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# Practices of Process Research in Strategic Management<sup>1</sup>

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## Abstract

This paper reviews the most influential research efforts that have had a bearing on the practices of process research in strategic management. It will look at Henry Mintzberg's 'Tracking Strategy' research, Andrew Pettigrew's 'Contextualism', Andrew Van de Ven's 'Minnesota Studies', and some contributions from studies in technological change and from Historical Sociology. This will reveal that research questions aim for an understanding of the course and the outcome of the process, that structuration-type theories are prevalent although some agency based theories appear as well, and that the longitudinal qualitative case study is the preferred research strategy. Differences between the research efforts are traced back to the generalist – contextualist dilemma with regard to the overall research orientation. It is argued that a process research project's position with regard to this dilemma has to inform how this research has to be evaluated. With regard to future research, given how much theory on strategy process now is available, testing existing explanations of the course and the outcome of a process have to have prevalence over additional inductive case studies, although theory incorporating events outside the organization and their effect on the course and the outcome still is needed.

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<sup>1</sup> Working paper, March 20, 2007.

<sup>2</sup> This paper has benefited from comments made by Phil Johnson, Kamel Mellahi, Patricia Murtagh, Antonie van Nistelrooij, Andrew Pettigrew, and Andrew Van de Ven. However, all errors remain mine.

## Introduction

Every strategy scholar must be familiar with the 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. The Mintzberg and Waters paper is part of a research stream that seeks to find an answer to the question 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 variety of contributions to the strategic management literature, notwithstanding the difficulties associated with having this type of research published (Bengtsson et al., 1997; Smith, 2002). All of these contributions share a common question but there are profound differences in the answers and in the manner in which these answers were sought. Process research usually takes on the form of producing a 'story' with regard to the unit of analysis 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 purpose of this paper is to provide a review of this variety of contributions by looking not only at the methodology and methods but also at the theories that were used and developed to deal with the question of how a strategy actually is being realized.

An overview of the practices of process research in strategic management suggests that the main argument will be about the methodology and the methods that have been employed. Earlier overviews tended to focus predominantly on methodological issues of process research (Langley, 1999; McPhee, 1990; Ropo et al., 1997; Van de Ven & Huber, 1990<sup>3</sup>). There is, however, 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). What the Mintzberg and Waters (1985) image of the strategy process signifies is that, theoretically, the strategy process may include strategic decision-making as an activity, but strategic decision-making is too limited a representation of the strategy formation process (also see: Chia, 1994; Hendry, 2000; Langley et al., 1995; Laroche, 1995; Mintzberg et al., 1990). Methodologically, research in strategy formation requires a process approach which is distinct from the more widespread variance approach in organization and management research (Abbott, 1984; 1988; 1992; 1994; 2001; Abell; 1987; Farjoun, 2002; Gorski, 2004; Mohr, 1992; Poole et al., 2000; Scott, 1994; Van de Ven & Poole, 1989; 1990; 1995; 2005). A process approach recognizes the transience of a research object like strategy. Therefore, as Miller and Friesen (1982: 1020) already had 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 it is this what is at the heart of the research question here. Consequently, this paper will look at both the theories that are employed to describe and understand the full process of strategy

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<sup>3</sup> 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).

formation over time as well as the methodologies and methods by which strategy process researchers engage with their subject<sup>4</sup>.

To understand what process research is about, it needs to be clear what is being meant with process. Van de Ven (1992; Poole & Van de Ven, 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 actually is 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 it still resembles a variance approach. In a way this is a static representation of a process and does little to account for the changeable nature and transiency of the research object. The definition of process which is at the heart of the practices of process research in this review sees 'process' as a developmental event sequence (Langley, 1999; Poole et al., 2000; Miles & Huberman, 1994). In contrast to a variance approach, this process approach to process does not work with variables that provide explanations in terms of relationships between dependent and independent variables but works instead in terms of events that lead to an outcome. Events are taken to somehow contribute to the continuity and change of the object under study and are at the heart of any process explanation (Peterson, 1998).

The review will take place roughly in a chronological order but will distinguish between distinct research efforts that often are linked with particular scholars. This paper will concentrate on those contributions to strategy process research practice that are not only exemplary research efforts in their own right but are also accompanied by more reflective and methodological accounts about how and why the research was done. That is probably why these contributions have proven to be the most 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 looked at. 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. A subsequent section will be devoted to research on the process of technological change, and especially the contributions of Stephen Barley, Geraldine DeSanctis, Dorothy Leonard-Barton, Wanda Orlikowski, and Brian Pentland. Again this strictly speaking is not strategy formation research but the number of cross references between both areas is thought to be enough reason to have these contributions included in this review. Besides, depending on the impact of the technology, technological change just as much can be elaborated as strategic change. The last section of this review will take a closer

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<sup>4</sup> There is a large body of research that concentrates on the process of strategic decision making and / or use the term strategy process to refer to the process of strategy formulation (see Hutschenreuter and Kleindienst, 2006). Apart from very often employing a variance approach, this research is more concerned with intended strategy than with realized strategy and therefore will not be part of this review.

look at Historical Sociology. The observation that many of the researchers that are figured in the previous sections refer to methodological and sometimes theoretical contributions from this field of study warrants a closer look at what is on offer there.

### **Organization of the Paper**

Each of the research efforts that will be reviewed here will be queried with regard to three different aspects. Although all of these efforts share a general research question referring to the 'how' of process to explain an outcome, the first query asks about the more specific research question or set of questions that has been addressed. Furthermore, although they all share a similar definition of process, they each work with a more specific understanding or theory of process. The second query, therefore, deals with the underlying theoretical roots of each of the research efforts. The third query is concerned with the methodology and methods by which each of these efforts have engaged with 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. With regard to the third query, use will be made of a basic vocabulary to compare different approaches of qualitative management research derived from Johnson et al. (2006) which also includes a description of quantitative research. Their classification is particularly suited to this review because it treats the ontological position as separate from the epistemological position. Before we set off, this typology of management research will be explained in more detail.

Johnson's et al. (2006) point of departure is a research approach that they labelled as positivism. It is quantitative in nature and, to them, is the most widespread account of what is considered to be scientific research. It basically is represented by a falsificationist hypothetico-deductive methodology with the aim of '*erklaren*'. Social reality is assumed to exist independently of the observer (realist position). Most of the methodological considerations associated with this approach are based on an understanding that knowledge about social reality needs to be as objective as possible while human action is taken to be determined by (measurable) external forces. As such, it fits rather well with the variance approach described earlier. These assumptions are paired to criteria of research quality that are concerned with validity and reliability. Validity refers to construct or internal validity on the one hand (did the research instrument capture the phenomena under study?), and external validity or generalizability on the other hand (Do the results have significance beyond the research sample?). Reliability is concerned with the question to what extent the research process itself is contributing to the outcomes. Do different researchers or research settings produce the same results, or, in other words, can the research be replicated?

The first distinct approach in qualitative research described by Johnson et al. (2006) is labelled as neo-empiricism. This approach 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*' instead of '*erklaren*', and with regard to the understanding of human action as being driven by interpretation and subsequent choice instead of outside forces. As a

result, 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. Criteria of research quality mirror the ones put forward by positivism but are adjusted to the aim and scope of neo-empirical research. With regard to validity there is more concern about internal validity than with external validity. However, internal validity understood in terms of the level of correspondence between the data and that what has been measured is replaced by notions of credibility, authenticity, and local understanding. If external validity is a concern, it is judged in terms of transferability to comparable situations or generality is more described in terms of a generic logic that can be demonstrated with a single case study than in terms of statistical generalization. However, a difference can be observed between researchers with a neo-empiricist orientation that either see qualitative research as very distinct to quantitative research or see qualitative research and quantitative research as complementary. Those neo-empiricist researchers who distinguish themselves from positivism emphasize the local character of their findings and aim to understand the situation from the inside (*verstehen*). Those researchers who see neo-empiricism and positivism as complementary see both approaches as subsequent steps in an overall research strategy which starts with induction and theory construction from a single or a few cases which has to be followed up with deduction and theory testing across a population. The latter researchers are ultimately more interested in explanation (*erklären*).

The second approach in qualitative research is dubbed by Johnson et al. (2006) as critical theory. To them it 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. The epistemological position, therefore, is more subjectivist but the orientation towards social reality remains a realist one. There still is some idea that social reality is out there in some form to intervene and limit the possibilities for human action. With positivism and empirical realism, notions of validity depend on a correspondence idea of truth. With critical theory, this idea of correspondence has lost much of its significance, making that validity needs to be judged using other criteria. Any description of a social phenomenon, scientific or otherwise, is considered to be subjective. Here again a difference in orientation can be observed. The critical theorist 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. What in this paper will be referred to as a critical realism, on the other hand, is less interested in emancipation but does share a concern for producing an account that reflects different point of views. Both sub-types on the whole are more about comparison and finding similarities and differences between situations than being able to generalize.

Finally, Johnson et al. (2006) describe a post-modern approach to qualitative 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. (2006) 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 to the taken-for-granted and familiar. It is not so much about finding the definitive answer but more about producing alternative points of view.

With this typology of research orientations in place, each one of the five practices of process research can now be queried with regard to the research questions, process theory in use, and methodological orientation. A summary of the results is presented in table 1.

Table 1: Practices of Process Research

	Principal Author	Research Question	Process Theory	Research Orientation	Nature of Explanation
<b>Tracking Strategy</b>	Mintzberg	How is strategy realized?	Configuration Theory	Empirical Realism	Generalist
<b>Contextualism</b>	Pettigrew	How do context, process, and content combine and explain outcome?	Structuration Theory	Critical Realist	Contextualist
<b>Minnesota Studies</b>	Van de Ven	How do innovations develop over time?	Meta theory of innovation and change	Empirical realism geared towards <i>erklaren</i>	Generalist
<b>Technological Innovation</b>	Barley	How does new technology affect day-to-day activities?	Structuration Theory	Empirical realism geared towards <i>erklaren</i>	Contextualist
	DeSanctis	How does technology affect the organization?	Structuration Theory	Empirical realism geared towards <i>erklaren</i>	Contextualist
	Leonard-Barton	How is technology implementation realized?	Structuration Theory	Empirical realism geared towards <i>erklaren</i>	Generalist
	Orlikowski	How does information technology affect organization?	Structuration Theory	Empirical realism geared towards <i>erklaren</i>	Contextualist
	Pentland	How does information technology affect organization?	Organizational Grammar	Empirical realism geared towards <i>erklaren</i>	Contextualist
<b>Historical Sociology</b>	Abell -Comparative Narrative Method	Patterns in event sequences?	Agency Theory	Positivist	Generalist
	Abbott -Sequence Analysis	Patterns in event sequences	Inductive	Positivist	Generalist
	Heise -Event Structure Analysis	Root cause of a later outcome?	Agency Theory	Empirical realism geared towards <i>verstehen</i>	Contextualist
	Griffin -Event Structure Analysis	Root cause of a later outcome?	Structuration Theory	Critical Realist	Contextualist

## Tracking Strategy

Henry Mintzberg was one of the first who started asking 'how' questions with regard to strategic management. He had set himself the task of formulating a theory of business policy (Mintzberg, 1977)<sup>5</sup>. This theory had to be quite comprehensive by providing answers to questions about managerial work, organizational structure, organizational power, the making of strategic decisions, the formation of organizational strategies and about strategic analysis. The nature of managerial work had been the subject of his PhD-thesis (Mintzberg, 1968) and already had been published (Mintzberg, 1973; 1975). Organization structure and organization power were dealt with in Mintzberg (1979a) and Mintzberg (1983) respectively. How organizations 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 interrupts. However, there was a realization that making a strategic decision not automatically means that this decision is going to be implemented and therefore treated the formation of organizational strategies as a separate subject, to be investigated under the banner of 'tracking strategy'.

Tracking a strategy involved an extensive case study of a single organization with the aim of describing its strategy as a pattern in a stream of actions over a long time period (Mintzberg & Waters, 1985)<sup>6</sup>. 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 (Mintzberg et al., 1990; Langley et al. 1995). 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 & Waters, 1985).

Mintzberg (1979b) insisted the case studies needed to be as descriptive as possible to be able to come close to what actually was 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 already had 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 like observation, (periodic semi-structured) interviews and document analysis. Because he claimed little was known about the actual process, consequently 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 with, for

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<sup>5</sup> This he also explained in the forewords of Mintzberg (1979a) and Mintzberg (1983).

<sup>6</sup> These case studies included Volkswagenwerk and the US strategy in Vietnam (Mintzberg, 1978), Steinberg (Mintzberg & Waters, 1982), Canadian Lady (Mintzberg, 1978; Mintzberg & Waters, 1984), McGill University (Hardy et al., 1984), National Film Board of Canada (Mintzberg, 1978; Mintzberg & McHugh, 1985), Air Canada (Mintzberg et al., 1986), and Arcop (Mintzberg et al., 1988).

instance, characterizing 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 & Mintzberg, 1984; Mintzberg, 1990). Configurations are generic types of constellations of mutually supportive elements. His work on organizational structure (Mintzberg, 1979) 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 & Waters, 1985) which had to be fitted with the earlier defined structure configurations (Mintzberg, 1990; Quinn et al., 1988<sup>7</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, 1991). 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 that what is happening is due to the interplay of seven basic forces that he had also identified<sup>8</sup>. In Mintzberg (1990) and also in his introduction to Mintzberg (1991) 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 fitting parts together into coherent wholes than dealing with the flux of constituting parts that are continuously changing shape and are being pushed and shoved 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 it had been lost (Miller & Mintzberg, 1984; Mintzberg, 1990) 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, 1994), preferring a metaphorical description of strategic management as a craft instead (Mintzberg, 1987). Siggelkow (2001; 2002; Siggelkow & Levinthal, 2003; 2005) recently picked up on this approach, doing longitudinal case studies as well as simulations on problems of external and internal fit of 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 all add up into an overall theory of business policy that would include a representation of the social reality of strategy formation. Theoretically, it can be questioned to what extent his configurational approach actually can be considered a process theory. Concentrating on fitting parts

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<sup>7</sup> 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 4<sup>th</sup> (international) edition.

<sup>8</sup> These forces are direction, efficiency, proficiency, concentration, innovation, cooperation, and competition.



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. However, Mintzberg can be credited with putting the overall research question of how a strategy actually is 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 criticised as being ahistorical, aprocessual, and acontextual (Pettigrew, 1985a; 1985b; 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 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 & Whipp, 1991) while a study of the British National Health Service (NHS) focussed on the question 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 world wide research project on innovative forms of organizing (Pettigrew & 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>9</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, both in 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; 1985b; 1990; 1992) relies on structuration-like theories and specifically Giddens (1979), Sewell (1992) and Sztompka (1991) to provide the recurrent pattern in the process. Structuration-like theory sees social

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<sup>9</sup> Pepper (1966) later added selectivism as a fifth world hypothesis.

process resulting from actions that are bound by the social structure but also have an 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 why firms in similar circumstances performed differently was explained with a pattern of five interrelated factors for managing change (Pettigrew & 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 either lead to competitive success or failure, depending on how each of these factors take shape and are 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 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, cooperative 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 & 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 especially 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 like deciding what process is going to be investigated (and making decisions on its beginning and its ending), formulating a research question and gathering and analyzing data involve both induction and deduction (Pettigrew, 1990; 1997a). A pure 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 very 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 socioeconomic 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 they refer to, at least to the participants in the process under investigation (Pettigrew, 1995b; Ferlie & McNulty, 1997). 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 often is associated with change and it provides an opportunity for comparison. In its most 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 do 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 & 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 particular to a certain moment in time as well. 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 consist of, for instance, interrelated factors of change (Pettigrew & Whipp, 1991) or a mechanism of changing structures, boundaries, and processes (Pettigrew & 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.

## 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. Much of the results were first published in an edited volume (Van de Ven et al., 1989)<sup>10</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 more aimed at change and process research in general (Van de Ven, 1992; Van de Ven & Poole, 1995; 2005; Poole et al., 2000; Garud & Van de Ven, 2002). The initial research problem of MIRP was aimed at understanding how innovations develop over time, what makes innovation processes to become successful, and to what extent knowledge about innovation processes can be generalized (Van de Ven & Angle, 1989).

The MIRP research strategy was based on the grounded theory approach with an explicit reference to Glaser and Strauss (1967)<sup>11</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>12</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 (Van de Ven & Poole, 1989; Van de Ven & Poole, 1990; Poole et al., 2000). Raw data was recorded as incidents: basic descriptions about what happened and who had done something. These were then coded into events, theoretical laden interpretations of that 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 make them ready 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 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 either in 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 is only an announcement of statistical techniques that are going to be utilized (Van de Ven & Poole, 1989; 1990). These had to be especially aimed at establishing

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<sup>10</sup> The results were later re-visited in Van de Ven et al. (1999).

<sup>11</sup> See also Eisenhardt (1989) and Strauss and Corbin (1990).

<sup>12</sup> These include research projects on hearing health (Garud & 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 & Mauriel, 1989), computer company startups (Van de Ven et al., 1989), commercialization of space (Ring & Rands, 1989), nuclear safety standards (Marcus & Weber, 1989), government strategic planning (Bryson & Roering, 1989), advanced integrated circuits (Rappa, 1989), hybrid wheat development (Knudson & Ruttan, 1989), corporate mergers and acquisitions (Bastien, 1989), state education reform (Roberts & King, 1989), multihospital systems, and human and resource management.

causal patterns among the various event tracks. At this stage the results were described in a qualitative form concentrating on either the ideas track (Schroeder et al., 1989), the people track (Angle, 1989), the transactions track (Ring & Van de Ven, 1989)<sup>13</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 MIRP was that the diversity and complexity of the process patterns that were found do not allow for the formulation of a general theory of innovation processes yet (Poole & 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 theory building (Poole & Van de Ven, 1989b). They concentrate on the agency – structure contradiction (which is fundamental to structuration-like theory) and suggest 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 (Van de Ven, 1992; Van de Ven & Poole, 1995; Poole et al., 2000; Garud & Van de Ven, 2002). 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 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; 1985b; 1990; 1992). The evolutionary model assumes 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 & Mintzberg, 1984; Mintzberg, 1990). Van de Ven ultimately seems to prefer an approach which encompasses every one of the four models (Poole & Van de Ven, 1995; Poole et al., 2000; Garud & Van de Ven, 2002).

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 & Van de Ven, 1996) and subsequently suggest processes can either follow a periodic, chaotic, pink noise (constrained randomness) or white noise (random) pattern (Dooley & 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 & Van de Ven, 2000). He demonstrates the fitting of homogeneous

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<sup>13</sup> Results on the transaction track were also published in Ring and Van de Ven (1992; 1994).

Markov models, phasic analysis, event time series regression analysis, and event time series nonlinear 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 then are found in the event data then can be taken to support either of the four process theories, depending on the actual pattern that has been found (Van de Ven, 1992; Van de Ven & Poole, 1995; Poole et al., 2000).

At this point in time 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 or generative mechanism 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 & Van de Ven, 2002; Van de Ven & Poole, 1995). The resulting 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 & Poole, 2005). One way involves the construction of narratives of emergent actions and activities by which an outcome unfolds. The other way involves dynamic modelling of agent-based models or chaotic complex adaptive systems. Especially the latter type of research 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 analyzed but even more importantly with regard to the coding procedures that are adopted (Garud & Van de Ven, 2002; Van de Ven & Poole, 1990; Poole et al., 2000). 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 & 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).

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 & Angle, 1989) there is a clear concern for generalization with ultimately a change from qualitative mode to quantitative mode (Cheng & Van de Ven, 1996; Das & Van de Ven, 2000; Dooley & Van de Ven, 1999; Poole et al., 2000; Van de Ven & Poole, 1989; 1990). The qualitative case studies were designed and executed with methodological criteria like 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 what might be expected, and was more aimed at analytical generalization instead. Theoretically, the Minnesota Studies were relatively uncomplicated at first, with only a set of 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 & Van de Ven, 2005; Poole et al.,

2000; Van de Ven, 1992; Van de Ven & 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 lead 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 partly revert back into the variance approach (Van de Ven & Poole, 2005).

## **Research on Technological Change in Organizations**

Although the process of technological change in organizations is not synonymous with strategy formation, it is similar enough for this subject to be studied utilizing a process approach. Notably researchers like Stephen Barley, Gerardine DeSanctis, Dorothy Leonard-Barton, Wanda Orlikowski, and Brian Pentland each approached this subject with similar research questions and methodological orientation. Barley (1986; 1990a) looked at how aspects of technology affect the day-to-day goings on in an organization by investigating the introduction of a new technology (CT scanners) in a hospital. Leonard-Barton (1988) wanted to understand the dynamics of the process of the implementation of new technologies in organizations. Orlikowski looked at the relationship between information technology and organization (Orlikowski & Robey, 1991; Orlikowski, 1992). Pentland (1992; 1995a) examined how information technology affects how organizations take shape. Finally, DeSanctis was interested in how technology in general impacts on the organization (DeSanctis & Poole, 1994).

The principal research strategy that was employed was the real-time longitudinal case study (Barley, 1990b; Leonard-Barton, 1990; Orlikowski, 1992; Pentland, 1992). Here as well as with MIRP, the basic methodological orientation predominantly was derived from the grounded theory approach (Eisenhardt, 1989; Glaser & Strauss, 1967). Following the concerns associated with the limited statistical generalizability of case studies (Yin, 2004)<sup>14</sup>, Leonard-Barton (1988; 1990) bolstered her findings by doing some additional retrospective case studies. The actual data collection procedures were mostly fashioned according to ethnographic principles (Van Maanen, 1988), employing (participant) observation in some form or another. Consequently, much weight was put on internal validity. Sticking to strict procedures during both data collection and data analysis was put forward as a way to safeguard research quality (Barley, 1990b; Leonard-Barton, 1990). This was accompanied with the suggestion of utilizing the qualitative methods that had been collected in Miles and Huberman (1994)<sup>15</sup>. There was a clear expectation that the findings eventually had to be of a general nature, hence the reference to Yin (2004) and the adoption of some form of multi-case design by both Leonard-Barton and Barley.

Similar to Pettigrew's contextualism, structuration-like theories provided a basic understanding of process throughout the research projects, with references being made to Bourdieu (1977; 1990) and Giddens (1976; 1979; 1984). Each one of the researchers summarized under the header of technological change eventually

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<sup>14</sup> Reference was actually made to the 1<sup>st</sup> edition of 1984.

<sup>15</sup> Here too it was the 1<sup>st</sup> 1984 edition that the original reference was made to.

developed a more specific reading of the process that provided an answer to their particular research question. Barley's answer 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>16</sup>. This idea later was adapted to a more general structuration-based theory of institutionalization (Barley & Tolbert, 1997; Orlikowski & Barley, 2001). Leonard-Barton (1988) came to an understanding of technology implementation as 'mutual adaptation' in which both the technology and the organization are re-invented while implementation takes place. Orlikowski as well as DeSanctis developed more specific versions of Giddens' 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 & Robey, 1991; DeSanctis & 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, 1995b; Pentland & 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).

These studies in technological change provide an interesting mix in research orientation. As mentioned above, they share a basic theoretical prevalence for structuration-like theories with Pettigrew's contextualism. They also work with different levels of abstractness with structuration providing the most abstract account of the process but with research questions aimed at developing theories at a lower level of abstractness to answer each of their respective 'how' questions regarding the process of technological change. Methodologically, however, they have more in common with Van de Ven's Minnesota Studies. There is a concern here as well with generalization and seeing their efforts as part of a research effort that starts with inductive case studies for the purpose of theory construction to eventually be able to test these theories using a falsificationist hypothetico-deductive methodology. Basically, these research efforts therefore are best characterized as fitting empirical realism but aiming *erklären*.

## **Historical Sociology**

The process of strategy formation has not been studied under the banner of historical sociology as such. However, process research has been the main methodological orientation (Abell, 2004; Aminzade, 1992; Büthe, 2002; Gorksi, 2004; Griffin, 1992; 1993; Mahoney, 2004; Sewell, 1996) to the extent that some of the authors working in this sub-discipline, like Andrew Abbott or Peter Abell have been referred to by both Pettigrew and Van de Ven. Within this field of study there is something of an ambivalence whether it is about utilizing sociological theory to explain history or if it is about using history to underpin sociological theory (Büthe, 2002; Gotham & Staples, 1996; Griffin, 1995). While some only go as far as acknowledging the importance of time for the analysis and explanation of the phenomena under study (Aminzade, 1992;

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<sup>16</sup> Barley (1990b) also explained this notion of scripts was rooted in the interpretative sociology of Goffman (1959; 1984) as well as in Giddens' structuration theory.



Büthe, 2002) others have developed bespoke process methods that warrant a closer look. To Abbott (1992) these methodologies and methods are either aimed at making formal descriptions like Abell's 'Comparative Narrative Method' or Heise's 'Event Structure Analysis', or empirical categorizations like his own 'Sequence Analysis'.

Peter Abell developed the 'Comparative Narrative Method' for doing process research (Abell, 1984; 1987; 1993; 2004). His suggestion is to describe and analyze a sequence of events in a formal manner. Events are either actions (what people do), or forbearances (the specific alternative to this action by not doing it). These are assumed to be reactions to previous events or to surrounding circumstances. A succession of actions and reactions can be recorded together with the relevant conditions surrounding each action, resulting in event sequences or narratives that then can be compared and analyzed. These narratives then can be generalized into common patterns that then can be taken as explanations of outcomes at the micro level, or these narratives can be used as building blocks of larger narratives to be able to create further abstractions and explanations of outcomes at the macro level.

David Heise was initially interested in developing a method that could map how people think situations are produced (Heise, 1989). Instead of uncovering individual cognitive cause maps, this method of 'Event Structure Analysis' later saw use in analyzing historical and organizational process (Brown, 2000; Griffin, 1993; Stevenson & Greenberg, 1998). The method basically consists of listing events and going through them asking yourself questions if it has been caused by a preceding event or not. Heise developed a computer program<sup>17</sup> that facilitates the analysis and also incorporates a number of logical pre-conceptions so that a very specific causal chain of events can be produced. In this way a researcher could identify one or more events that appear to be the root cause of an outcome later in time as well as what appear to be typical progressions from an initial state to a specific outcome. Such a root cause event or maybe an event somewhere up the chain that appears to be of crucial significance can then be subjected to 'Counterfactual Reasoning' (Gotham & Staples, 1996; Griffin, 1993) to establish some idea about the necessity and / or inevitability of the course of the process. Counterfactual reasoning basically asks the 'what if' question to assess to what extent the subsequent chain of events would have turned out differently if a particular event had gone the other way. Both event structure analysis as well as counterfactual reasoning involve informed judgements about the situation and the course of process and therefore require an intimate knowledge of the particular world in which the process takes place (Griffin, 1993; Heise, 1989).

Andrew Abbott focussed on methods of identifying patterns in event sequences (Abbott, 1990; 1995; 2001; Abbott & Tsay, 2000). He has demonstrated this 'sequence analysis' can be done with a variety of statistical methods (There is a strong connection between Van de Ven's use of statistical techniques and the work of Abbott, see Poole et al, 2000). Abbot's main interest is in finding whether some processes typically happen in a specific order, whether these patterns are affected by external circumstances and whether particular patterns are linked to specific outcomes.

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<sup>17</sup> On 20<sup>th</sup> March 2007, this program was available at <http://www.indiana.edu/~socpsy/ESA/home.html>.

Besides, Abbott relentlessly argued in favour of process approaches in sociological research in general (Abbott, 1984; 1988; 1990; 2001).

There is something of a debate to what extent theory should be used to inform and shape the nature of the explanation and what this theory should look like (Aminzade, 1992; Büthe, 2002; Gorski, 2004; Mahoney, 2004; Quadagno & Knapp, 1992). Consequently, it is difficult to exactly pinpoint the research orientation utilizing the Johnson et al. (2006) typology. To his own admission, Abbott (1992) is more inductive than deductive in his pursuit of finding patterns in event sequences, letting them as it were, emerge from the recorded event sequence data. Abell (1987; 1993), on the other hand relies very much on a rational action model of agency (Von Wright, 1971) to assess the chains of causality in his narratives. The actions and reactions that make up events he assumes to be the result of deliberate choices of the actors, given their preferences and their reading of the situation regarding previous actions and the surrounding circumstances. Heise (1989) presumes something similar. The presumption that agents make rational choices about what to do next in reaction to a previous event allows him to reconstruct a collection of events into a causal chain. Griffin (1992; 1993) argues that any process theory has to acknowledge the interplay of agency and structure and suggest structuration-like theories (Abrams, 1982; Giddens, 1979; Sewell, 1992) as the basis for analysis instead.

Linked to this debate is the question of generality of an explanation (Büthe, 2002; Griffin, 1992; 1993; Quadagno & Knapp, 1992), where a view can be taken that any finding is, by definition, highly contextual and that therefore any form of generalization is deemed impossible from the start, or that external validity is an important measure of research quality and that findings can and should have significance beyond the particular historical phenomenon. Heise fits perhaps best with empirical realism in that respect but Abell and Abbott have an eye on positivism with their ambition to unearth general patterns paired to a qualitative methodology. Griffin might fit better with critical realism with his emphasis on the contextuality of an explanation and his preference for structuration-like theories, but like Pettigrew, there is also not much of an interest in the emancipatory role. What is remarkable, however, is that Heise, and more specifically Griffin, are representative of a different kind of research question. Instead of aiming for an explanation of a more general outcome and using a representative case, they are interested in the particular and want to explain why a specific outcome was reached in a specific case.

### **Similarities, Differences, and What Next?**

We have looked at Mintzberg's "Tracking Strategy" research, Pettigrew's 'contextualism', Van de Ven's 'Minnesota Studies', as well as contributions from research into technological change and Historical Sociology. These contributions stand out not only because they have been exemplary but also because they include reflective and methodological accounts of why and how the research was done. However, these are not the only contributions to strategy formation research. Bower (1970) as well as Grinyer and Spender (1979), Quinn (1980), Whipp and Clark (1986), Johnson (1987), Hinings and Greenwood (1988), Lewis (1988), Stein (1993) and Sminia (1994) are examples of similar work incorporating longitudinal case studies to

investigate how a strategy actually was realized. Each of these studies shared an understanding that strategic management rarely conforms to the ideal of rational decision-making and subsequent planned change. Each of them went to great length to observe and uncover the 'real' process. As part of this ongoing research effort, Johnson (1987) could argue that there are at least five alternative explanatory schemes available to the strategy formation researcher which, apart from the rational model, included a logical incremental model, a political incremental model, a cognitive interpretative model, and a symbolic interpretative model. As a common denominator, strategy formation became to be seen as a process of 'punctuated equilibrium' (Romanelli & Tushman, 1994) with longer periods of slow incremental change during which the overall interpretative scheme remains intact; being alternated by short but radical shifts when the organizations' more fundamental core assumptions become subject to change.

Most of these case studies, as did Mintzberg and Pettigrew, focussed on the strategy process as it is taking place inside the organization. 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 & Smith, 1987; Smith et al., 1990). Continuity and change was explained as resulting from the interplay between the firm and the environment in terms of interpretative schemes, competitive conditions and cooperative relationships. Like with Pettigrew's contextualism, here too reference was made to Giddens' (1979) structuration theory to define the overall process as one in which agency and structure stand to each other in a mutual constitutive relationship.

A more recent strand of strategy formation research is even more inward looking. 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; Johnson et al., 2003; Whittington, 1996; 2003). Again this involves longitudinal and real time case studies. This time the daily activities of practicing managers are being 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 & 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; 2000b; 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 like ethnomethodology (Garfinkel, 1967) and symbolic interactionism (Goffman, 1959; 1974; 1983) has been referred to as well.

There has not yet been much of the post-modern type of research done on strategy formation processes. What can be found, however, are appraisals of the taken-for-granted-ness of core terms like 'strategy', 'management' or 'decision-making' in research and management (Barry & Elmes, 1997; Chia, 1994; Grandy & Mills, 2004; Hendry, 2000; Knights & Morgan, 1991; Tsoukas & Chia, 2002). These post-modernist 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 post-modern analysis of a strategy formation process, 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 at 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 case studies that challenge these kind of presumed causal relationships.

Overall there are a number of similarities and differences between the practices of process research in strategic management and the related subjects that have been reviewed in this paper. Methodologically, what jumps out is that all contributors share a conviction that a process approach requires a longitudinal research strategy. Most of the research relies on a qualitative case study as well in which a single organization has been the case. Multiple data sources are used to be able to somehow construct what can be referred to as the 'story' of the case (Langley, 1999). 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. There is certain prevalence for structuration-like theories although some accounts are being based on more agency based theories. 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 is being debated among historical sociologists (e.g.: Büthe, 2002; Gorski, 2004; Griffin, 1992; 1993; Quadagno & Knapp, 1992) but has not yet surfaced as profoundly as that among organization and strategy scholars (Numagami, 1998; Tsoukas & Hatch, 2001). It seems obvious to treat this dilemma as resulting into two irreconcilable positions but the practices of process research reviewed here suggest that it can be seen as a matter of degree. On the extreme contextualist end, everything is in flux and there is nothing against which any truth claim can be grounded as there already would have been change while things have moved on. The post-modern type of process research would reside towards this end of the continuum. On 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 are these law-like patterns 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 & Banbury, 1994; Nutt, 1993; 2000).

The process research practices reviewed in this paper take up more intermediate positions. Pettigrew along with Barley, DeSanctis, Orlikowski, Pentland, and Griffin are situated more towards the contextualist end of the continuum. They take structuration as a fixed point of reference. They vary, however, in the degree to which they take the social structure as a stable fixture. They can all argue that the generative mechanisms that they propose as an answer to their research questions are there by virtue of a specific arrangement of the social structure that regulates and limits human agency in a particular manner. The empirical realist research orientation of Barley, Orlikowski and Pentland implies they assume that part of the social structure that shapes the process of technological change in general has enough stability over time to be engaged as if it is a knowable social reality that can be discovered and generalized. However, the social structure part that deals with a particular technology is considered to be more salient as it is being shaped by this process. The more critical realist orientation of Pettigrew implies that there is some more 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 more temporary character. Van de Ven, as well as Leonard-Barton and Abbott 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.

With regard to future strategy process research, given the volume of the research that already has been done, a purely inductive approach that has had been advocated earlier (Barley, 1990b; Dawson, 1997; Fox-Wolfgramm, 1997; Langley, 1999; Leonard-Barton, 1990; Mintzberg, 1979b; Orton, 1997) seems to be less appropriate now (Hinings, 1997). With the comprehensive overviews of (strategy formation) process theories available now (e.g. Johnson, 1987; Mintzberg, 1990; Poole et al., 2000), one currently is spoilt for choice. Additional research in strategy formation should take these theories into account and be more of a deductive nature. With all these theories available, one could argue that any outcome of a strategy formation process can now be explained in several ways and research questions should be more formulated in terms of which one of these explanations makes the most sense. This would require a theory testing procedure in which empirical evidence is matched with theoretical derived process patterns to allow for some form of analytical generalization. How this procedure actually takes shape and what constitutes good process research will vary with where the researcher positions herself / himself on the generalist – contextualist continuum.

Unfortunately, the process research practices in strategic management have also contributed to a separate understanding of strategy process and strategy content, resulting in a desperate need to reconnect the two (Farjoun, 2002; Helfat et al., 2007; Porter, 1991; Rumelt et al., 1994; Schendel, 1992; Shanley & Peteraf, 2006). One way to deal with this is to extend strategy process research into the realm of strategy content. The how question about strategy formation will then need to include an explicit reference to the realization of performance over time. From a process perspective, performance can be defined and investigated as a pattern in a stream of achievements. Pettigrew and Whipp (1991) already emphasized that performance does

not necessarily has to be considered as a discrete outcome state but that it can also be seen as a layered process in itself, consisting of the more traditional measures like profits, market share, or turnover indicating performance at a certain moment in time as well as the multiple and changeable bases of competitiveness over a period of time and the abilities of a firm to deal with continuity and change during the course of time.

This inclusion of performance as part of the process implies that future research should also refer to what is happening outside the organization to explain the course and outcome of the strategy formation process in conjunction to what is happening inside. It is not that the environment has been ignored but it is mostly treated as exogenous to the process. However, a realised strategy is just as much brought about by the possibilities and limitations that are posed by the (competitive) environment as that it has been shaped by what happens within the bounds of the organization. This suggests that competitive positioning and competitive dynamics (Grimm et al., 2006; Grimm & Smith, 1997; Smith et al., 1992; 2001) is just as much part of the strategy formation process as is strategic decision making and organizational change. In effect, there already are two research streams that are busy blazing trails in this direction. Recent developments in the realm of the dynamic capabilities approach are attempting to deal with the content–process divide from the opposite –content–direction, pointing at the essential processual nature of the this approach as well as proposing ways to bridge the gap (Helfat et al., 2007; Peteraf, 2005; Shanley & Peteraf, 2006). Another 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 & Leblebici, 2004; Lounsbury et al., 2003; Munir, 2005). Attempts to understand how inter-organizational arrangements emerge, change and develop over time have brought back agency into institutional theory. This subsequently has given rise to a processual, and often structuration-like elaboration of institutionalization which parallels strategy process research practices to such a degree that it must be possible to integrate the two in order to not only understand how a strategy and the associated firm performance has come about, but to also provide guidance in assessing what intended course of action could lead to what outcome.

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