with Mintzberg *et al.* (2003) is now in its 4th (international) edition.
- 6 These forces are direction, efficiency, proficiency, concentration, innovation, co-operation, and competition.
- 7 Mintzberg famously became embroiled in a debate with Igor Ansoff on this subject (Ansoff 1991; 1994; Mintzberg 1990b, 1991b, 1994d,e).
- 8 Pepper (1966) later added selectivism as a fifth world hypothesis.
- 9 The results were later revisited in Van de Ven *et al.* (1999).
- 10 See also Eisenhardt (1989) and Strauss and Corbin (1990).
- 11 These include research projects on hearing health (Garud and Van de Ven 1989, 1992; Van de Ven *et al.* 1989), therapeutic apheresis (Van de Ven *et al.* 1989), naval systems development contracting (Scudder *et al.* 1989), school site-based management (Lindquist and Mauriel 1989), computer company start-ups (Van de Ven *et al.* 1989), commercialization of space (Ring and

- Rands 1989), nuclear safety standards (Marcus and Weber 1989), government strategic planning (Bryson and Roering 1989), advanced integrated circuits (Rappa 1989), hybrid wheat development (Knudson and Ruttan 1989), corporate mergers and acquisitions (Bastien 1989), state education reform (Roberts and King 1989), multihospital systems and human resource management.
- 12 Results on the transaction track were also published in Ring and Van de Ven (1992, 1994).
- 13 Strategy-as-practice is the subject of a dedicated review paper in this issue (Jarzabkowski and Spee 2009) and was therefore not included in this paper.
- 14 Barley (1990b) also explained this notion of scripts was rooted in the interpretative sociology of Goffman (1959) as well as in Giddens's structuration theory.

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