Single Cases: The What, Why and How

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Single cases have been an important methodology used by scholars to advance the field of management. Scholars have used single cases to examine a variety of complex organizational processes from corporate venturing (Burgelman, 1983) to organizational identity (Dutton & Dukerich, 1991), change (Huy, 2002) and sensemaking (Weick, 1993). Single cases have also been used at the industry level to trace the emergence of new markets (Ozcan & Santos, 2015). Despite the novel and rich theoretical insights produced from single cases, this methodology can be one of the most intimidating and challenging for organizational scholars (Yin, 2014). Researchers without proper training or familiarity in single case research may see this methodology as one to avoid, rather than one to exploit. Moreover, other than Yin (2014), there is limited work on how to conduct rigorous and systematic single case research in the management field. Hence, our motivation for this chapter is to provide scholars with a roadmap in conducting rigorous single case research by highlighting the specific choices available to scholars when using single cases, the tradeoffs to these choices, and strategies available to researchers in mitigating some of the challenges associated with single case research.

To inform our roadmap in conducting single case research, we systematically reviewed 38 single case studies published in four top management journals[1] across various management topics (organizational behavior, strategy, organizational theory) and over time, which helps capture changes in how the methodology may have evolved. Specifically, our review includes five seminal articles published before 2000, three articles published during 2000 to 2005, 14 articles published during 2006 to 2010, and 16 articles published during 2011 to 2016. We were deliberate in selecting more studies from the last five years to capture the latest in how

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[1] Academy of Management Journal, Administrative Science Quarterly, Organization Science, and Strategic Management Journal

researchers are conducting single case research. To place these 38 studies into context, a search of single or comparative case studies (i.e. two cases), or articles emphasizing the use of single cases as a methodology, yielded 104 articles during this same time period. Further, several special issues have showcased single case studies examining a variety of theoretical perspectives such as institutional theory (Suddaby, Elsbach, Greenwood, Meyer, & Zilber, 2010), culture in organizations (Weber & Dacin, 2011), and organizational processes related to change (Langley, Smallman, Tsoukas, & Van de Ven, 2013).

In the remainder of this chapter, we start by providing insight into the motivations for using single cases followed by choices regarding study design. Next, we cover topics related to field access, data collection and analysis, and conclude our chapter by discussing ways to present single case findings.

Motivation: Why single cases?

Single cases are advantageous for four main reasons. First, researchers can gain an in-depth understanding of complex organizational phenomena from a variety of perspectives over time. Second, single cases allow researchers to take advantage of unusual access to a phenomenon that may not be easily observable to outsiders. Third, the case may be an instantiation of a rare phenomenon or process for which multiple cases may not exist and the study of one case is enough to produce new theory. Therefore, the rationale for single case research should be to satisfy one of three conditions: (1) the case is an unusual phenomenon, (2) the case has not been accessible to researchers before, or (3) the case can be observed longitudinally. Corresponding to Yin's (2014) rationales for conducting single case research, these are similar to choosing a case that is "extreme" (i.e. unusual), "revelatory", or "longitudinal". Dutton & Dukerich's (1991) study on the Port Authority of New York and New Jersey, Weick's (1993) seminal study on the

Mann Gulch fire disaster of 1949, and Tripsas & Gavetti's (2000) investigation of the Polaroid Corporation are prominent examples of single case studies in management. First, these studies examined extreme cases of a particular phenomenon. The Port Authority was an unusual case of an organization responding to a highly visible and salient issue (homelessness), the Mann Gulch fire was an extreme case of organizational disintegration, while Polaroid was an unusual example of organizational inertia. Second, these cases were studied in detail over time from multiple perspectives and data sources that included several interviews and rich archival data.

A fourth reason for using single cases is to examine a phenomenon at a fine-grained level of detail that cannot be achieved through multiple cases or other methods such as large sample statistical studies. For instance, single cases are ideal for investigating complex social processes. In fact, the majority of the articles we reviewed have a strong link to organizational process research (Langley, 1999; Langley et al., 2013; Van De Ven, 1992), which largely focuses on questions examining "how and why things emerge, develop, grow, or terminate over time" (Langley et al., 2013: 1). The studies in our review emphasized four theoretical processes: (1) evolutionary change processes, i.e. the unfolding of a variety of phenomena such as how corporate venturing processes (e.g. Burgelman, 1983) or alliance negotiations (e.g. Ariño & Ring, 2010) unfold, how organizational identity changes after a merger (e.g. Clark, Gioia, Ketchen, & Thomas, 2010), or how strategy is formulated in adhocracy (e.g. Mintzberg & McHugh, 1985); (2) organizational response to external events, i.e. behaviors within organizations subsequent to specific changes in the environment such as the Port Authority of New York and New Jersey's response to rising homelessness (Dutton & Dukerich, 1991) or a team of firefighters reacting to an unpredictable wildfire (e.g. Weick, 1993), or organizational change initiatives as a result of increased industry competition (e.g. Thomas, Sargent, & Hardy, 2011); (3) work processes, i.e.

daily interactions between individuals in organizations such as brainstorming (Sutton & Hargadon, 1996), the incorporation of a new technology (e.g. Bailey, Leonardi, & Barley, 2011; Mazmanian, 2013), or achieving workplace inequality (e.g. Chan & Anteby, 2016); and finally (4) institutional field level change, i.e. the impact of interactions between individuals and organizations on a particular institutional field such as the influence of dominant actors on new market emergence (e.g. Ozcan & Santos, 2015), regulatory change by entrepreneurs (e.g. Gurses & Ozcan, 2015), or the micro-processes among diverse actors to change an institution dominated by organized crime (e.g. Vaccaro & Palazzo, 2015). As apparent from above, the majority of these studies used the organizational level as the primary unit of analysis for the processes they studied while some used the inter-organizational or institutional field level.

Relatedly, single cases allow researchers to study a complex process over a very long period of time that would not be practical through multiple cases. Tripsas & Gavetti's (2000) study on Polaroid is an exemplary longitudinal single case. The authors gained access to extensive archival data (public data and company archives) and conducted interviews with several informants throughout the firm's history. This resulted in a detailed historical examination of Polaroid from its founding in 1937 to its attempts at adapting to digital imaging technology in the late 1990s. The authors used this longitudinal case to ultimately develop theory on the interplay between a firm's capabilities, managerial beliefs, and organizational adaptation to radical technologies. At the industry level, the Ozcan and Santos (2015) single case study on mobile payments examined the longitudinal and complex process of market emergence, considering factors related to various industry players and their interaction both at global and local levels to develop theory on why market emergence at the convergence of different industries may get delayed.

Overall, single cases provide several advantages. They allow researchers to examine a previously unobservable or rare instantiation of a particular phenomenon longitudinally and at a fine-grained level of detail, which would not be feasible using multiple cases. Given these advantages, researchers should strive to select a case that fits one of three rationales of being extreme, revelatory, or longitudinal. In the next section, we discuss ways to design a single case study, with a particular emphasis on tradeoffs related to using different single case study designs.

Study Design

Once the researcher has selected a case that is either extreme, revelatory, or longitudinal, another choice for researchers is to consider whether to use an embedded versus holistic case design. An embedded case design involves examining subunits (e.g. individuals, project teams) within a larger case (e.g. department, project, company). This design choice offers two main benefits (Yin, 2014). First, researchers can examine a specific phenomenon more systematically and in more detail leveraging the replication logic that is typical of multiple cases (Eisenhardt & Graebner, 2007; Eisenhardt & Ott, this issue). Second, embedded cases can help alert researchers to potential changes in the research focus as case analysis proceeds. This can be particularly useful in alerting the researcher to different theories or literature that fits with the emerging findings, ultimately saving researchers' time and energy while leading to theory that is more grounded in the data.

Among the single case studies we examined, some studies clearly used logical subunits within their single case as part of the research design while others were less explicit in using embedded cases but collected data from different levels of analysis within the case (e.g. Beck & Plowman, 2014; Hardy & Maguire, 2010; Vuori & Huy, 2016). For the studies using some form of embedded cases, researchers identified and used a variety of sub-cases. When the single case

was at the organizational level, work teams, corporate venture projects, or functional departments were used as embedded cases (e.g. Bailey, Leonardi & Barley, 2011; Burgelman, 1983; Dutton & Dukerich, 1991; Galunic and Eisenhardt, 2001; McPherson & Sauder, 2013). For instance, in their study of organizational adaptation at Omni Corporation, Galunic and Eisenhardt (2001) embedded their single case with business units within Omni, which allowed a replication logic. If the single case was a phenomenon involving multiple organizations such as a merger or alliance, researchers used the involved organizations as embedded cases (e.g. Ariño & Ring, 2010; Clark et al., 2010; Denis, Dompierre, Langley, & Rouleau, 2011; Hoffman, 2007). Further, researchers used embedded cases at the country level if their case was the emergence of a global market (e.g. Ozcan & Santos, 2015).

The decision to use embedded cases largely depends on the nature of the case and the research question. If multiple subunits exist within the case and examining these units provides additional insight into the phenomenon of interest, then embedded cases can be advantageous. However, if the research question examines a holistic organizational level process where subunits do not add theoretical insight, or if the case doesn't have clear subunits, then a holistic case design may be more appropriate. When choosing a holistic case design, researchers should be aware of certain risks such as the analysis remaining too abstract with less specific measures or a limited ability in noticing changes to the research focus. To mitigate these risks, researchers can collect data from different levels of analysis within their case (e.g. lower level employees to upper management), which can result in more fine-grained insights into the phenomenon. For example, Vuori & Huy's (2016) study examining Nokia did not utilize embedded cases but collected data from several informants across the firm's hierarchy including individuals from top management, middle management, and engineers. The data from these informants, coupled with

extensive archival data, led to a rich framework regarding the role of shared emotions on innovation. In other words, despite the case being largely holistic in nature, the use of data from several sources and hierarchies within the firm mitigated the risks associated with holistic cases.

As a final note on study design, we find that while the advantages of a single case design and of multiple cases are more established, less has been said about comparative cases. Comparative cases are "at the sweet spot" between single and multiple case studies. The use of two cases can be advantageous as replicating the findings from one case with the other can lead to more robust and generalizable theory without too much compromise on the richness of their data. Comparative case designs have been used extensively within management (e.g. Gurses & Ozcan, 2015; Kellogg, 2011; Noda & Bower, 1996; Rindova & Kotha, 2001). They can be useful either due to the contrast between the chosen cases (e.g. Battilana & Dorado 2010; Gurses & Ozcan, 2015; Kellogg, 2011) or due to their similarity (e.g. Heinze & Weber, 2015). For instance, Gurses & Ozcan (2015) used a wide range of archival data including interview transcripts from 1940s to 1980s in order to compare and contrast how providers of two distinct technologies (over the air and cable TV) fought to establish pay TV services in the United States. Their comparison of one failed initiative (over the air pay TV) with a successful one (cable pay TV) led to robust results in how, in their endeavor to establish new products and services, entrepreneurs can mitigate resistance from industry incumbents through a set of framing and collective action strategies. On the other hand, the Heinze and Weber (2016) study used two integrative medicine (IM) programs inside large healthcare organizations to reinforce findings about how institutional intrapreneurs work to initiate logic change in highly institutionalized organizations. Regardless of whether the comparative case design is used to emphasize similarity or contrast, the selection of the two cases is an important choice for researchers. For instance, if the research setting is in a

specific industry like in the studies above, the two cases should be similar on several dimensions (e.g. time period, size, product offering, etc.) to rule out alternative explanations and to focus on the main processes of interest.

Overall, the decision to use embedded cases within a single case, a holistic single case, or comparative cases largely depends on the case itself (e.g. the presence of logical sub-units) and the research question (e.g. a holistic organizational level process). The use of embedded cases is generally more advantageous since the phenomenon can be examined in more detail and changes in research focus may be more apparent. However, holistic cases can also be approached systematically by collecting data from lower levels of analysis. Finally, comparative case designs allow direct replication of findings and potentially stronger theory. Based on the nature of a case and research focus, researchers should consider these tradeoffs when considering which design is most appropriate for their study.

Field Access

Once a study design is chosen, another challenge is obtaining field access for data collection. Within our review, 22 articles used observations as one component of data collection, but only 8 of these explicitly gave information regarding authors' field access. The commonality across these eight articles is that field access was obtained mainly by the authors' personal ties such as previous or current employment within the case setting, a research relationship or a simply personal relationship. When the researcher does not have any personal ties to key informants for the study, there are still ways to gain access. In our experience, industry conferences where key informants for the study are likely be present are great ways to meet in person and introduce one's research in order to gain access after the conference. In addition, we have found short introductory emails to key informants an effective way to approach them. The

email should provide clear links to the researcher and to the study (we recommend putting up a simple website describing the research before approaching potential informants). It should briefly describe the benefits of participation (including a report or presentation made available to the informants) and ensure anonymity both for the informants and their company, if appropriate. We also recommend not asking for more than 20-30 minutes of the informants' time for the start as a 45 or 60 minute conversation can seem very long for busy managers. Finally, suggesting a specific time to speak (i.e. "how is next Monday morning 10am?") rather than asking when they are available is an effective way to help potential informants commit to participating in the study.

During interviews with initial informants, it is important to ask the informants for introductions to their colleagues or other individuals who are knowledgeable or close to the phenomenon. This "snowballing" technique helps researchers leverage their initial contact to provide legitimacy to their follow-up introductions. Also, researchers should make sure to ask their informants if they'd be open to being contacted for follow-up questions. This helps to set expectations for future contact which can help to maintain field access as the case study proceeds and for potential future research.

Data Collection

Single case research typically requires a large amount of data since the justification of using one case is often unusual access to a level of granular detail not permitted by multiple cases. Researchers can generally collect three types of qualitative data: (1) interviews, (2) archival data, and (3) observations. While interviews with key informants are an efficient means "to gather rich, empirical data" (Eisenhardt & Graebner, 2007: 28) that capture both real-time and retrospective processes of interest, archival data can provide researchers with familiarity into the case and also serve to triangulate findings. Finally, observations allow researchers to directly

observe their case in real time. In the following sections, we provide in depth analysis on these three data sources by examining the patterns of data collection, the choices available in collecting the data, and the strategies available to researchers in mitigating potential risks associated with data collection.

a. Interviews

Interviews are one of the most important sources of data for case research (Yin, 2014) and should always be included if the opportunity exists. Depending on the research question of the single case, interviews can be more or less critical. For instance, Chan & Anteby's (2016) case study within the Transportation Security Administration (TSA) in a large urban airport focused on examining employees' experiences with task segregation, thus interviews asking employees about how they performed tasks were the most appropriate means for data collection as opposed to other data sources.

The choice of how many interviews to conduct for a single case depends on the availability of other data sources (e.g. archives). In our review, we observed that those single case studies with only a few or no interviews (e.g. Ariño & Ring, 2010; Hampel & Tracey, 2016; Maguire & Hardy, 2013; Rojas, 2010; Weick, 1993) typically had access to substantial archival data. For instance, Weick's (1993) case study on the Mann Gulch fire did not have any surviving informants yet he had access to Norman Maclean's detailed novel (Maclean, 1972) examining the incident. Similarly, Ariño & Ring (2010)'s study examining an alliance negotiation had only three interviews yet the authors had access to 150 pages of written communications surrounding the negotiations.

Conducting longitudinal interviews is highly beneficial for examining how complex processes unfold over time within one's case study. Conducting interviews with informants at

two or more points in time is not always easy as individuals may move position or it may be difficult for the researcher to convince them to speak for a second or third time. However, given the advantages particularly for process studies, researchers should attempt to conduct longitudinal interviews if the opportunity exists. When using longitudinal interviews in a study, we recommend providing clear information in the methods section about which specific informants were interviewed, how many times and how much time passed in between as interviewing only some informants multiple times or with different time gaps may lead to biases in the data.

If conducting longitudinal interviews are not an option, authors can still trace the unfolding of a phenomenon longitudinally by conducting interviews with informants close to the phenomenon and in real time. For example, Dutton & Dukerich (1991)'s study on the New York Port Authority and the growing issue of homelessness used 25 interviews. Even though these interviews were not longitudinal, data were collected as the homeless issue was still an ongoing concern for the Port Authority and with informants directly involved with the issue. Similarly, other studies without longitudinal interviews collected data on their cases as they unfolded in real time such as during an organizational change (Crossan & Berdrow, 2003; Plowman et al., 2007; Sonenshein, 2010; Thomas, Sargent, & Hardy, 2011), alliance negotiation (Ariño & Ring, 2010) or merger (Denis, Dompierre, Langley, & Rouleau, 2011), or simply to observe organizational rituals (Dacin, Munir, & Tracey, 2010) or daily work (Bailey et al., 2011).

One difference in conducting interviews for single case studies is greater customization of interview questions. Compared to multiple case research where similar questions must be asked across cases to examine similarities or differences of a phenomenon, interview questions for single cases can be customized for different informants, which can be especially useful to obtain

data on a phenomenon at different points in time and across informants. The data can be triangulated among informants in same time periods or with other data (e.g. archival data).

For conducting interviews within the single (as well as the multiple case) design, we recommend the semi-structured interviews format. A semi-structured interview implies that there are specific topics that the interviewer wants to cover in the interview but also gives the power to the interviewer to ask further questions in order to explore the views expressed by the participants (Bryman & Bell, 2015). In a semi-structured interview, the order of the questions is varied according to the flow of each interview (Bryman & Bell, 2015). To avoid informant bias, researchers can use multiple informants who are knowledgeable on the phenomenon within the single case (Miller, Cardinal, & Glick, 1997), attempt to conduct interviews as the phenomenon unfolds or has recently just occurred (Huber, 1985), and use interview techniques (e.g., "courtroom" questioning, event tracking, nondirective questioning) that are known to yield accurate information from informants (Eisenhardt, 1989).

If speaking in person or over the phone is not possible, email interviews may also be used by researchers. The disadvantage of this method is that it is time consuming because there is a time lag with sending the questions and getting the answers back and so forth (Cassell & Symon, 1994). Also, the interviewer cannot dig deeper into interesting topics that may emerge during an actual interview. On the other hand, this time delay can be advantageous as it gives both the interviewer and interviewee time to reflect on their responses (Cassell & Symon, 1994).

Finally, in order to get the most out of an interview, we recommend audio recording the interview upon getting the informant's consent. In addition, it is very important to take notes during the interviews as audio files can be corrupted or difficult to transcribe due to noise. The researcher's notes are also very useful for reconstructing the interview afterwards. Our

experience suggests that if the researcher types up the interview notes before going to sleep that evening, they can reproduce most of the interview content based on the notes, using the audio file to fill in the blanks.

b. Observations

Observations are another important source of data in single case research since they allow researchers to observe complex social and behavioral processes unfolding in real time. The choice of observational setting depends on the study's research question. Our review reveals three common settings for conducting observations for single cases: (1) meetings, (2) work interactions, and (3) conventions or conferences. While studies examining processes associated with daily work typically focused on meetings and interactions among employees (Bailey et al., 2011; McPherson & Sauder, 2013; Sonenshein, 2010; Sutton & Hargadon, 1996; Thomas et al., 2011), researchers of strategy as practice typically observed meetings among senior managers, executives, or board members (Beck & Plowman, 2014; Clark et al., 2010; Crossan & Berdrow, 2003; Denis et al., 2011; MacKay & Chia, 2013). Lastly, observations of conventions or conferences were typically used in studies examining interactions across organizations (e.g. Hardy & McGuire, 2010; Gioia, Price, Hamilton, & Thomas, 2010; Ozcan and Santos, 2015). For instance, in their study of the emergence of the global mobile payment market, observations at mobile and banking conferences worldwide were a key source to Ozcan and Santos (2015) in increasing the accuracy of their data about local and global interaction between the involved players.

c. Archival data

In addition to interviews and observations, archival data is another significant source of data for single cases. Archival data is particularly useful to familiarize researchers with their case

or to gain additional insights. Great examples are the Sonenshein (2010) study that used 115 documents of archival data to construct a 'running history' of the change process within a single retail site of a Fortune 500 retail firm undergoing strategic change. Similarly, McPherson & Sauder's (2013) study on a drug court utilized academic studies and reports to better understand how drug courts function. In addition, archival data can also help triangulate data from interviews or observations (Bailey et al., 2011; Burgelman, 1983; Vuori & Huy, 2016).

Archival data can also be used as the main source of data for analyzing a case, particularly for historical cases on which the researcher can find large amounts of archival data (e.g. books, press articles, magazines, academic articles) and where interviewing informants knowledgeable about the case may not be an option. (e.g. Hampel & Tracey, 2016; Maguire & Hardy, 2013; Mintzberg and McHugh, 1985; Rojas, 2010; Weick, 1993). In addition, it is important that the theoretical focus of the case involves examining the use of text. For example, the Maguire & Hardy (2013) study of how meanings around risk are constructed in the chemical industry in Canada appropriately used archival data on discourse, which existed in abundance for the case, as the main data source given the theoretical focus on discourse and meaning making.

Archival data can also be a great source of second hand quotes by individuals associated with the case from interviews, speeches, or even emails. This is particularly important for historical cases where informants are no longer alive (e.g. Hampel & Tracey, 2015; Rojas, 2010; Weick, 1993). If gaining access to correspondence between individuals (e.g. emails) is not an option, researchers can look for interviews in books about the case (Weick, 1993), press articles that included interviews (e.g. Danneels, 2011), video interviews (e.g. Vaccaro & Palazzo, 2015), interviews conducted for an earlier research project (MacLean & Behnam, 2010), or relevant speeches that have been recorded or transcribed (Dutton & Dukerich, 1991). Finally, blogs,

twitter feeds, and social media posts can also be a great source of second hand quotes from individuals. We recommend researchers to familiarize themselves with these new channels of communication both for contacting and collecting data from individuals.

In collecting and later analyzing large chunks of archival data, software tools such as NVivo can be quite helpful in marking specific themes within text and doing advanced searches to explore possible relationships between the themes. NVivo can manage different data formats including multimedia-based data (videos) and allow researchers to transfer their archival data as a single project file, which makes co-analyzing data much easier. In our experience, NVivo is quite a useful tool. However, it has shortcomings such as taking a long time to import large datasets and errors occurring during the transfer of files between Mac and PC computers.

Data Analysis

There are two main analytical strategies available to single case researchers for data analysis. One is to create in depth case histories, which is a straight forward way to organize a large amount of data in a descriptive fashion (Eisenhardt, 1989). Researchers can add data to a running description of their case, helping to increase familiarity with the case as data collection and analysis proceeds. Also, the emerging case history may help researchers notice gaps in data collection or potential changes in research focus. Examples of case histories include Mintzberg & McHugh (1985)'s detailed case study on the National Film Board of Canada, which identified and tracked how strategies emerged over six distinct periods from 1939 to 1975. Tripsas & Gavetti (2000)'s study on Polaroid, which examined the evolution of the firm's capabilities and managerial beliefs in a detailed case narrative starting with the early founding of the firm and then examining the firm in ten year increments from 1980 to 1998. Hoffmann (2007)'s study on alliance portfolios focused on analyzing the sequence of events underlying the development of

alliance portfolios in two business units within Siemens. Similarly, in a study on how meanings are negotiated by senior and middle managers during organizational change, Thomas et al., (2011)'s data analysis involved extracting quotes related to two key meanings in a chronological order and then tracing how negotiations over these meanings unfolded over time.

Another method is to categorize data from lower to higher levels of abstraction (Gioia, Corley, & Hamilton, 2013). This method generally involves a "1st-order analysis" where researchers develop a list of categories based on terms or phrases used by informants, a "2nd-order analysis" where researchers seek to examine potential relationships among these categories by grouping the first order categories into a smaller number of categories and finally combining the 2nd order themes into higher order theoretical dimensions. For instance, in Dacin et al., (2010)'s study on dining rituals at Cambridge, the authors first coded their interviews for words or phrases regarding the social processes within dining rituals. Then, the authors collapsed these codes into higher-level categories, which were then further collapsed into common theoretical dimensions that helped to provide a framework regarding Cambridge dining micro-rituals.

In our opinion, the case history approach to data analysis is very useful for the researcher to develop a deep understanding of the case, to fill in the gaps in the story, and to write a thorough paper. The case histories are also great for "seeing" potential future papers from the data and can be used to write them. However, as researchers typically cannot attach entire case histories to their paper during the review process, this approach makes the data less transparent to the reviewers. On the other hand, the "Gioia method" of data categorization allows the researcher to show more of the data analysis process in the final paper in the form of figures and tables, but may not allow the researcher to form as great an understanding of the data compared to building a case history from scratch. One strategy would be to combine these two analytical

methods. A simplified version of the case history can be included in the paper, thus providing researchers with familiarity of the case and showing readers a timeline of key events with theoretical relevance along with how the data were grouped into aggregate categories. Also, researchers can show where certain higher order themes were more or less prevalent throughout their case history.

Once an inductive model has been developed through one of these two approaches, researchers can utilize certain strategies to check the model's validity. In their study examining the role of shared emotions among middle and top managers in Nokia's downfall, Vuori and Huy (2016) presented their initial findings to 23 informants across the firm and sent four page summaries of the key findings to 331 top and middle managers who worked for Nokia during their study period, asking for feedback. The general feedback was that their model accurately described what unfolded in Nokia and several middle managers provided additional examples regarding shared emotions. Also, during the review process, the authors conducted follow-up interviews with informants to confirm the findings from prior interviews. Through this entire process, the authors had confirmation that their model was indeed accurate and inductively derived from the data. Similarly, McPherson & Sauder (2013)'s study on how individuals manage different institutional logics in their day-to-day work lives in a drug court presented findings to drug court personnel and met with the full court to discuss findings and observations. Thus if possible, we recommend presenting the key findings of the study to a variety of informants who can confirm, disconfirm, or suggest improvements to the model, which is considerably easier to accomplish in single case studies set in one organization compared to multiple case studies involving multiple organizations.

Presentation of the Data

The presentation of the data is critical for managing the review process. Particularly when the single case is longitudinal, the researcher is left with the choice of whether or not to present it chronologically. The chronological presentation allows the readers to follow it like a story that unfolds over time. However, as authors using this approach, we have sometimes been criticized by reviewers that the theoretical framework was too "buried" inside the story, undermining the theoretical rigor of the case. Another option is to build the story around theoretical constructs, which has the disadvantage of breaking the flow of the story. In our opinion, a good approach is to maintain the case chronology as much as possible but to put theoretical signposts within the story, which can then be integrated into a theoretical framework in the discussion section as well as in the figures. Good examples of this can be found in Gurses & Ozcan's comparative case study on the emergence of Pay TV (2015) and in Hampel & Tracey's single case on destigmatization at Thomas Cook travel agency in Victorian Britain (2016).

Another key strategy to show reviewers the richness of the data and the rigor of the analysis is the effective use of tables and figures. If the findings are distinct from one another and low in number, dedicating a table to each finding to present the strength of evidence may be a good idea. For instance, in their examination of how radical change occurs in a church over time, Plowman et al (2007) provide separate tables for the two main findings related to the initial changing organizational conditions that are the source of change and the subsequent actions that amplify change. Otherwise, a more extensive "main table" such as in Sutton & Hargadon (1996) may work better. In their main table, they present six consequences of brainstorming within IDEO with the corresponding level of support from each data source ranging from "sporadic", "moderate", to "strong" evidence. This provides readers with an overview of how the findings were triangulated among different types of data. Another strategy, which is well suited for data

that include events and longitudinal processes, is to present the data through temporal brackets identified through theoretical constructs (Langley, 1999). Mintzberg & McHugh (1985)'s study on strategy formation is a prominent example using temporal bracketing. The authors use several graphs and timelines to show different phases in each of their identified strategies over the period of their case. Similarly, the Ozcan & Gurses (2016) study on the categorization of dietary supplements divides the single case into two phases, the movement of dietary supplements to a different category, followed by the creation of an entirely new category, which is supported by timelines and figures. Finally, when using the "Gioia method", it is important to include a figure that clearly lays out how the data were categorized from first order to higher order aggregate dimensions. Clark et al (2010)'s study on organizational identity change during a merger of two hospitals does this effectively through figures showing first order concepts, second order themes, and the resultant theoretical dimensions as well as tables with representative quotes for first order concepts.

Conclusion

The future of single case methods in management is promising. For instance, single case research is heavily used in strategy within the growing strategy-as-practice perspective (e.g. Jarzabkowski & Kaplan, 2015; Jarzabkowski & Spee, 2009; Kaplan, 2008; Vaara & Whittington, 2012), which is concerned "with the doing of strategy" (Jarzabkowski & Spee, 2009: 69), i.e. the actors, their tools, and actions that shape strategy. Single case research is an important methodology for researchers in this stream, as it allows researchers to go deep within organizations to examine interactions among actors and the specific tools involved in strategy making. More broadly, single case research can also help tackle "grand challenges", i.e. societal problems that require extensive collaboration and coordination among actors and technologies

such as global hunger, poverty, or disease (Eisenhardt, Graebner, & Sonenshein, 2016), by examining the processes through which actors address and attempt to resolve these complex social problems. For instance, a case study of a community in which homelessness has been eliminated would be a worthwhile endeavor even as an extreme case.

In terms of how single case research is conducted, future research may incorporate new types of data such as video ethnography techniques and social media (e.g. blogs, twitter) to supplement traditional interview and observational data. Video ethnography can provide real time data on the interactions between individuals while social media archives can give researchers insight into evolutionary changes related to executive and firm level decisions as well as interactions between individuals regarding a phenomenon.

Single case research can also be used to expand management theory on a global scale. Recent calls have been made for management researchers to investigate neglected national and cultural contexts, such as the African continent (George, Corbishley, Khayesi, Haas, & Tihanyi, 2016) or to integrate emergent theories from Asia with existing management theories (Barkema, Chen, George, Luo, & Tsui, 2015). Single cases can enable researchers to develop a particularly detailed and nuanced view of organizations and phenomena embedded within these national contexts, which can both influence existing theories and lead to the development of new theories.

Overall, we highly recommend single case studies as a way to study complex and rare organizational processes in detail as well as longitudinally. High quality single case research can produce rich theory on organizational phenomena. They can also provide a great basis for writing teaching cases afterwards. As laid out in the chapter, there are many trade-offs that researchers face in terms of study design, data collection, analysis, and presentation of single case research. When possible, we suggest making the approach more systematic through an

embedded case design, data collection at different levels of analysis, and by emphasizing the theoretical model in the presentation through clear constructs and signposts to help researchers in the review process. Also, researchers may want to consider comparative cases to improve generalizability if feasible.

In closing, we hope that the roadmap we provided in this chapter will encourage and inspire many researchers in their pursuit of both interesting and systematic single case studies.

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Summary of Single Case Studies Reviewed for This Chapter

Study	Research question	Empirical setting	Level of analysis	Rationale for setting	Micro-process	Theoretical focus	Primary data collection
Burgelman (1983)	What is the process of internal corporate venturing?	The new venture division within a large diversified firm	Organization	Extreme case	Strategy as practice	Evolutionary change process	Real time
Mintzberg & McHugh (1985)	How is strategy formulated in adhocracy?	The National Film Board of Canada	Organization	Extreme case	Strategy as practice	Evolutionary change process	Retrospective
Dutton & Dukerich (1991)	How are organizations and their environments interrelated over time?	Port Authority of NY/NJ	Organization	Extreme case	Daily work	Organizational response to external event	Real time
Weick (1993)	Why do organizations unravel and how can they be made more resilient?	Mann Gulch fire disaster	Organization	Extreme case/access to historical data	Daily work/Strategy as practice	Organizational response to external event	Retrospective
Sutton & Hargadon (1996)	How is brainstorming used in organizations?	IDEO	Organization	Extreme case	Daily work	Work processes	Real time
Tripsas & Gavetti (2000)	How does managerial cognition influence the evolution of capabilities and thus contribute to organizational inertia?	Polaroid corporation	Organization	Extreme case/access to historical data	Strategy as practice	Evolutionary change process	Retrospective
Marginson (2002)	How do management control systems affect managers' strategic activities?	UK telecommunications firm	Organization	Extreme case	Strategy as practice	Evolutionary change process	Real time
Crossan & Berdrow (2003)	How does organizational learning explain the phenomenon of strategic renewal?	Canada Post Corporation (CPC)	Organization	Extreme case/field access	Strategy as practice	Evolutionary change process	Real time
Hoffman (2007)	What determines the configuration and evolution of the alliance portfolio?	Siemens	Organization	Extreme case/data availability/field access	Strategy as practice	Evolutionary change process	Retrospective
Plowman et al. (2007)	How do nonlinear dynamics work in organizations undergoing change?	A church that created a homeless ministry	Organization	Emergent patterns/Extreme case	Daily work	Evolutionary change process	Real time

Study	Research question	Empirical setting	Level of analysis	Rationale for setting	Micro-process	Theoretical focus	Primary data collection
Danneels (2007)	What is the process of technological competence leveraging?	A new technology developed within a chemical instrument firm	Organization	Extreme case	N/A – Strategy content	Evolutionary change process	Retrospective
Rojas (2010)	How does power influence institutional change?	1968 Third World Strike at San Francisco State College	Organization	Extreme case/access to historical data	Interactions between individuals	Organizational response to external event/ Evolutionary change process	Retrospective
Arino & Ring (2010)	How do perceptions of fairness influence alliance negotiations?	Alliance between a Spanish distributor of medical equipment and Argentinian manufacturer of chemicals	Inter-organizational	Extreme case	Interactions between individuals and organizations	Evolutionary change process	Real time
Gutierrez et al., (2010)	How do individuals retain identification with an institution while dis-identifying with organizational aspects?	Voice of the Faith (a lay organization of Catholics, organized in response to Catholic Church's sex scandal in Boston)	Organization	Extreme case	Interactions between individuals	Organizational response to external event/ Evolutionary change process	Real time
Danneels (2011)	Why are some firms able to renew themselves when environmental changes threaten their viability?	Smith Corona	Organization	Extreme case	N/A – Strategy content	Evolutionary change process	Retrospective
MacLean & Behnam (2010)	How do organizational members respond to decoupling within organizations?	A large mutual life insurance company	Organization	Extreme case	Daily work	Evolutionary change process	Retrospective
Tilcsik (2010)	How does the process preceding decoupling unfold inside organizations?	Post-Communist government agency	Organization	Extreme case/long term access	Daily work	Evolutionary change process	Real time
Clark et al., (2010)	How does organizational identity change during major organizational transformations?	The merger of two healthcare organizations	Inter-organizational	Extreme case	Strategy as practice/Interactions between individuals and organizations	Evolutionary change process	Real time
Gioia et al., (2010)	What are the processes involved in organizational identity formation?	Founding of a college within a state-university system	Organization	Extreme case	Interactions between individuals and organizations	Evolutionary change process	Retrospective

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Study	Research question	Empirical setting	Level of analysis	Rationale for setting	Micro-process	Theoretical focus	Primary data collection
Hardy & McGuire (2010)	How do new narratives emerge from discursive processes?	The UN conference that resulted in the Stockholm Convention on Persistent Organic Pollutants	Institutional field	Extreme case/data documentation	Interactions between individuals and organizations	Institutional field level change	Real time
Sonenshein (2010)	How do employees respond to managers' meaning making regarding organizational change?	A single retail site within a Fortune 500 retail company undergoing a strategic change	Organization	Extreme case/field access	Daily work	Evolutionary change process	Real time
Dacin et al., (2010)	What is the process through which institutions are maintained?	The dining hall at the University of Cambridge	Organization	Extreme case	Daily work/Interactions between individuals	Work processes	Real time
Thomas et al., (2011)	How are meanings negotiated by senior and middle managers during organizational change?	One cultural change workshop held within a telecommunications company in the UK	Organization	Extreme case	Daily work/Interactions between individuals	Organizational response to external event	Real time
Tracey et al., (2011)	What kinds of institutional work are required when institutional entrepreneurs create new organizational forms?	Social enterprise focusing on providing employment for homeless	Organization	Extreme case	Daily work/Interactions between individuals	Evolutionary change process	Retrospective
Bailey et al., (2011)	How does the use of digital technologies during work affect the coupling between employees to objects?	US automobile manufacturer	Organization	Extreme case	Daily work	Work processes	Real time
Wasserman & Frenkel (2011)	What is the role of organizational aesthetics (OA) in identity regulation?	Israeli Ministry of Foreign Affairs	Organization	Extreme case	Daily work/Interactions between individuals	Work processes	Real time
Denis et al., (2011)	What is the process behind escalating indecisions?	Large university hospital in Quebec	Organization	Emerging patterns	Strategy as practice	Evolutionary change process	Real time
Maguire &	What are the	Chemical risk assessment	Institutional field	Extreme case/field	N/A – Meaning making	Evolutionary change	Retrospective

Study	Research question	Empirical setting	Level of analysis	Rationale for setting	Micro-process	Theoretical focus	Primary data collection
Hardy (2013)	organizational processes through which products and technologies become risky?	in Canada		access	through textual analysis	process	
McPherson & Sauder (2013)	How do actors manage institutional logics in their day-to-day organizational activities?	A drug court	Organization	Extreme case	Daily work/Interactions between individuals	Work processes	Real time
Van Wijk et al. (2013)	How does collaborative work between activists and field incumbents emerge and affect the organizational field under challenge?	Outbound Tour Operators Association in Netherlands	Institutional field	Extreme case	Interactions between individuals across organizations	Institutional field level change	Real time
MacKay & Chia (2013)	How do actions interact with chance environmental circumstances in affecting organizations?	Canadian automotive firm	Organization	Emergent patterns/Extreme case	Strategy as practice	Evolutionary change process	Real time
Mazmanian (2013)	How do individuals differently use a new technology within a firm?	A mid-sized footwear and apparel company	Organization	Extreme case	Daily work/Interactions between individuals	Work processes	Real time
Beck & Plowman (2014)	How does interorganizational collaboration occur?	Columbia shuttle disaster	Inter-organizational	Extreme case	Daily work/Interactions between individuals	Evolutionary change process	Real time
Brown et al (2015)	What role does human capital play during strategic change?	Non-profit hospital in the US	Organization	Extreme case	Strategy as practice	Organizational response to external event/ Evolutionary change process	Retrospective
Vaccaro & Palazzo (2015)	How can institutional change succeed in environments dominated by organized crime?	Anti-Mafia organization in Sicily, Italy	Organization	Extreme case/field access	Interactions between individuals across organizations	Institutional field level change	Real time
Hampel & Tracey (2016)	How does an organization remove stigma and become legitimate?	Cook's travel agency - Victorian Britain	Organization	Extreme case	Interaction between organization and external audience	Evolutionary change process	Retrospective

Study	Research question	Empirical setting	Level of analysis	Rationale for setting	Micro-process	Theoretical focus	Primary data collection
Vuori & Huy (2016)	How do emotions and bounded rationality influence the innovation process?	Nokia	Organization	Extreme case	Strategy as practice	Evolutionary change process	Retrospective
Chan & Anteby (2016)	How does task segregation lead to workplace inequality in job quality?	TSA	Organization	Example of an "intensity case" - phenomenon is present but not present in an unusual manner	Daily work	Work processes	Real time