

CASE STUDIES AND THE CONFIGURATIONAL ANALYSIS
OF ORGANIZATIONAL PHENOMENA

PEER C. FISS
Marshall School of Business
University of Southern California
3670 Trousdale Pkwy, Bridge Hall 303-B
Los Angeles, CA 90089-0808, USA
Phone: 213-821-1471
Fax: 213-740-3582
Email: fiiss@marshall.usc.edu

Chapter prepared for the *Handbook of Case Study Methods*,
edited by Charles Ragin and David Byrne.

Draft – Version 2007-09-30
Please do not quote, cite, or circulate without the permission of the author

Within the organization and management literatures, the case study has traditionally occupied a somewhat peculiar position. On the one hand, case studies have a long and distinguished history in the study of organizations. They have featured prominently in academic research on organizations, and many of the most highly regarded and influential studies in the organization and management literature have employed a case study approach (cf. Gephart, 2004). Some of the most well-known examples include Selznick's (1949) study of the Tennessee Valley Authority, Blau's (1962) and Crozier's (1964) research on the dynamics of bureaucracy, Allison's (1971) study of governmental action around the 1962 Cuban missile crisis, or Dalton's (1959) and Kanter's (1977) work on life within the modern corporation, to name but a few. In fact, one might well argue that case studies form the cornerstone on which modern organization theory has been built, providing rich insights into the workings of modern organizations and ample opportunities for theory building... Furthermore, case studies occupy a central role for in the curricula of most business schools, where cases are used extensively as a pedagogical tool. Case studies are attractive in the classroom because they simulate real-world experiences, allowing the students to take on the roles of specific people in specific organizations (Mauffette-Leenders, Erskine, and Leenders, 2001). Their closeness to the experience of life in organizations and their appreciation for the complexities of organizational phenomena thus makes case studies attractive to academics and practitioners alike.

On the other hand, there has been a considerable debate over the scientific nature of case studies and the ways in which they are to be conducted. This debate over the case study approach goes back to at least the 1940s. Back then—as is largely true today—the

ability of the case study to generate new ideas and thus contribute to theory development was uncontested, but controversy focused on whether the case study could be used to derive generalizable insights (e.g. Lundberg, 1941; Stouffer, 1941; Foreman, 1948). Even today the case study remains probably the least understood and least formalized methodology in the study of organizations (Ragin and Becker, 1992). Despite a number of works on the use of the case study methodology (e.g. Yin, 1981; Eisenhardt, 1989), there is still relatively little agreement on how to write a memorable and publishable case study, particularly if this involves the use of qualitative evidence (Van Maanen, 1998).

Unfortunately, the classic case studies tend to be of little help in clarifying how an exemplary case study is to be conducted and written up. Most offer no separate section on methodology at all, presenting instead the polished product without the guidelines as to how it was created. A few do offer more detailed insights into how the data was collected, how many interviews were conducted, and what sources were used, with some even offering summary tables of descriptive statistics regarding the context (e.g. Kanter, 1977). However, the hermeneutic process of inference—how all these interviews, archival records, and notes were assembled into a coherent whole, what was counted and what was discounted—remains usually in the dark. This is especially true for case studies relying primarily on qualitative field work methods. Acknowledging the fact that “there are probably as many ‘methods’ as there are fieldworkers,” Kunda entitles the methods section of his influential ethnography of life in U.S. high-tech corporation “A Confessional of Sorts”(1992: 229), while others have forcefully attacked current case study practices as essentially “free-form research where everything goes” (Maoz, 2002: 164). As a result of the questions and perhaps the mystique surrounding it, the case study

thus still presents a probably more risky research (and career) strategy, and the majority of published research on organizations tends follows a variable-oriented approach using standard statistical estimation.

In the following, I examine the logic of the case study as it applies to the study of organizations. I take the position that the case study is distinguished from other organizational research strategies by a *configurational understanding of organizational phenomena within a specific spatial and temporal context*. This configurational nature of the case study presents both an advantage and a challenge vis-à-vis other research strategies, as it raises particular methodological demands. Perhaps most importantly, many of the quantitative methods commonly used to formally examine organizational configurations—such as cluster analysis, interaction effects, and hierarchical linear modeling—are not well suited to grasping the fundamentally configurational nature of the case study approach. As I have argued elsewhere (Fiss, 2007), I will suggest that set-theoretic methods such as Qualitative Comparative Analysis (QCA) provide a viable alternative much better suited to the configurational nature of the case study approach.

I begin by discussing the nature of cases and case studies and of organizational configurations as well as how configurations may occur at the intra-organizational, organizational, supra- and inter-organizational levels, as well as across such levels. I further discuss the methods commonly used to examine organizational configurations—both qualitative and quantitative—and examine the ability of these methods to account for the configurational nature of the case study. I conclude by discussing the implications of employing QCA for both the case study methods and the theory of organizational

configurations and lay out an agenda for future research on a configurational understanding of organizational phenomena.

Of Cases and Case Studies

A serious treatment of the case study approach has to come to terms with the entity that the approach takes its name from, that is, the case. As Ragin (1992a) and others have pointed out, despite its widespread use and centrality in scientific discourse, the concept of the case is frequently not well defined and the term ‘case’ is used in a variety of different ways. Cases, for example, may be understood as theoretical constructs or as empirical units, and their relationship to the underlying phenomena may be conceptualized in a formative or reflective way (e.g. Ragin, 1992a). What complicates the situation is that many of the various definitions of cases have considerable merit on their own, making a consensus definition that is both rigorous and encompassing is hard to come by. Although the study of organizational cases shares this problem with the social sciences more broadly, this makes the challenge no less difficult.

Rather than attempting a formal definition of a case here, I will focus on the underlying aspect of cases that is most relevant to the questions at hand, namely that cases and the process of ‘casing’ delimit the real world phenomena of interest within time and space (Ragin, 1992b). In order to examine something as a case—whatever that may involve in more detail—one has to be able to identify and thus delimit the case from the multitude of phenomena and aspects that will be not be studied. This process of establishing boundaries around a phenomenon is what reduces complexity to manageable proportions and turns the potentially limitless possibilities into concrete “cases,” usually

by first defining the theoretical category of the case, narrowing it down to a subset of cases within this category, and then selecting specific empirical instances of this subset.¹ Indeed, at an abstract level, “every study is a case study because it is an analysis of social phenomena specific to time and place” (Ragin, 1992a: 2). While time and space offer intuitively appealing boundaries around a case, other conceptualizations are of course conceivable, such as cases of mechanisms (e.g. Hedström and Swedberg, 1998) or sequences (e.g. Abbot, 1992; Heise, 1989). However, time and space are usually the most commonly used dimensions, and I will simply follow that convention here.

The process of delimiting or ‘casing’ is a necessary undertaking because it goes along with a fundamentally *contextual* understanding of cases, which holds that a case combines certain characteristics or features that appear together within it and give the case its essential character. As Walton notes, “cases come wrapped in theories” (1989: 122). More specifically, cases come wrapped in theories about what matters, where boundaries ought to be set, and what may be disregarded as either unimportant or of a different kind. The process of ‘casing’ is part and parcel of the normal conduct of social science research and often disguised by the ways in which we encounter our phenomena. Much of the social world comes to us in “chunky” form, and frequently the boundaries of a case will be intuitively plausible and useful due to social convention (e.g. the nation state, an organization, a subunit, a team etc). However, it is important to remember that not everything that comes in a naturally consumable form is also best understood in that form. Frequently, social phenomena are perhaps better unwrapped, taken apart, and then reassembled in order to form a more analytically useful “case.”

¹ For an example of this process, see Ragin’s (1992) analysis of Wieviorka’s (1992) ‘casing’ as evidenced in treatment of terrorist groups as social movements.

As noted above, I will argue here that one can distinguish the case study from other organizational research strategies by its configurational understanding of organizational phenomena within a specific spatial and temporal context. As the notion of ‘casing’ implies, a case is a holistic entity. In order to understand it, we have to study it in its entirety; a mere focus on parts of the case will lead to partial insight, potentially taken out of context. The research strategy of the case study must take account of this configurational character of the case. As Eisenhardt suggests, the case study “is a research strategy which focuses on understanding the dynamics present within a single setting” (1989: 534). Instead of disaggregating the case into its features, operationalizing such features as variables, and then testing for correlations between these variables while controlling for as many other features as possible or relevant, the case study approach aims to preserve the integrity of the case and understand it as a particular configuration of features embedded in a specific context and time. This configurational nature makes problematic any research strategy that focuses on one feature while ‘controlling’ for the effect of other features. As in the classic Indian fable about the blind men examining an elephant, with each one reporting on a different part of the animal, the challenge lies in comprehending the case in its entirety rather than merely its parts.

A configurational understanding of the case also clarifies the nature of the case study. The case study is fundamentally a *research strategy*, “to be likened to an experiment, a history, or a simulation, which may be considered alternative research strategies” (Yin, 1981: 59). As Yin notes, this understanding also helps to remove the frequent confusion between the case study as a research strategy and the types of evidence used in it (e.g. qualitative vs. quantitative data) or the types of data collection

methods employed to gather this data (e.g. ethnography vs. survey collection). Because the case study approach is a research strategy that aims to maintain the configurational, holistic nature of the case or cases, it is not limited to any particular form of evidence or data collection, and it can involve single or multiple cases, various methods of data collection and several types and levels of analysis (cf. Eisenhardt, 1989). In fact, combining evidence from multiple sources, such as interviews, archival data, and surveys frequently leads to the most successful organizational case studies. An essential feature of the case study approach is therefore its propensity to foster triangulation across different data sources (Yin, 1994; Eisenhardt, 1989). Clearly not all situations and phenomena will lend themselves to a case study approach. Yet, a case study approach will frequently be a very desirable, if also demanding approach because it requires an in-depth understanding of the case rather than a superficial understanding that goes little beyond the operationalization of variables.

While the view of the case study I employ here emphasizes the configurational nature of the case as delimited in time and space, it is important to note that this view does not imply an inability to make comparisons. While the case study is a useful research strategy when engaging unique phenomena, most research on organizations is not concerned with such one-of-a-kind entities or events, but instead aims to develop an understanding of organizations that has broader implications. The case study approach thus tends to be comparative in nature, if only in the way in which observations from a case may inform knowledge about organizations and life in them more broadly by elucidating the features of a larger class of similar phenomena (Gerring, 2004). In this sense, the case study approach does frequently resemble more variable-oriented

approaches in that the researcher tends to make typological reductions. However, as Stouffer (1941) notes, the case study researcher differs from the statistician in that he can do what the variable-oriented researcher frequently cannot do, namely conduct an intensive, detailed analysis that can be adjusted during the course of the research project. The case study approach is thus more dynamic in nature, and the researchers will constantly compare theory and data in order to achieve a fit between both (Eisenhardt, 1989; Ragin, 1994).

Furthermore, since the logic of the case study is not built around average tendencies in large samples, the selection of the case or cases takes on a critical role. This selection is usually informed by theoretical, not statistical reasons (Eisenhardt, 1989). For example, Pettigrew (1990) argues that the selection of empirical sites for organizational case studies should focus on (1) extreme situations, critical incidents, and social dramas, (2) polar types that allow for stronger contrasts, and (3) sites with a relatively high experience levels of the phenomena under study, that is, the phenomenon under study should manifest itself clearly and there should be easy to access this manifestation. Case selection is of course probably the most obvious example of the process of ‘casing,’ and again points to the importance of drawing boundaries around the organizational phenomenon of interest as essential to the case study.

The Nature of Organizational Configurations

I have argued that the case study approach is unique as a research strategy in its configurational approach, that is, in its focus on the relative arrangement of parts or elements that can only be fully understood in their entirety. In order to develop these

arguments more fully and see how they apply to the study of organizations specifically, it is also necessary to clarify what is meant by a configuration and how configurational reasoning is reflected in current research on organizations. A useful starting point is offered by Meyer, Tsui, and Hinings, who define organizational configurations as “any multidimensional constellation of conceptually distinct characteristics that commonly occur together” (1993: 1175). There are two things particularly notable about this definition. First, it is empirically oriented in that it points to the presence of multiple instances of a constellation, be they across entities or time. Second, the definition emphasizes the co-occurrence of distinct characteristics, thus using commonality as a reference point, but leaving open what this commonality is based upon.

The definition of Meyer et al. thus can be used with both typological and taxonomic approaches to understanding the nature of configurations. While both approaches share the idea that a configuration is marked by some characteristic emerging from the constellation of its elements, they present different ways of arriving at this characteristic. Typological approaches of configurations are essentially reflective in that they conceive of configurations as containing an internal logic that exists independent of concrete instances and is merely reflected in the empirical manifestations. Accordingly, the typological approach is deductive and causality flows from the construct to the empirical manifestations; the empirical manifestations only take on meaning because of the construct (MacKenzie, 2003). This approach has been used very successfully in research on organizational configurations, and examples include works by Delery and Doty (1996), Doty et al. (1993) and Drazin and Van de Ven (1985). In contrast, taxonomical approaches to organizational configurations take a more inductive,

empirically based approach. Here, the construct is formative in that causality flows from the empirical manifestations to the construct; the construct does not exist independently of its manifestations. Taxonomic approaches to organizational configurations were used more often in the past and include the works of Hambrick (1984) and Miller and Friesen (1978; 1980). However, they have recently become less popular as compared to typological approaches, which are more aligned with an emphasis on theory testing.

Regardless of whether configurations are derived deductively or inductively, researchers are usually interested in identifying the specific constellation of relations between the different parts that make up the organizational configuration (McPhee and Scott Poole, 2001). Usually, the internal “logic” of such organizational configurations is one of consistency that can be achieved by a variety of mechanisms. For example, the “fit” characterizing configurations may be the result of internal, adaptive learning about how the various elements of the organization are best configured to achieve more efficient outcomes. As such, configurations are most likely to be observed where experimentation is encouraged and indeed feasible, where high levels of interdependence between different organizational elements exist, and where this interdependence is marked by complementarity, that is, if the interdependence is of such a form that engaging in one type of activity will increase returns from another one (Miller, 1990; Milgrom and Roberts, 1995). A classic example of organizational complementarity is found in manufacturing plants, where the flexibility of production equipment is related to the breadth of the product line. As Milgrom and Roberts (1995: 193) show, having more flexible production lines that can be easily switched over to a different product makes it less costly (and thus more valuable) to produce many small batches of customized

products that can be matched to customer preferences. Conversely, a diverse product portfolio increases the value of a flexible production line which does not rely on economies of scale and can be quickly shifted over, leading to less downtime while the line gets retooled. In practice, it will therefore be rare to see either flexible production equipment or a diverse product portfolio without the other; both are complements in that each increases the value of the other; as organizational components, they are “sticky.”

Complementary configurations frequently are made up of multiple components commonly found together. For instance, the modern manufacturing process tends to be marked by a number of components such as flexible machines, short production runs, highly skilled workers, horizontal communications, and targeted markets, which tend to make it quite different from the traditional, mass production system that relied specialized machinery, long production runs, low worker skills, and hierarchical controls, and mass markets (Milgrom and Roberts, 1995). While the examples I have given here come from the field of industrial manufacturing, complementarities may of course relate to any number of organizational characteristics, including the classic ones of organizational structure and environment where small, agile organizations are usually considered to perform better in turbulent environments while large, lumbering organizations tend to do better in stable environments.

Alternatively, instead of learning and fit, the logic may be based on an external, environmental selection mechanism such as organizational birth and death due to market competition. Here, some kind of mechanisms is needed to generate variation in organizational configurations, and efficiency pressures then operate to narrow down this variety into a smaller number of viable forms.

Many of the arguments regarding organizational configurations thus take on a functional logic in tying empirically observed configurations to some form of fit based on pressures towards efficiency and consistency. However, arguments relating to the emergence of configurations need not be restricted to efficiency-based responses to either internal consistency demands or external pressures on organizations. Organizational configurations may also be formed around socio-cultural or political factors. For example, Peteraf and Shanley (1997) argue that strategic groups may form around a shared identity rather than efficient forms of organizing. Alternatively, organizational configurations may reflect social logics of appropriateness that suggest certain forms of organizing as associated with specific economic activities, logics that might furthermore exhibit considerable differences, for instance across cultural contexts.

It is important to note, however, that the assumption of an internal logic to configurations may frequently be too strong. For example, particular configurations of circumstances may be the result of historical constellations following now discernable internal logic yet resulting in particular and identifiable effects. As such, functionally oriented arguments that configurations are based on a logic of consistency may not be warranted. As McPhee and Scott Poole (2001) note, the idea that a configuration reflects an underlying logic may to some extent present a problem for configurational theories, and by extension also for the case study approach. Specifically, “most configurational theories are what Althusser (1972) called 'expressive totalities'—they are supposed to be consistent because each part reflects the underlying logic of the whole” (McPhee and Scott Poole, 2001: 515). However, a good theory should question the assumption of consistency, that is, the assumption that all parts of the configuration are equally

necessary or important. For instance, one might alternatively conceive of configurations as consisting of a core and periphery, where core elements are essential while more peripheral elements are less important and perhaps expendable. Furthermore, most research on configurations emphasizes the internal consistency of the configuration's underlying logic. Yet there may frequently be inconsistencies within configurations, where "a better configuration might balance off conflicting logics, or list the necessary conditions for success and make sure that the configuration meets them"(McPhee and Scott Poole, 2001: 515).

What emerges, then, is a picture of configurations as embedded in space and time and involving varying levels of complexity, dynamism, and analysis. Simple configurations may involve only few and linear interdependencies. In contrast, complex configurations may involve multiple interdependencies that are furthermore characterized by interactions such as complementarity or substitution effects leading to synergies and trade-offs between the different elements. Furthermore, configurations need not be static, but may be dynamically changing, suggesting that organizations follow dynamic configurations that change over their life cycles (e.g. Moores and Yuen, 2001). Finally, configurations may be cutting across several levels of analysis. For example, organizational configurations may involve elements at the organizational, intra-organizational, and supra-organizational level.

While the number of conceivable organizational configurations is thus staggering, taxonomic studies of organizations have shown a relatively small number of configurations account for a relatively large share of all organizations in the samples studied (Miller 1990). This phenomenon, which is known as *limited diversity* (e.g. Ragin,

1987), presents an important issue for the study of organizational configuration. Table 1 demonstrates such a situation of limited diversity by means of a truth table—an analytical tool for listing all possible combinations of causal conditions. The truth table here lists four organizational characteristics (A, B, C, D) and one outcome (Z). Since a truth table uses binary values there are 16 possible combinations here. However, not all conceivable configurations of organizational characteristics also show empirical instances. In table 2, combinations 7, 12, 14, and 15 show a question mark in the outcome column, indicating there may be no empirical instance of this combination, indicating a situation of limited diversity.

--- Insert Table 2 about here ---

Limited diversity stems from a number of reasons. First, as Stouffer (1941) points out for configurational approaches more generally, even relatively few elements can lead to an astronomically large number of different possible complex dynamic configurations, so there will frequently be very few or no empirical instances of any particular configuration. The number of rows in a truth table is calculated as 2^k , with k indicating the number of causal conditions. For table 2, the number of possible combinations is thus 2^4 , or 16, but if one was to double the number of causal conditions to 8, the number of possible configurations would jump to 256.

Beyond the issues of manifested versus hypothetical configurations, Miller (1986) points to three reasons why there should be relatively few kinds of organizational configurations. First, competitive pressures from the environment are likely to weed out

unsustainable models, an argument that connects to the external selection perspective. Second, organizations should be drawn to certain configurations that are internally harmonious and mutually reinforcing, an argument that connects to an internal selection mechanism, usually based on experience of what works in any given context. And finally, Miller (1990) points out that organizational change tends to be non-continuous and episodic, suggesting that hybrid forms are less likely to be explored and that preference will usually be given to ideal types presenting mutually exclusive positions.

Organizations and Configurations across Levels of Analysis

While configurations lie at the heart of the case study approach, not all studies that examine organizational configurations can properly be classified as case studies. Case studies and studies of organizational configurations thus form partially overlapping sets. In the following, I examine studies from the union of those sets rather than the intersection, to provide an overview of the various forms of addressing organizational configurations either explicitly or implicitly. Configurations can occur at the intra-organizational, organizational, and the supra- and inter-organizational levels, as well as across such levels. Because of the extensive literature, it is necessary to note that the studies I use here are for the purpose of illustration rather than for providing an exhaustive overview of work on configurational thinking in organization and management studies.

Intra-Organization Level. The study of intra-organizational phenomena has been at the focus of a number of the classic case studies. Gouldner's (1954) *Patterns of Industrial*

Bureaucracy focuses almost exclusively on intra-organizational phenomena as he described three configurations of “mock,” “representative,” and “punishment-centered bureaucracy that emerge from rule creation and enforcement. Similarly, Kanter’s (1977) *Men and Women of the Corporation* examines how the power structure of a large corporation shapes both the behavior and personalities of its employees, while Dalton’s earlier (1959) *Men Who Manage* likewise focused on issues of formal and informal power relations within corporations. More recently, Kunda’s *Engineering Culture* (1991) focused on the organizational culture in the engineering department of a large American high-tech corporation. Other research has taken an even more micro-level approach, focusing on configurations at the group level such as the demographic composition of teams (e.g. Tsui & O’Reilly, 1989) and even individual-level configurations such as the fit between the individual and the organization (e.g. Chatman, 1989).

Organization Level. A considerable number of case studies as well as studies of organizational configurations more generally have focused on the organization level, and particularly the relationships between strategy, structure, and processes. Much of the literature on strategic groups operates at this level (e.g. Cool and Schendel, 1987; Dess and Davis, 1984; Ketchen et al., 1997; McNamara, Deephouse, and Luce, 2003), While many of the studies at this level have employed quantitative methods, there are also a number of case studies using mainly qualitative methods, such as work on organizational activity systems (e.g. Siggelkow, 2001; 2002) or Chandler’s (1962) *Strategy and Structure*, which examined strategic and organizational change in the United States.

Likewise, Philip Selznick's (1949) *T.V.A. and the Grass Roots* is also largely located at this level of analysis, although not exclusively.

Supra-Organization Level. A smaller number of studies have examined configurations at the inter-organizational level. Examples here include Bensaou and Venkatraman's (1995) study of interorganizational relationships in the automobile industry, or Malhotra et al.'s (2005) research on supply chain partnership configurations. Child (2002) likewise uses a configurational approach to examine 20 cases of international joint venture formation, while Dubbs et al. (2004) examine configurations at the organizational network and system level in the health care industry. At an even more macro-level, research on Business Systems and the Varieties of Capitalism approach have suggested that economic systems are likewise best understood from a configurational perspective (e.g. Hall and Soskice, 2001; Whitley, 1999) and analyzed using configurational methods (e.g. Kogut and Ragin, 2006).

Cross-Level Configurations. While the studies I have discussed so far mainly inhabit a single level of analysis, this classification is not a very rigid one, and effects located at different levels frequently impinge upon the configurations at the main level of analysis. However, a number of studies have moved towards a truly multi-level examination of configurations. For examples, Crozier's (1966) classic work on *The Bureaucratic Phenomenon* explicitly connects the bureaucratic control system to the cultural environment in which French administrative organizations are embedded. Similarly, the Miles and Snow (1978) typology of firms as Defenders, Prospectors, Analyzers, and

Reactors explicitly theorizes configurations of structure, strategy, and environment, thus spanning the organization and supra-organizational levels. Extending the Miles and Snow framework in a different direction, Moores and Yuen (2001) examine configurations of strategy, structure, leadership style, and decision making style, thus combining characteristics at the organization and individual levels.

Methodological Challenges of Organizational Case Studies

Because the case study approach is marked by a configurational understanding of organizational phenomena within a specific spatial and temporal context, it faces a particular challenge, namely analyzing and understanding complex interdependencies between various factors and causal conditions that in combination characterize the case in question. To address this challenge, a variety of different methodological approaches have been employed, each of which offers certain advantages while also carrying certain liabilities.

The most prevalent method for analyzing cases still relies on qualitative research methods such as interviews or organizational members, observation of life in organizations such as ethnography and participant observation, the use of focus groups, or the examination of various archival records regarding the organization and life around it. Such qualitative methods for the analysis of organizations are grounded in the hermeneutic tradition of the humanities (e.g. Gephart, 2004) and usually involve the researcher's inductive and interpretive treatment of the evidence (Van Maanen, 1998). The flexibility of these methods makes them very attractive for the case study approach, as they can be applied where quantification is problematic or has to be deferred until a

later point in the analysis. However, this very flexibility also presents a challenge in the generally more positivistically oriented field of organization and management studies. While there are a number of guides as to how qualitative research might proceed in a systematic manner (e.g. Emerson, Fretz, and Shaw, 1995; King, Keohane, and Verba, 1994; Miles and Huberman, 1984; Van Maanen, 1988; Yin, 1984) as well as advice on how to get this research published in top flight research journals (e.g. Gephardt, 2003; Suddaby, 2006), the typical case study still relies to a considerable extent on the persuasiveness of its narrative. While good qualitative research is systematic and disciplined, there are few agreed-on rules for drawing conclusions and verifying their robustness (Miles and Huberman, 1984). Due to this lack of standardization the analysis still largely resembles an art rather than a science, and as a result “one cannot ordinarily follow how a researcher got from 3600 pages of field notes to the final conclusions, sprinkled with vivid quotes though they may be”(Miles and Huberman, 1984: 16).

However, even the most hermeneutic of approaches has to start with observing differences and similarities and likely with either counting their commonness or assigning some weight to their importance. At the most general level, the actual analysis of the collected evidence will thus usually involve a search for similarities and dissimilarities within the data that eventually leads to empirical generalizations, usually along the lines of inquiry presented by John Stuart Mill in his *A System of Logic* (1843), and particularly as incorporated in the methods of agreement and difference (e.g. Stouffer, 1941; Ragin, 1987). Consider, for example, Eisenhardt’s (1989) influential work on how organizational researchers can employ case studies to build better theories. Eisenhardt describes two forms of analysis: that of within-case data and the search for

cross-case patterns. Among these, the analysis of within-case data presents the first step and is clearly the less formalized approach. Eisenhardt suggests that it is imperative for the researcher to become intimately familiar with the case as a stand-alone entity, for example by writing case histories, examining transcripts, or by collecting and tabulating quantitative data on a variety of relevant aspects. Whatever approach the researcher chooses, the goal of this process is to “allow the unique pattern of each case to emerge before investigators push to generalize patterns across cases”(Eisenhardt, 1989: 540). Connected to within-case analysis is the search for patterns across cases to identify similarities and differences. This analysis can take various forms, such as looking for within-group similarity and inter-group differences, examining pairs of phenomena, or comparing the evidence by data sources. Regardless of which particular form is chosen at this time, however, the general approach remains the search for agreement and difference within pattern of the evidence.

While the advantage of a purely qualitative, hermeneutic analysis of the evidence lies in its ability to provide insights that are difficult to achieve using quantitative, statistically oriented methods, the disadvantage of this approach is equally evident and in large part stems from the researcher’s cognitive limitations. Purely qualitative analysis quickly exhausts the levels of complexity in patterns it can process (e.g. Stouffer, 1941), particularly if the concepts of interest are graded rather than binary in nature. Even if our cognitive capabilities would allow us to consider the exponentially growing number of configurations that emerge quickly even from only a few binary concepts, we would still be subject to all sorts of cognitive biases, such as the tendency to search for information in a way that confirms our preconceptions (e.g. Watson, 1960) or our propensity to

neglect the base rate of events (e.g. Kahneman and Tversky, 1973). The recognition of how quickly the organizational researcher is overwhelmed by the amounts of data and how difficult it is to identify patterns and draw inferences has led to an increased usage of qualitative data analysis software packages that aim to assist the researcher in sorting, coding, and analyzing the data their data. While these software packages facilitate the process of drawing inferences and tend to make it more systematic, they present but a partial solution to the underlying problem of dealing with the complexity that configurations of factors present.

At the other end of the methodological spectrum lie quantitative methods for identifying and examining configurations. Among these, cluster analysis is probably the most popular one for distinguishing configurations, and has enjoyed a certain revival in the recent literature on organizational configurations, particularly in the field of business studies (e.g. Corso et al, 2003; Desarbo et al., 2005; Lim, Acito, and Rusetski, 2006; Malhotra et al., 2005; Uhl-Bien and Maslyn, 2003). Cluster analysis is attractive for the study of configurations because it offers various algorithms for grouping cases that share similar features into respective clusters. As an exploratory tool for the analysis of quantitative data, cluster analysis can be used to discover structures in the data without specifying a priori what those structures might be. As a result, a number of researchers have used cluster analysis to examine organizational configurations across a variety of levels of analysis (e.g. Bensaou & Venkatraman, 1995; Cool & Schendel, 1987; Dubbs et al., 2004; Hambrick, 1983; Ketchen, Thomas, and Snow, 1993; Moores and Yuen, 2001; for reviews, see e.g. Ketchen and Shook, 1997; Ketchen et al., 1997).

However, while cluster analysis allows the discovery of configurations of characteristics that commonly occur together, it also has significant weaknesses. Perhaps most importantly, the exploratory nature of cluster analysis makes it unsuitable for testing theory. While it would of course be possible to hypothesize the existence of different types of clusters before actually conducting the analysis, it is not possible to test these hypotheses because there is currently no test statistic for cluster membership. Although one might compare the results of different clustering algorithms or assess performance differences between different clusters, the basic issue remains that cluster analysis will *always* result in some clustering and there is not test statistic to guide the analysis. The fact that even with for the most part randomly distributed data some kind of cluster solution is likely to emerge has led a number of researchers to question the existence of true underlying configurations, suggesting that e.g. strategic groups may be merely statistical artifacts (e.g. Barney & Hoskisson, 1990; Hatten & Hatten, 1987; Thomas and Venkatraman, 1988).

Another problematic aspect of cluster analysis is that its assignment of cases to clusters is based on all the characteristics included regardless of the relationship between these characteristics and outcomes of interest, such as performance, reputation, deviance, or some other construct. Consider for example a situation where not all characteristics included in the analysis are in fact causally important regarding the outcome (a situation that is likely to be the rule rather than the exception). Here, cluster analysis is insensitive to the fact that some cases may be *identical* regarding a few causally important characteristics, but may be *different* along a large number of characteristics that are irrelevant. From a causal point of view, such cases belong into the same category since

they share the same causally important characteristics. However, cluster analysis would usually place them in different clusters because they differ on many (though irrelevant) characteristics. While cluster analysis thus allows the researcher to quickly determine configurations in a dataset, the nature of these configurations and the relationships between the various characteristics included remains largely unexamined. Although it is possible to use regression analysis with dummy variables for different configurations to examine the relationship between these configurations and an outcome of interest, the issue remains that these configurations need to be identified first, and the usual methods such as cluster analysis show significant weaknesses here. Furthermore, combining clustering with a correlational analysis would also not be able to examine the effect of different levels of the variables that are joined in the dummy for cluster membership and would not be able to address issues of equifinality, that is, situations where “a system can reach the same final state, from different initial conditions and by a variety of different paths” (Katz & Kahn, 1978: 30). Equifinality und thus equal effectiveness of different configurations presents an important theoretical issue for configurational thinking on organizations, and methods that cannot address this issue thus do not adequately match up with the theory (Fiss, 2007).

Similar critiques also apply to approaches using deviation scores to determine the fit between a hypothesized ideal and empirically observed configuration. While such approaches tend to be deductive in nature and thus are theoretically more attractive than the largely inductive cluster analysis, deviation score approaches hold related problems such as limited insight into the relationship between the different characteristics of the configuration and a considerable sample dependence in how profiles are derived (e.g.

Drazin and Van de Ven, 1985), thus making them quite sensitive to errors in estimating the “ideal” configuration and reliability issues (Gupta & Govindarajan, 1993).

The recognition that organizational configurations can be nested across multiple levels of analysis has led some researchers towards statistical modeling techniques that allow assessing such multi-level effects. In particular the study of educational organizations has employed hierarchical linear modeling (HLM) to take into account that the achievement of individual students also depends on effects at the school and state level, thus leading to three-level hierarchies (e.g. Raudenbusch, Fotiu, and Cheung, 1999). Similarly, HLM can be used to examine multilevel effects of organizational work groups, departments, organizations, and environments (e.g. Hoffman, 1997; Hoffman and Gavin, 1998). But while HLM presents a better methodological fit for multilevel theories of organizations and allow the testing of more complex effects, such modeling still has significant shortcomings regarding a truly configurational understanding of cases and organizations.

Specifically, as linear models, HLM equations are based on a number of assumptions that stand in contrast to configurational thinking. For instance, while configurational approaches point to nonlinear, synergistic effects that can lead to equifinal configurations, the econometric model that underlies HLM and regression methods more broadly assumes linear, additive effects that are unifinal. While ordinary regression analysis estimates one average net effect across a whole population, HLM presents an improvement as it allows the net effect to be separated into level-specific effects. However, HLM still treats different variables as competing in explaining the variation of the outcome of interest, with a focus on the unique contribution of each

variable while holding all other effects constant. In contrast, configurational thinking emphasizes that one has to consider how causes combine rather than compete to create outcomes, and that the goal should be estimating this very relationship between different parts rather than aiming to statistically control for such effects.

Interaction effects present one way to take these relationships into account and include them into the statistical model, but for all practical purposes such effects have been largely restricted to two-way interactions, as three way interactions are exceedingly hard to interpret and rarely appear in published research. Such a limitation to interaction effects between only two causal factors places an undue burden on the modeling of configurational effects that can easily include four or more relevant factors. And finally, because they estimate a single equation, regression-based models are problematic when the goal is to examine equifinal outcomes, that is, situations where there are several paths to an outcome of interest, thus blocking the empirical investigation of equifinal configurations (e.g. Gresov & Drazin, 1997; Fiss, 2007). One might consider using ANOVA or regression with dummy variables to examine the relationship between e.g. membership in a configuration and performance, but this of course does not address the main issue of how configurations and the relationships between their different characteristics were identified in the first place. A possible approach to estimating these relationships would be the use of log-linear models (e.g. Knoke and Burke, 1980), but these make no distinction between dependent and independent variables and thus cannot determine the direction of causality within an relationship. In addition, log-linear models are useful for categorical but not continuous variables, making them again rather unwieldy tools.

Some researchers have aimed to combine qualitative and quantitative analysis as a promising way to better capture the complex nature of configurations that marks case studies. For example, Siggelkow's (2002) study of the configurations of a large U.S. corporation combined in-depth qualitative interviews and the analysis of archival records with network analysis methods. By first estimating qualitatively the existence and strength of relationships between the different activities that the corporation engaged in, he was then able to use network measures to estimate the centrality or "coreness" of various organizational elements as well as identify the various patterns in the evolution of the organization. Similarly, Black and Boal (1994) suggest the use of network analysis to capture the complex interdependencies between firm resources. Treating the configuration as a network of interdependent characteristics thus offers intriguing possibilities for future case study research.

Both purely qualitative and quantitative approaches thus have considerable difficulties regarding the configurational nature of the case study. While qualitative approaches are flexible, they quickly exhaust the levels of complexity they can handle in a rigorous way. Quantitative approaches allow for the analysis of a large number of data points, but they either allow little insight into how configurations emerge or are rooted in the linear model that is frequently not useful in examining configurational arguments. As I have argued elsewhere (Fiss, 2007), this disconnect between configurational arguments and empirical methods in organization and management theory has emerged as significant hindrance to the further development of a configurational understanding of organizations. In a similar manner, the case study approach, with its configurational nature, would likewise benefit from employing more frequently a methodology better in

line with its assumptions of complex causal interdependencies. Specifically, set-theoretic methods such as Qualitative Comparative Analysis (e.g. Ragin, 1987; 2000) provide an attractive alternative here. Rooted in the comparative methods between qualitative and variable-based approaches, QCA is deeply configurational in its understanding of how causes combine to create outcomes, making it a particularly useful tool for the case study approach. QCA is able to handle considerable amounts of causal complexity while retaining the holistic quality of the phenomenon under study—two issues that are essential for the case study approach.

An Agenda for Future Research on Configurational Phenomena

The case study still presents one of the most attractive research strategies for understanding life in and around organizations. The configurational nature of the case study in particular aligns well with the configurational thinking that underlies much of management and organization theory and is typical of the social world more broadly. As I have argued, however, many of the current data analysis approaches used with a case study do not fully speak to this configurational nature of the case study approach, and the potential for significant methodological improvements along these traditional lines of inquiry seems limited at this time. However, due its configurational nature, set-theoretic methods in general and QCA in particular offer a way to conduct case study research that is both methodologically rigorous and able to offer new and different insights than traditional methods. These methods can be used in a variety of ways. For example, they can be used to analyze quantitative data on organizational structure, strategy, and the environment. However, set-theoretic methods can also be used to examine qualitative

evidence contained in the narratives that commonly accompany case studies, allowing for a more rigorous examination than is usually feasible with purely qualitative approaches. Additionally, QCA can be used as a meta-analysis tool to examine case studies. An intriguing example of this approach is Hodson and Roscigno (2004) which combines a content analysis of 204 organizational ethnographies with QCA analysis to determine the causal configurations that lead to organizational success such as employee involvement and competent management. Furthermore, while QCA can now be successfully applied to large-N analyses (e.g. Ragin and Fiss, 2007), it was originally designed to handle small-N situations, making it particularly attractive to a case study approach that requires considerable in-depth knowledge about cases and thus places certain constraints on the number of cases that can be explored in sufficient detail.

Beyond the use of tools that speak to the configurational nature of the case study, an important way forward lies with the study of configurations across levels of analysis. While a number of studies have already explored configurations reaching across the individual, organizational, and supra-organizational levels, such research is still the exception rather than the norm. Given the interconnectedness of many organizational phenomena, much more research is needed along these lines. Furthermore, such analyses need not be restricted to the traditional constructs of e.g. strategy, structure, and environment. For example, Fombrun (1989) suggests three levels of constraint that are likely to affect organizational configurations: the infrastructure of interdependencies, the sociostructure of exchange relations, and the superstructure of symbolic representations. However, while most studies have so far focused on the infrastructure of largely economic and technological interdependencies, much remains to be explored regarding

the socio-political and symbolic-cultural side of configurations. The processes creating organizational configurations operate at many levels, including competitive and evolutionary processes, but also socio-political and cultural-symbolic ones, as suggested by the institutional theory (e.g. Lounsbury and Ventresca, 2002). Industry level "recipes" about how to compete and what is successful in organizing may be powerful scripts leading to specific organizational forms that either are configurations or lead to the formation of specific configurations because of ensuing economic and technical interdependencies. Accordingly, a true understanding of organizational configurations must go beyond merely technical interdependencies to include the interaction between these and socio-political and cultural-symbolic factors.

The goal of extending case study approaches to examine phenomena across more levels of analysis and phenomena furthermore points to the fact that many organizational phenomena are essentially constituted by configurations of configurations. This phenomenon—where the whole has takes the same shape or form as its parts—is known as self-similarity in complexity theory. While some researchers have argued that organization theory has much to gain from connecting more closely to the insights of complexity theory (e.g. Brown and Eisenhardt, 1997; Levinthal, 1997; Rivkin and Siggelkow, 2003), so far these connections have not been explored in detail. Furthermore, most of the research in this vein has employed computational modeling as a research strategy, suggesting that much may be gained by connecting to more empirically oriented research such as the case study approach.

Finally, much of the research on organizational configurations has focused on static rather than dynamic configurations. Again, a case study approach can contribute

here by allowing for a more dynamic understanding of organizational configurations. Tracking configurations over time is methodological challenging, but certainly not infeasible and would significantly enhance our way of thinking about configurational phenomena in and around organizations.

References

- Abbott, Andrew. 1992. "What Do Cases Do? Some Notes on Activity in Sociological Analysis." Pp. 53-82 in C. Ragin and H. Becker, What Is a Case? Exploring the Foundations of Social Inquiry. Cambridge: Cambridge University Press.
- Allison, Graham T. 1971. Essence of decision: Explaining the Cuban missile crisis. Boston: Little, Brown.
- Barney, Jay E., and Robert E. Hoskisson. 1990. "Strategic groups: Untested assertions and research proposals." Managerial and Decision Economics, 11: 187-198.
- Bensaou, M., and N. Venkatraman. 1995. "Configurations of interorganizational relationships: A comparison between U.S. and Japanese automakers." Management Science, 41: 1471-1492.
- Black, Janice A., and Kimberly Boal. 1994. "Strategic resources: Traits, configurations and paths to sustainable competitive advantage." Strategic Management Journal, 15: 131-148.
- Blau, Peter. 1955. The Dynamics of Bureaucracy. Chicago: Chicago University Press.
- Brown, S. L., & Eisenhardt, K. M. 1997. "The Art of Continuous Change: Linking Complexity Theory and Time-paced Evolution in Relentlessly Shifting Organizations." Administrative Science Quarterly, 42: 1-34.
- Chatman, J. A. 1989. "Improving Interactional Organizational Research: A Model of Person-Organization Fit." Academy of Management Review, 14: 333-439.
- Child, John. 2002. "A Configurational Analysis of International Joint Ventures." Organization Studies, 23: 781-815.
- Cool, Karel, and Dan E. Schendel. 1987. "Strategic group formation and performance: The case of the US pharmaceutical industry, 1963-1982." Management Science, 33: 1102-1124.
- Corso, Mariano, and Antonella Martini, Luisa Pellegrini, Emilio Paolucci. 2003. "Technological and Organizational Tools for Knowledge Management: In Search of Configurations." Small Business Economics, 21: 397-408.
- Crozier, Michel. 1964. The Bureaucratic Phenomenon. London: Tavistock Publications.
- Dalton, Melville. 1959. Men Who Manage. New York: Wiley.
- Delery, J. E., and D.H. Doty. 1996. "Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions." Academy of Management Journal, 39: 802-835.

- Desarbo, Wayne S., and C. Anthony Di Benedetto, Michael Song, and Indrajit Sinha. 2005. "Revisiting the Miles and Snow Strategic Framework: Uncovering Interrelationships between Strategic Types, Capabilities, Environmental Uncertainty, and Firm Performance." Strategic Management Journal, 26: 47-74.
- Dess, Gregory G., and P.S. Davis. 1984. "Porter's (1980) generic strategies as determinants of strategic group membership and organizational performance." Academy of Management Journal, 27: 467-488.
- Doty, D. H., and W. H. Glick, G. P. Huber. 1993. "Fit, equifinality, and organizational effectiveness: A test of two configurational theories." Academy of Management Journal, 36: 1196-1250.
- Drazin, R., and A. H. Van de Ven. 1985. "Alternative forms of fit in contingency theory." Administrative Science Quarterly, 30: 514-539.
- Dubbs, Nicole L., and Gloria J. Bazzoli, Stephen M. Shortell, Peter D. Kralovec. 2004. "Reexamining Organizational Configurations: An Update, Validation, and Expansion of the Taxonomy of Health Networks and Systems." Health Services Research, 39: 207-220.
- Eisenhardt, Kathleen M. 1989. "Building Theories from Case Study Research." Academy of Management Review, 14: 532-550.
- Emerson, Robert M., and Rachel I. Fretz, Linda L. Shaw. 1995. Writing Ethnographic Fieldnotes. Chicago: University of Chicago Press.
- McNamara, Gerry, and David L. Deephouse, Rebecca A. Luce. 2003. "Competitive Positioning Within and Across Strategic Groups: The Performance of Core, Subsidiary, and Solitary Firms." Strategic Management Journal, 24:161-181.
- Fiss, Peer C. 2007. "A Set-theoretic Approach to Organizational Configurations." Academy of Management Review, in press.
- Foreman, Paul B. 1948. "The Theory of Case Studies." Social Forces, 26: 408-419.
- Gephart, Robert P. 2004. "Qualitative Research and the Academy of Management Journal." Academy of Management Journal, 47: 454-462.
- Gerring, John. 2004. "What Is a Case Study and What Is It Good for?" American Political Science Review, 98: 341-354.
- Gerring, John. 2007. Case Study Research: Principles and Practices. Cambridge: Cambridge University Press.
- Gresov, Christopher, and Robert Drazin. 1997. "Equifinality: Functional equivalence in organization design." Academy of Management Review, 22: 403-428.

- Gupta, A. K., and V. Govindarajan. 1993. "Methodological issues in testing contingency theories: An assessment of alternative approaches." Pp. 453-471 in Yuji Ijiri (Ed.), Creative and innovative approaches to the science of management. Westport, CT: Quorum Books.
- Hall, Peter A., and David Soskice (eds.). 2001. Varieties of Capitalism: The Institutional Foundations of Competitive Advantage. Oxford: Oxford University Press.
- Hambrick, Donald C. 1983. "An empirical typology of mature industrial-product environments." Academy of Management Journal, 26: 213-230.
- Hambrick, Donald C. 1984. "Taxonomic approaches to studying strategy: Some conceptual and methodological issues." Journal of Management, 10: 27-41.
- Hatten, K.J., and M.L. Hatten. 1987. "Strategic groups, asymmetrical mobility barriers and contestability." Strategic Management Journal, 8: 329-342.
- Hedström, Peter, and Richard Swedberg. 1998. Social Mechanisms: An Analytical Approach to Social Theory. Cambridge: Cambridge University Press.
- Heise, David. 1989. "Modeling Event Structures." Journal of Mathematical Sociology 14:139-169.
- Hodson, Randy, and Vincent J. Roscigno. 2004. "Organizational Success and Worker Dignity: Complementary or Contradictory?" American Journal of Sociology, 110 : 672–708.
- Hoffman, David A. 1997. "An Overview of the Logic and Rationale of Hierarchical Linear Models." Journal of Management, 23: 723-744.
- Hoffman, David A., and Mark B. Gavin. 1998. "Centering Decisions in Hierarchical Linear Models: Implications for Research in Organizations." Journal of Management, 24: 623-641.
- Kahneman, Daniel, and Amos Tversky. 1973. "On the Psychology of Prediction." Psychological Review, 80: 237-251.
- Kanter, Rosabeth M. 1977. Men and Women of the Corporation. New York: Basic Books.
- Katz, D., and R. L. Kahn. 1978. The social psychology of organizations. Second edition. New York: Wiley.
- Ketchen, David J., Combs, J. G., Russel, C. J., Shook, C., Dean, M. A., Runge, J., Lohrke, F., Naumann, S., Haptonstahl, D. E., Baker, R., Beckstein, B. A., Handlers, C., Honig, H. & Lamoureux, S. 1997. "Organizational configurations and performance: A meta-analysis." Academy of Management Journal, 40: 223-240.

- Ketchen, David J., and J. B. Thomas, C. C. Snow. 1993. "Organizational configurations and performance: A comparison of theoretical approaches." Academy of Management Journal, 36: 1278-1313.
- Ketchen, David J., and C. L. Shook. 1996. "The application of cluster analysis in strategic management research: An analysis and critique." Strategic Management Journal, 17: 441-485.
- Ketchen, David J., Combs, J. G., Russel, C. J., Shook, C., Dean, M. A., Runge, J., Lohrke, F., Naumann, S., Haptonstahl, D. E., Baker, R., Beckstein, B. A., Handlers, C., Honig, H. and Lamoureux, S. 1997. "Organizational configurations and performance: A meta-analysis." Academy of Management Journal, 40: 223-240.
- King, Gary, and Rober O Keohane, Sidney Verba. 1994. Designing Social Inquiry: Scientific Inference in Qualitative Research. Princeton, NJ: Princeton University Press.
- Knoke, David, and Peter J. Burke. 1980. Log-Linear Models. Beverly Hills, CA: Sage.
- Kogut, Bruce, and Charles C. Ragin. 2006. "Exploring complexity when diversity is limited: Institutional complementarity in theories of rule of law and national systems revisited." European Management Review, 3: 44-59.
- Kunda, Gideon. 1992. Engineering Culture: Control and Commitment in a High-Tech Corporation. Philadelphia: Temple University Press.
- Levinthal, Dan. 1997. "Adaptation on Rugged Landscapes." Management Science, 43: 34-950.
- Lim, Lewis K.S., and Frank Acito, Alexander Rusetski. 2006. "Development of archetypes of international marketing strategy." Journal of International Business Studies, 37: 499-524.
- Lounsbury, Michael, and Marc J. Ventresca. 2002. "Social Structure and Organizations Revisited." Research in the Sociology of Organizations, 19: 3-36.
- Lundberg, George A. 1941. "Case-Studies vs. Statistical Methods—An Issue Based on Misunderstanding." Sociometry, 4: 379-383.
- MacKenzie, Scott B. 2003. "The Dangers of Poor Construct Conceptualization." Journal of the Academy of Marketing Science, 31: 323-326.
- Malhotra, Arvind, and Sanjay Gosain, Omar A. El Sawy. 2005. "Absorptive Capacity Configurations in Supply Chains: Gearing for Partner-Enabled Market Knowledge Creation." MIS Quarterly, 29: 145-187.

- Maoz, Zeev. 2002. "Case Study Methodology in International Studies: From Storytelling to Hypothesis Testing." IN Frank P. Harvey and Michael Brecher (eds.), Evaluating Methodology in International Studies: Millennial Reflections on International Studies. Ann Arbor: University of Michigan Press.
- Mauffette-Leender, Louise A., and James A. Erskine, Michiel R. Leenders. 2001. Learning with Cases. Second edition. London, Ontario: Ivey Publishing.
- McPhee, Robert D., and Marshall Scott Poole. 2001. "Organizational Structures and Configurations." Pp. 503-543 in F. Jablin and L. Putnam (eds.), The New Handbook of Organizational Communication: Advances in Theory, Research, and Methods. Thousand Oaks, CA: Sage.
- Meyer, Alan D., and Anne S. Tsui, C. Robert Hinings. 1993. "Configurational approaches to organizational analysis." Academy of Management Journal, 36: 1175-1195.
- Miles, Matthew B., and Michael Huberman. 1984. Qualitative Data Analysis: A Sourcebook of New Methods. Beverly Hills, CA: Sage.
- Miles, R. E., and C. C. Snow. 1978. Organization strategy, structure, and process. New York: McGraw-Hill.
- Milgrom, P., and J. Roberts. 1995. "Complementarities and fit: Strategy, structure, and organizational change in manufacturing." Journal of Accounting and Economics, 19: 179-208.
- Mill, John Stuart. [1843] 2002. A System of Logic: Ratiocinative and Inductive. Honolulu, HI: University Press of the Pacific.
- Miller, D. 1986. "Configurations of Strategy and Structure: A Synthesis." Strategic Management Journal 7: 233-249.
- Miller, D. and P.H. Friesen. 1978. "Archetypes of strategy formulation." Management Science, 24: 921-933.
- Miller, D. and P.H. Friesen. 1980. "Archetypes of organizational transition." Administrative Science Quarterly, 25: 268-299.
- Miller, Danny. 1990. "Organizational Configurations: Cohesion, Change, and Prediction." Human Relations, 43: 771-789.
- Moores, Ken, and Susana Yuen. 2001. "Management accounting systems and organizational configurations: a life-cycle perspective." Accounting, Organizations, and Society, 26: 351-389.
- Peteraf, M. and M. Shanley. 1997. "Getting to know you: A theory of strategic group identity." Strategic Management Journal, Summer Special Issue, 18: 165-186.

- Pettigrew, Andrew. 1990. "Longitudinal Field Research on Change: Theory and Practice." Organization Science, 1: 267-292.
- Ragin, Charles C. 1987. The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies. Berkeley, CA: University of California Press.
- Ragin, Charles C. 1992a. "Introduction: Cases of 'What Is a Case?'" Pp. 1-17 in C. Ragin and H. Becker, What Is a Case? Exploring the Foundations of Social Inquiry. Cambridge: Cambridge University Press.
- Ragin, Charles C. 1992b. "'Casing' and the Process of Social Inquiry" Pp. 217-226 in C. Ragin and H. Becker, What Is a Case? Exploring the Foundations of Social Inquiry. Cambridge: Cambridge University Press.
- Ragin, Charles C. 1994. Constructing Social Research: The Unity and Diversity of Method. Thousand Oaks, CA: Pine Forge Press.
- Ragin, Charles C., and Howard S. Becker (eds.). 1992. What Is a Case? Exploring the Foundations of Social Inquiry. Cambridge: Cambridge University Press.
- Ragin, Charles C., and Peer C. Fiss. 2007. Fuzzy Set Policy Analysis. Unpublished book manuscript. University of Arizona, Tucson, Arizona.
- Raudenbush, Stephen W., and Anthony S. Bryk. 2002. Hierarchical linear models: Applications and data analysis methods. 2nd edition. Newbury Park, CA: Sage.
- Raudenbush, Stephen W., and R. P. Fotiu, Y. F. Cheong. 1999. "Synthesizing results from the trial state assessment." Journal of Educational and Behavioral Statistics, 24(4), 413-438.
- Rivkin, Jan, and Nicolaj Siggelkow. 2003. "Balancing Search and Stability: Interdependencies Among Elements of Organizational Design." Management Science, 49: 290-311.
- Selznick, Philip. 1949. T.V.A. and the Grass Roots. Berkeley, CA: University of California Press.
- Siggelkow, Nicolaj. 2001. "Change in the presence of fit: The rise, the fall, and the renaissance of Liz Claiborne." Academy of Management Journal, 49:838-857.
- Siggelkow, Nicolaj. 2002. "Evolution Towards Fit." Administrative Science Quarterly, 47: 25-159.
- Stouffer, Samuel A. 1941. "Notes on the Case-Study and the Unique Case." Sociometry, 4: 349-357.
- Suddaby, Roy. 2006. "What Grounded Theory Is Not." Academy of Management Journal, 49: 633-642.

- Thomas, H., and N. Venkatraman. 1988. "Research on strategic groups: Progress and prognosis." Journal of Management Studies, 25: 537-555.
- Tsui, Anne S., and Charles A. O'Reilly. 1989. "Beyond Simple Demographic Effects: The Importance of Relational Demography in Superior-Subordinate Dyads." Academy of Management Journal, 32: 402-423.
- Uhl-Bien, Mary, and John M. Maslyn. 2003. "Reciprocity in Manager-Subordinate Relationships: Components, Configurations, and Outcomes." Journal of Management, 29: 511-532.
- Van Maanen, John. 1988. Tales of the Field: On Writing Ethnography. Chicago: University of Chicago Press.
- Van Maanen, John. 1998. "Different Strokes: Qualitative Research in the Administrative Science Quarterly from 1956-1996." Pp. ix-xxxii in J. Van Maanen (ed.), Qualitative Studies of Organizations. Thousand Oakes, CA: Sage.
- Walton, John. 1992. "Making the Theoretical Case." Pp. 121-137 in C. Ragin and H. Becker, What Is a Case? Exploring the Foundations of Social Inquiry. Cambridge: Cambridge University Press.
- Wason, P.C. 1960. "On the failure to eliminate hypotheses in a conceptual task." Quarterly Journal of Experimental Psychology, 12: 129-140
- Wieviorka, Michel. 1992. "Case Studies: History or Sociology?" Pp. 159-172 in C. Ragin and H. Becker, What Is a Case? Exploring the Foundations of Social Inquiry. Cambridge: Cambridge University Press.
- Whitley, Richard. 1999. Divergent Capitalisms: The Social Structuring and Change of Business Systems. Oxford: Oxford University Press.
- Yin, Robert K. 1981. "The Case Study Crisis: Some Answers." Administrative Science Quarterly, 26: 58-65.
- Yin, Robert. 1984. Case Study Research: Design and Methods. Thousand Oaks, CA: Sage.

Table 1: Truth table exhibiting limited diversity

Configuration	Organizational Characteristics				Outcome
	A	B	C	D	Z
1	Yes	Yes	Yes	Yes	Yes
2	Yes	Yes	Yes	No	No
3	Yes	Yes	No	Yes	Yes
4	Yes	Yes	No	No	Yes
5	Yes	No	Yes	Yes	No
6	Yes	No	Yes	No	No
7	Yes	No	No	Yes	?
8	Yes	No	No	No	No
9	No	Yes	Yes	Yes	Yes
10	No	Yes	Yes	No	Yes
11	No	Yes	No	Yes	No
12	No	Yes	No	No	?
13	No	No	Yes	Yes	No
14	No	No	Yes	No	?
15	No	No	No	Yes	?
16	No	No	No	No	Yes