The Pennsylvania State University

The Graduate School

Department of Learning and Performance Systems

UNINTENDED OUTCOMES OF LEADERSHIP SENSEMAKING IN A CONTINUOUSLY RECONFIGURED BUSINESS MODEL CHANGE INITIATIVE

A Dissertation in Workforce Education and Development

by

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Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

August 2017
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ABSTRACT

The purpose of this study was to explore the ambiguity created by the continuous reconfiguration of a business model change initiative, the sensemaking perspective (Weick 1995, 2005) of organizational leaders in response to that ambiguity, and any unintended outcomes resulting from those sensemaking activities. To accomplish these research objectives, a single case study was conducted with a small technology firm during a period of intense and continuous reconfiguration of its business model in response to market feedback collected from a series of industry trade shows. Data collection included interview data, office documents related to the change effort, bi-weekly information requests, and public communications including website descriptions and press releases. The data yielded descriptions of ambiguity created by the continuous reconfiguration of the business model change effort, of the sensemaking activities undertake by leadership in the face of ambiguity, and of the unintended change outcomes traceable to the leaders’ sensemaking. The data contributed to the researcher’s findings that the continuous reconfiguration of the organizational change effort did contribute to ambiguity, and that ambiguity did have an effect on the implementation of the change, prompting some unintended outcomes. These findings are relevant to business model change literature that recommends continuous reconfiguration to deal with rapidly changing markets, and will be useful to workforce education and development researchers and practitioners in broadening their understanding of organization change in relevant contexts.
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ACKNOWLEDGEMENTS

Many thanks to my husband and family for their patience and support throughout this process. I am also very grateful for all those who assisted with this study, especially Dr. Rothwell, committee chair, Dr. Maureen Jones, methodologist, and committee members, Drs. Kolb, Donahue and Yoder.
Chapter 1

Introduction

The business model emerged rather recently as a dedicated unit of analysis in organization science literature, with its prevalence in the literature growing by 89% between 1995 and 2000, as compared to the previous nineteen years, 1975 to 1994 (Zott & Amit, 2011). Researchers’ interest in business models peaked as the internet gained prevalence as a venue for commerce and organizations faced pressure to change their business models to incorporate new “e-commerce” strategies (Zott & Amit, 2011).

Although the need for business model change is not new, the rapid advance of internet and other technologies has both created new opportunities and led to a proliferation of risk from substitute products and new delivery channels, which has generally trimmed the lifespan of business models across many industries and requiring companies not only to change, but to change continuously.

A look back across the past 20 years suggests that changing the business model is very important, but not at all easy. Blockbuster Video, for example, which once operated 9,000 video stores, has been left with fewer than 50 (Atler, 2014) after failing to change their brick and mortar business model in response to Netflix very successful move toward a subscription mail service. Another household name, Eastman Kodak, which once dominated the photography industry, was driven to declare bankruptcy in 2001 after others in the photography industry better executed the shift toward digital photography and quickly rendered Kodak’s print film business model irrelevant (Cohen, 2011).
History suggests that the ability to successfully implement changes to the business model can spell the difference between success and failure for organizations, regardless of their history of success.

One of the challenges noted in the existing literature is that planning and decision-making are often hindered during business model change initiatives because leaders often have little expertise or experience with the new business model (Chesbrough, 2007). Chesbrough (2010) suggested that organizations maintain agility throughout the business model change process to enable mid-course corrections if they recognized a misjudgment. Chesbrough (2007, 2010) surmised that changing course quickly would enable organizations to right their “wrong” decisions as they proceeded through the implementation of the change effort. Similar concepts have been noted by other researchers, including experimentation at the product level, whereby companies conduct “low-cost probes” of the market before committing to a new concept (Brown & Eisenhardt, 1997, p. 1) and continuous reconfiguration of the business model, where “change is embedded into normal routines” and is conceptualized as “deprioritization”, rather than “chopping off” of initiatives (McGrath, 2013, p. 13). Notably, neither the experimentation nor the continuous reconfiguration literature directly addresses the effect that continuous reconfiguration has on the overall business model change effort.

Rather, the literature has most often addressed business model change with a focus on where “right” versus “wrong” decisions have been made, based on an external economic performance perspective, without specific attention to the change effort itself. Coined by the literature as the “cognitive perspective”, these studies evaluate the accuracy of decisions. Questions have been raised by these cognitive researchers,
though, about the actual process of interpretation that managers must undertake to make and then act on a decision (Cavalacate, Kesting & Ulhøi, 2011), because sometimes even having the “right” knowledge and making the “right” decisions lead organizations to undesired outcomes. This was arguably the case with Kodak, which actually patented the first digital camera, but was unable to capitalize on this technology because, although the company had invested in the development of that next generation technology, it failed to bring the digital camera to market out of fear of cannibalizing their existing print film-based business model (Estrin, 2015).

Additionally, when the business model changes, shared expectations, routines and knowledge bases – or organizational paradigms - are disrupted and individuals throughout the organization must interpret the change and negotiate new meanings and routines to function effectively in the new direction. Some researchers have called for additional research into how relevant paradigms are shifted in organizations (Aspara, Lamberg, Laukia, & Tikkanen, 2013), particularly in the case of business model change which effects multiple organizational paradigms. These organizational paradigms – or agreed-upon ways of operating – enable the members of the organization to establish work patterns, and when organizations implement change, these paradigms must change as well. Paradigm shifts are important to understand because it is these shared organizational paradigms that individuals draw from to determine how to work together where there are interdependencies (Balogun, 2006), and changing the business model almost always change how units within the organization work together (Chesborough, 2010).
The Problem

Researchers have noted both the importance and the particular challenge of changing a business model, and have recommended that organizations maintain agility throughout business model change initiatives, making mid-course corrections to the change effort when necessary. The researcher’s own experience, however, has suggested this agility or continuous reconfiguration of a fundamental change effort, regardless of the accuracy from a cognitive or economic perspective, may contribute to unintended outcomes in implementing the change. These unintended outcomes, which contribute inconsistencies in implementing the overall change effort, may be traceable back to how the mid-course corrections were interpreted and acted upon by the organization’s leadership and fed into the research interest of this study.

This insight was drawn from an ongoing case study with a small technology development company which pivoted from engineering services to a market-driven product-based business model. The case study was initiated with no a priori theories, except for the presumption that business model change was uniquely challenging, and interviews were conducted with leaders of the organization with the primary question being simply, “why is it so difficult to change a business model?” (Spencer, 2013). These interviews began with the company’s Chief Executive Officer (CEO) in the fall of 2013, expanded to include the company’s department heads in the winter of 2013, and a second round of interviews was conducted in the fall of 2014. Some responses tracked known challenges, like the fear of failure and identification with existing roles and routines. However, threaded throughout the data was a new idea: an observation by the
CEO that “organizational turbulence” had been created throughout the organization because middle managers were implementing the change in their departments “at different velocities and to different degrees” (confidential participant, personal communication, October 11, 2014). Interviews with the rest of the company’s leadership revealed that the goals and parameters of the change effort were often “tweaked” during management meetings, and the leaders shared an assumption that the implementation would continue to evolve. This shared interpretation seemed to have contributed to a “wait and see” approach to implementing change directives, and this study describes how the “continuous reconfiguration” approach to change resulted in unintended outcomes which contributed to the “turbulence” noted by the company’s CEO.

Although the business model change literature offered no research specific to this phenomenon – the unintended outcomes of leaders’ need to continually interpret and adapt to continuous reconfiguration of the business model change implementation – an extensive review of the literature yielded Weick’s (1995, 2005) sensemaking perspective, which was recognized as a framework through which to describe leaderships’ efforts to “make sense” of the continuous reconfiguration of the business model change initiative, and to track related unintended change outcomes of that sensemaking (Balogun & Johnson 2004, 2005; Balogun 2006). Specifically, Weick’s sensemaking perspective provides a framework for the study of individuals’ interpretation of ambiguity with a focus on the creation and alignment of meaning into shared paradigms within an organization. Sensemaking has been utilized by other researchers to analyze the interpretations that change recipients engaged in to “make sense” of ambiguity during organization change. A subset of this research used sensemaking perspective as a
framework to effectively trace managers’ interpretations and connect them with associated change-related outcomes. The outcomes of sensemaking can be either conducive or counteractive to the overall change effort, with the counteractive being coined by the literature as unintended outcomes (Balogun, 2006).

It appeared from the case study data that the case organization’s leaders interpreted the “tweaks” made to the business model change initiative to be an indication that other elements of the plan may change - resulting in a great deal of ambiguity regarding next steps - though this emergent theory required additional investigation. Sensemaking perspective provided an appropriate means through which to study this phenomenon because of its focus on the interpretation of ambiguity, rather than on the accuracy of decision making, as has been the focus of most of the business model change literature to date. Sensemaking perspective provided a means to describe leaderships’ interpretation of the ambiguity created by continuous reconfiguration of the change effort, which was necessary to describe the processes the organization had to go through to implement a “moving target”, and to detail the related unintended change outcomes.

Although no research was found directly related to the central phenomenon, the review of literature yielded some research which provided context for the need for reconfiguration of plans during a business model change effort, including Gunther McGrath’s (2010, 2013) work on “continuous reconfiguration” and Brown and Eisenhardt’s (1997) work on “continuous change/improvisation”. Although their work was primarily focused on continuous change and experimentation at the product level, Brown and Eisenhardt offered that organizations which continuously update their product offerings will “eventually transform themselves” (p. 2). Chesbrough (2010) noted that,
when companies innovate at the product level, they also must change their business models to address any mismatch between the existing business model and the nature of new technology (including competitive strategy, target customers, distribution, etc.). Gunther McGrath’s study of 5,000 organizations revealed that the most successful companies were the ones for which change was “evolutionary” (p. 22), where change is ongoing and “part of the normal routine” (p. 18). Although she does not address the how-to, she summed her research by noting, “the leadership and management challenge is thus maintaining an organizational system that can manage the complementary forces of innovation and stability” (p. 23).

This literature was reviewed to provide context and to serve as evidence that organizations face real pressure to change their business model, and that business model change initiatives are likely to evolve for several reasons. A review of the sensemaking literature served as the basis for the literature review to establish the opportunity it represents as a new and important lens through which to study business model change, based on the case study organization observations, and based on the need for additional research noted by others studying business model change.

**Significance of the Study**

Chesbrough (2007) remarked that, “no great business model lives forever” (p. 15), noting that, although business model change is difficult, it is often made necessary by competitive pressures and other market forces. Implementing change in organizations is notoriously difficult, however, and organizational change efforts are plagued by failure.
Burke (2011) reported that as many as 70% of organization change efforts fail, with “failure” defined as, “…not attaining the goals for change or accomplishing change but the attainment does not last” (p. 152). It is worth noting that these failures are not limited to small, weak or generally unsuccessful organizations. A study by the Shell Corporation measured the decline of Fortune 500 companies - the 500 most profitable companies in a given year - and found that in the span of 13 years, 33% of the companies not only fallen out of the prestigious Fortune 500 list, but had gone out of business altogether (Morris, 2009). According to Morris, many of these defunct companies perished after failing to respond to competitive pressures with timely and appropriate changes to their organizations and operations, which begs the question - what difficulties could be so perilous as to be insurmountable by the Fortune 500?

There is a significant body of literature dedicated to the general facilitation of change in organizations, but relatively little dedicated to analyzing the particular complexities of changing the business model, or the specific unintended outcomes related to implementing a business model change while the goals and parameters continue changing. To date, the majority of business model change research is focused in two primary areas: on the difficulties of divesting of existing business infrastructure (Chesbrough, 2007; Chesbrough, 2010; Koen & Bertels, 2011; Zott & Amit, 2011), and on the effect of leaders’ existing knowledge on awareness and interpretation of current and future data (Bettis & Prahalad, 1995; Chesbrough, 2010). To date, none of the literature has examined how the recommended agility in a business model change effort was interpreted by change recipients in continuous reconfiguration scenarios, and whether the interpretation is conducive or counteracting to the desired change outcomes.
Citing the persistent failure of organization change efforts, Burke (2011) has called for innovation in the understanding of these initiatives. He referenced the field of Organization Development (OD) in particular, noting that the need for new approaches for facilitating change in modern organizations, which tend to be more decentralized than the organizations that traditional OD theories and approaches were designed for. Burke advocated for qualitative discovery and careful translation of previously unexamined issues that may improve aid in the facilitation of change. Schein (1996) has also acknowledged a gap in the understanding of the complexities of organization change and has similarly challenged researchers and practitioners to observe organizations as they navigate change efforts, paying close attention to sub-cultures and assumptions which have yet to be explored.

**Purpose of this Study**

The purpose of this study was to follow-up on data that emerged from earlier engagements with the case study organization and analyze in greater detail an observation that continuous reconfiguration of the case organization’s business model change initiative led to unintended change outcomes, possibly related to the leaders’ shared attempts to make sense of the frequent midcourse corrections in the ongoing change effort. To study and describe the phenomenon, the case study organization was re-visited and Weick’s (1995, 2005) sensemaking perspective was used as a framework through which to explore leaderships’ interpretation of the continuous reconfiguration of the
business model change initiative, and to track their responses and related unintended outcomes.

A description of this phenomenon, with a focus on unintended outcomes, adds a new dimension to the business model change research, especially with respect to the recommendations regarding continuous reconfiguration during change efforts. The literature has presented evidence that many business model change implementations are subject to change, so it is important for scholars and practitioners to understand how to balance the need to define the details of the change effort (which does not necessarily imply “planned change”) against the need to make mid-course corrections to change efforts based on new information and changes in the operating environment.

Data for this study was collected from the case study organizations’ physical place of business (and from relevant electronic communications), and participants were selected based on the Chief Executive Officer’s (CEO’s) identification of those leaders – company vice presidents and department heads - that would be most directly affected by the continuous reconfiguration of the organization’s business model during the study period. A “business model change effort” was generally defined as a fundamental change in the way the company realizes economic benefit for its products and services, though the change may be limited to a single aspect of the business model (for example, offering an existing product/service through a new delivery channel). The “change effort” or “implementation” (used synonymously for the purposes of this analysis) refers to the actions and activities designed to move the organizations’ operations from their pre-change state toward the state deemed necessary to realize economic value from the proposed change to the business model.
This study was not an intervention and therefore was not designed to aid in the facilitation of the business model change effort. Also, although the case study analysis includes some contextual information about other organization change issues (including group consensus for change, executive decision-making, interpreting market data relating to the change, etc.), these issues are not the focus of the analysis and details are provided only insomuch as they add to the richness of description of the central phenomenon. The intention of this study was to develop a description of the sensemaking activities prompted by continuous reconfiguration in a business model change initiative in hopes of opening a new dialog regarding this phenomenon within its larger context: the literature suggests that business model change initiatives are likely to be changed during implementation, and the changes – even if they are associated with “right” decisions - may contribute to unintended outcomes.

**Research Questions**

To describe the unintended outcomes of middle manager sensemaking during a business model change initiative, the following research questions were proposed:

1. What ambiguity does continuous reconfiguration create within the context of the overall change effort?

2. How do leaders’ sensemaking activities (bracketing, retrospective interpretation of ambiguity, alignment of shared interpretations and action on the interpretations) affect the implementation of the business model change effort?
3. How has this sensemaking resulted in unintended change outcomes?

(‘Unintended’ per the judgement of the researcher and confirmation from participants during member-checking.)

Chapter Summary

Business model change efforts often require that organizations maintain agility throughout implementation to enable midcourse corrections when necessary (Chesbrough, 2010). Gunther McGrath (2010, 2013) noted the comparative success of organizations that pursue “continuous reconfiguration”, though she notes the management challenge of balancing stability and change. An ongoing case study conducted with a small technology development organization yielded data which suggested that continuous reconfiguration of their business model change effort may have to interpret the changes as evidence that the entire business model change initiative was subject to change, contributing to an unintended of a “wait and see” approach to implementing the new business model. This study was designed to follow-up on that observation utilizing Weick’s sensemaking perspective as a means through which to study how leaders “made sense” of the continuous reconfigurations of the business model change effort, and to describe related unintended outcomes of that sensemaking.
Chapter 2

Review of Related Literature

This chapter reviews the literature which shaped this study’s design and research questions. The path to this literature began with a search for publications directly related to the central phenomenon: the unintended change outcomes related to the continuous reconfiguration of a business model change implementation. No directly related literature was found, which prompted the researcher to reframe the problem so it could be properly anchored in a vein of existing research.

An extensive review of literature yielded Weick’s (1995) sensemaking perspective, which provided a framework through which to understand the central phenomenon as the process by which the organization’s leadership “made sense” of ambiguity in the change effort with the interpretation that the stated goals and parameters of the change effort were subject to change. The sensemaking literature lent a critical framework to the study and helped shape the research interest in the organizational ambiguity created by continuous reconfiguration of a business model change implementation and the unintended change outcomes that result from leadership’s efforts to “make sense” of that ambiguity.

Sensemaking literature, as it relates to organization change, spans the disciplines of OD, strategy and business administration and provides a framework for understanding the interpretation of and response to ambiguous events in organizations – like the ambiguity created when the goals and parameters of a fundamental change effort change throughout its implementation. Sensemaking is not a methodology, but rather a tool for
analysis which is particularly valuable for studying organizations when the research interest has to do with the interplay between interpretation, action, and the organizational interdependencies affected by ambiguity and interpretation (Werkman, 2010).

A subset of business model change literature was also reviewed to provide context for the study. As noted in the literature, changing an organization’s business model has proven to be uniquely challenging, in part because organizational leaders may not have experience or expertise directly relevant to the new business model (Chesbrough, 2007), which increases reliance on interpretation (as opposed to established knowledge). The review of literature also includes a summary of researchers’ recommendation that organizations remain “agile” throughout the change initiative, making mid-course corrections throughout the implementation when more accurate information comes to light (Chesbrough, 2010, Gunther McGrath, 2013). The relative accuracy of decision making has been studied by cognitive researchers, typically measured in terms of economic performance, but even this literature calls for greater insights into the process of interpretation that prompts action (Aspara et al., 2013).

**Sensemaking Perspective**

This section introduces Weick’s sensemaking perspective and details the relevant empirical research. The review briefly summarizes sensemaking’s foundation in social construction of meaning as prompted by ambiguity which disrupts normal routines, sensemaking perspective’s assumptions, namely the connection of the abstract to the concrete and the connection of interpretation to action, and the use of sensemaking
perspective as a tool for analysis in organization studies. Limitations and areas for future development are also detailed, noting specifically that the specific retrospective nature of sensemaking perspective.

**History and philosophical foundations**

Weick (1995, 2005) popularized the concept of “sensemaking” to integrate his earlier works (Mills, 2010) and in his own words, "sensemaking involves the ongoing retrospective development of plausible images that rationalize what people are doing" (Weick et al., 2005, p. 409). Weick’s 1995 book, *Sensemaking in Organizations*, was written from the viewpoint that reality is socially constructed, meaning that people’s perception became their reality (p. 67). Sensemaking has “…its genesis in disruptive ambiguity, its beginnings in acts of noticing and bracketing, its mixture of retrospect and prospect, its reliance on presumptions to guide action, its embedding in interdependence, and its culmination in articulation that shades into acting thinkingly” (Weick, 1995, p. 413). Practically speaking, sensemaking typically occurs in times of ambiguity when the selection of a plausible explanation is necessary to inform the action that will restore expected patterns (Weick et al., 2005, p. 414). Weick et al. (2005) noted that the “loss of sense” which prompts sensemaking comes from a range of organizational contexts including major upsets, troubling upsets (regardless of magnitude), and unfamiliar scenarios. The loss of sense can also prompt sensemaking in small and gradual ways, as is the case during the typical course of operating within an organization.
Weick (1995) specifies that the process of sensemaking is retrospective, where individuals interpret and assign meaning to something that has already happened. Weick’s sensemaking framework assumes that interpretation leads to related action, a point which is key to his framework because the action and its results become part of a feedback process that informs the ongoing process of interpretation. Although sensemaking is about the “interplay of action and interpretation” (Weick et al., 2005, p. 409), and not about the end evaluation and choice, Weick made the case that “rewards” related to sensemaking interpretations can create a sort of “self-fulfilling prophecy” through which the sensemakers’ belief that their perception is a fact becomes a logical reality is reinforced.

In a 2005 publication written to refresh the concept of sensemaking after ten years of use in the literature, Weick et al. (2005) reiterates that sensemaking in organizations is initiated when patterns were interrupted and actors must assign a “reasonable explanation” to the interruption in order to resume action (p. 409). The authors also reinforced the key point that, although sensemaking implies resulting action, the focus is on interpreting then acting, and not necessarily on the interpretation or action. In this way, sensemaking allow for better accounting of the effect of context on interpretations, rather than assessing the final conclusion solely as a “right” or “wrong” choice made by the decision maker.

Communication (formal, informal, spoken and observed behavior) is key to Weick’s conceptualization of sensemaking. In keeping with his perspective of socially constructed reality, Weick (1995) defined communication in terms of cues and frames of reference, which underscores the significance of local context to the meaning of
communications. The organizational reality, then, is constructed out of the shared meanings held by its members, and meaning is created by situating new information into existing paradigms, with the existing paradigms fluctuate based on new information. Weick notes the particular value of communication where there are points of ambiguity, as sensemaking may aid in the refreshment and alignment of organizational paradigms and help situate new information in the shared frame of reference.

Weick’s conceptualization of sensemaking within organizations recognizes the power that each change recipient has over the implementation of a change effort. Any perceptions that organization change is “controlled from above” misjudges the direct impact that sensemaking – in terms of change recipient interpretation, assignment of meaning and the development of shared paradigms – has on change-related action and behavior. Specifically, sensemaking underlies the development and stability of organizationally-relevant schemata – or mental models – which serve as the reference point against which individuals compare experiences when they assess and assign meaning. When ambiguity in the organization has prompted sensemaking, established schemata are both referenced and updated according to the new alignment of interpretations (Weick et al, 2005). This entire process is socially constructed based on the alignment of meaning by members of the organization, and change mandates and directives are only one element of the context used to construct reality.
Assumptions

The sensemaking perspective presumes the connection of the abstract and the concrete (Weick et al., 2005, p. 411). Sensemaking is not a passive or purely cognitive exercise—it presumes action pursuant to translating and meaning-making. In the case of the nurse’s sensemaking, she took her observations to the resident on duty and communicated her concern. Her concerns—based on her interpretation and assignment of meaning—would be tested against the reality of the baby’s condition. In this (and other ways), the relevant sensemaking of the baby’s symptoms and possible health complication occurred beyond the single nurse and included the medical resident and other medical staff alerted by the concerned nurse.

Sensemaking perspective presumes that the nature of shared paradigms is “radial” and “plastic”, meaning that the shared paradigms have many “peripheral instances”, and it is the drifting of the whole toward a periphery that can shift the entire radial paradigm (Weick et al., 2005, p. 411). The authors describe this as “acting thinkingly”, and within the healthcare example, this idea references the fact that medical professionals used trusted frameworks to interpret events, but because there are ongoing advances in medical knowledge and understanding, those same medical professionals also routinely reject once-trusted frameworks. “What this means is that in medical work, as in all work, people face evolving disorder. There are truths of the moment that change, develop, and take shape through time” (2005, p. 412).

Talk as a form of communication is important in sensemaking when it contributes to a “…continual, iteratively developed, shared understanding of the diagnosis and the
persuasive talk that leads to enlistment in action” (Weick et al., 2005, p. 413). The authors note that sensemaking is ongoing, and therefore, talk and action are considered to be cyclical and represent equal value in the sensemaking process. Talk is important to the development and alignment of interpretations, and as such, the authors suggest that organizational events are “talked into existence” (2005 p. 413) and persist in the social structure of the organization. In addition to “talking things into existence”, verbal communications can make tacit knowledge more explicit when the communicator is able to talk in ways that are symbolically relevant to listeners. Sensemaking is also described as a democratic process where the 'weight' of a vote - relative to the voter's power in the organization - may result in more influence on interpretation (2005, p. 417). The authors note that, although the aforementioned nurse notified a medical resident and fellow of her concerns, emergency attention was given to the infant only after another nurse went to the attending physician with the first nurse’s observation and compared the baby’s condition to that of another similarly symptomatic baby that had required emergency surgery just three weeks earlier. In this example, knowing who to communicate with and “what button to push” was key to stimulating desired movement within the organization.

**Studying Change in Organizations**

When using sensemaking perspective as a means through which to study change in organizations, Weick et al. (2005) notes the importance of two primary questions: 1) what constitutes an ambiguous event and 2) what does that event mean within the local context (2005, p. 410)? The authors note that, “students of sensemaking understand that
the order in organizational life comes just as much from the subtle, the small, the relational, the oral…as it does from the conspicuous, the large, the substantive, the written, the general, and the sustained” (2005, p. 410), implying that what type/level event constitutes “ambiguity” and the need for interpretation will vary by organization, according to its socially constructed reality.

To demonstrate the concept, the authors present a segment of descriptive data from an interview with a nurse and detailed her sensemaking process when a premature baby exhibited a subtle but potentially serious change in vital statistics. Weick et al. (2005) noted the nurse’s ability to pick up on “clusters of things that go wrong” (p. 411) in the midst of the overall buzz of constant activity of the hospital setting. Within the flurry of her normal routine, the nurse “noticed and bracketed” possible signs of trouble because the symptoms she noticed occurred outside of her expectation regarding the baby’s vital signs. She was able to notice and bracketed this event because of mental models that served as a point of reference that these symptoms may be indicative of a health complication. By differentiating the “events” that were unexpected and labeling them according to a plausible explanation, the nurse created meaning for the differences she noted in the baby between her rounds to check on him. This illustrates a key concept of sensemaking – that interpretation and sensemaking is retrospective. In the case of the example data, the authors simplify it this way: “how can I know what I’m seeing until I see what it was?” (2005, p. 411).
**Sensemaking as an Analytic Tool**

Sensemaking perspective emphasizes process over outcome, and some of its earliest applications involved analysis of crisis situations where the interpretation of situational ambiguity was of particular analytic interest (Mills, 2010). Weick applied the sensemaking perspective analysis of the Tenerife air disaster – the deadliest accident in aviation history (“Tenerife airport disaster”, 2016) – and revealed how decisions that appeared to be “right”, based on individuals’ interpretation of ambiguity, ultimately contributed to the crash of two aircrafts (Weick, 1990). Weick’s analysis demonstrated that even small misinterpretations can lead to “system breakdowns” and catastrophic outcomes (Mills, 2010). In the case of the Tenerife air disaster, a brief series of ambiguous communications between a pilot and air traffic control led the pilot to interpret he was clear for takeoff while air traffic controllers understood that the pilot was parked on the runway, awaiting further instructions, resulting in a runway collision that killed nearly 600 people (Weick, 1990).

Werkman (2010) proposed sensemaking perspective as a tool to modernize OD’s approaches to facilitating change, suggesting it may be a tool for participatory development of “new mindsets, construction of social meanings and agreements” (p. 424). Werkman conducted a mix-methods study with a police department which was reorganizing its emergency response system. His research demonstrates sensemaking perspective as an effective way to help members of the organization communicate effectively about both the need for change, as well as any resistance to change. He found that “feeding back” the relevant interpretations of both management and the officers
helped “break the pattern” (2010, p. 435) of what had been a forceful top-down approach to change, noting that the change approach had created some of the resistance on behalf of the officers, but also that management interpreted the resistance as a reason to hold fast to the top-down approach. Werkman suggested that sensemaking perspective is a tool that OD scholars and practitioners may use to help make change participants’ assumptions and beliefs more explicit, thereby aiding in change-related communications.

Weick (2012) notes the importance of storytelling in sensemaking, as well as the value of narratives to sensemaking analysis. The interpretation that occurs during sensemaking typically involves lateral communications between members of an organization, and stories are an important means through which ambiguous events are “labeled and categorized” (2012, p. 142). Weick notes the stories told by individuals in organizations have a dramatic effect on organization change efforts, suggesting that organizations can only change “in the direction of the dominant story” (2012, p. 143).

An organization’s dominant story serves as the reference point against which ambiguity is referenced and it informs the process of interpretation, based on the organizational paradigms. When challenged to act in the context of ambiguity, individuals use stories as the basis for logic to rationalize and justify their actions, and in justifying their actions, they are making sense of the ambiguity (2012, p. 145). Weick cites Langley and Tsoukas (2010, p. 13) and their study of jazz as a metaphor for sensemaking, suggesting that change recipients “reconstitute the evolving present” by retrospectively weaving recent history into an organization’s dominant story (Langley & Tsoukas, 2010, p. 149). Shared and stable narratives in organizations help to bind characters, events and expectations as “the story” continues to unfold.
Landau and Drori (2008) focus on the potential of storytelling to help create new narratives when crisis or change disrupts the former workings of an organization. From a sensemaking perspective, the creation of a new narrative is fundamental to helping the organization respond cohesively when routines are disrupted. The authors note that, although much sensemaking research focuses on interpretation as a positive process based on shared views and agreement among members of the organization, productive sensemaking can also occur through conflict (2008, p. 701). Landau and Dori conducted an ethnographic study with an Israeli federal research and development facility that was struggling to change its mission from basic research to market-driven technology commercialization in the wake of budget shortfalls. The researchers noted a significant ideological divide between management and tenured scientists, and an evaluation of their sensemaking activities through this period of crisis and change revealed that, although they never came to an ideological agreement regarding the change, they were able to move ahead with cohesive action when the two sides worked through a shared interpretation of survival of the organization. Management admitted that survival was a blurry concept, but in making that blurry concept the major theme of the change effort, the scientists felt they had enough room for interpretation to cling to their ideological paradigms about the importance of basic science, while still shifting some of their focus toward generating economic returns through their work. The researchers concluded that sensemaking need not always be focused on shared interpretations, but rather can also be experienced in terms of cohesive action when a “vague” change directive allows for disparate ideologies to exist, but to move forward in the desired direction.
Beyond the aforementioned applications in organizational effectiveness and change, sensemaking perspective has also been used in healthcare research as a tool to study how physicians’ approach to diagnosis and treatment changes as advances in medical knowledge require changes to “trusted frameworks” (Weick et al., 2005), as well as to study patients’ interpretation of self-care directives with respect to managing chronic diseases (Mamykina, Smaldone & Bakken, 2015). Other researchers have used sensemaking to study the social construction of identity within organizations (Gioia & Thomas, 1996). These applications of sensemaking perspective, outside of the study of organization change and effectiveness, were deemed to be beyond the scope of this review.

**Unintended Outcomes of Middle Manager Sensemaking**

A small subset of research has developed with a specific focus on the unintended outcomes that result from sensemaking activities. The following studies evaluate the sensemaking of middle managers in particular, noting that they are both change recipients and change implementers. Middle managers are also of particular interest in the following analyses because many of the details of the change effort must be worked out “on the front lines”, where middle managers operationalize strategic directives into operation within their departments and address process interdependencies affected by the change initiative. Although the following studies do not specifically address this study’s central phenomenon or the context of business model change, they do offer important precedent with respect to the research questions, methodology and data analysis.
Anonco Study. Balogun and Johnson (2005) conducted a longitudinal single case study of strategic change in an organization with a specific focus on “the social processes of interaction” of middle managers in response to a planned change intervention. The authors note that organization change is an “unpredictable” process and that the sensemaking activities of change recipients – who are also the implementers of the change effort – often contribute to unintended outcomes (2005, p. 1).

In the Anonco case, a “recently privatized” utility split one of its departments into three units and given district managers for executive and change leadership. The authors chose middle managers as the focus of this study because of their role in change implementation, and because their contributions to organization change have not yet been sufficiently researched (Balogun & Johnson, 2005, p. 5). Data was collected from middle-managers in the form of diaries over the course of 11 months, including impressions of problems, successes, significant events, rumors and anticipated problems (2005, p. 5), and regular contact between researchers and participants was also maintained via phone calls and site visits.

First-order and second-order analysis – an inductive theory development approach – was utilized to capture the mangers’ interpretation of the change initiative, events impacting the implementation of the change, and the ultimate outcome (Balogun & Johnson, 2005, p.7). The authors constructed a “change narrative” by using the diary accounts and coded the diary data and organized codes into categories which suggest “complex patterns of interaction between the different change interventions and events and the existing organizational context leading to both the counteracting and the congruent change consequences” (2005, p. 7). The resulting code categories outlined intended
outcomes related to new structures and contracts, as well as unintended outcomes in the form of intra-departmental tensions, questions about contracts, turf battles and the presumption that the change would never materialize, meaning a continuation of business as usual (2005, p 12).

Second-order analysis – where change effort interpretations were mapped with change effort outcomes – resulted in the identification of themes including social processes of interaction, old schemata, sensemaking triggers, designed change goals and interventions, the behavior of others within the organization, and emergent schemata (Balogun & Johnson, 2005, p. 15). Together, these themes comprise the sensemaking process of Anonco’s middle managers.

In terms of unintended outcomes, Balogun and Johnson (2005) note that even in planned change efforts, where the plans, goals and strategies are handed down from higher levels of the organization, middle managers are known to have a significant impact on the ultimate implementation of the change effort because of their role in interpreting and acting on the strategies and directives. The change-related formal and informal interactions and communications between middle managers contributed to the construction of a shared paradigm relative to the change, and the related process of interpretation and alignment of interpretation turned the planned change “into an emergent and unpredictable process” (2005, p. 2). In their study of Anonco, the authors found evidence of unintended outcomes in both the first and second order analysis, including a new dependency on job contracts to specify the division of labor and “turf battles” where there used to be inter-unit collaboration, the conceptualization of “black holes” where change recipients wanted detailed information, and new negative feelings...
about the organization’s structure. (Note: the authors make note of where “design flaws” in the planned change effort contributed to the eventual unintended outcomes, but because they also noted the sensemaking associated with the flawed design, they do not distinguish between unintended outcomes that inside/outside of the context of a design flaw.)

Balogun and Johnson (2005) noted the role that sensemaking plays in organization change through the influence that interpretation has on the implementation of a change plan. Their findings caused the authors to “question the feasibility of top-down control of change programmes”, suggesting instead that organizations manage change by facilitating the development of aligned interpretations counteractive to the desired change by focusing on “clarity of purpose, expected outcomes and boundary conditions” (p. 24). By relying instead on top-down planning and control of organization change efforts, organizations risk unintended outcomes as a result of sensemaking that is counteractive to the change effort.

Utilco Study. Balogun (2006) conducted a case study analysis of a utility company, Utilco, which implanted a fundamental organization change effort in response to regulatory changes in the industry during the 1990s. Balogun’s research focused on middle managers from across divisions and tracked the progress of a corporate restructuring over the course of approximately one year. Data was collected from 26 participating middle managers via interviews, brief “check-in” phone calls, diary entries (analyzed bi-weekly early in the change, then monthly), and a focus group conducted at the conclusion of the research. Change related documentation (2006, p. 34), including handouts and information provided during meetings, was also reviewed.
Balogun (2006) concluded that existing schemata, social interaction and emergent change all impacted the roll-out of the change plan, leading to both intended and unintended change outcomes. She noted that the need for individuals to rely on sensemaking is higher during times of organization change, when routines are disrupted, and that the preexisting ideas that change recipients had about change efforts impacted how they made sense of this change. She noted middle manager sensemaking as an explanation for specific unintended outcomes, noting that expectations regarding culture and roles persisted through the development of new change-based interpretations of culture and roles, despite the fact these expectations and roles were some of the targets of the change effort, by taking into account the fact that change recipients refer to existing schema when faced with ambiguity. Although schema are subject to change in response to new interpretations (and shifting alignment of interpretations), they tend to move ‘radially’, shifting toward a periphery rather than being completely reconstructed each time the parameters of the schema change (Weick et al., 2005).

Balogun (2006) makes a key observation with respect to sensemaking in the context of an organization change effort: “change recipients edit senior management plans” (p.30). The author notes that process of making sense of a change effort was influenced not only by the formal communication of a change plan, but also by how the “change recipients” interpret and assign meaning to the fundamental change the organization is making (this includes the plan and the new direction and reasoning for making a change). In other words, the change plan itself is only part of the equation with respect to sensemaking; interpretation of the plan, and the eventual alignment of interpretations will also shape the trajectory of behavior and implantation of change. As
such, according to Balogun, informal communications were as impactful as formal communications (2006, p. 46).

Balogun (2006) also notes that sensemaking occurred both vertically and laterally for middle-managers as they interpreted the message from senior management and negotiated the meaning with their departments. In her research, though, she found that the most significant communication related to the change effort was the lateral sharing of information between change recipients (including rumors and gossip), not the formal, vertical communications from senior leadership. She found that although formal communications transmitted information, the shared meaning was generated through informal communications (2006, p. 41), meaning that communications are more than “information transfer”; they become the foundation for knowledge generation.

Notably, sensemaking occurs not only with stated communications, but also where there were gaps in communication. It is unrealistic that a planned change can account for all details, and as a result, the details become subject to interpretation by the change recipients. Balogun (2006) notes that organizations risk unintended consequences when they employ planned change strategies, “honest communication about the uncertainties facing an organization, for example, may be interpreted as the senior managers not having clear plans” (2006, p. 30). When organization change is dictated from the top down, the “change recipients” rely on sense-making to interpret and assign meaning to the directives, and Balogun’s research suggested that the assigned meanings included a combination of intended and unintended interpretations. Balogun's study demonstrates change implementation is an “interpretive process” (2006, p. 40), noting again that the results of a planned change - whether anticipated or unanticipated - are not
the result of management control, but rather of change recipient sensemaking (either consistent with or contrary to management's intentions).

The need for change recipients to rely on sensemaking to ‘fill in the gaps’ with respect to the planned change effort resulted in several phenomenon, including negotiating between departments to determine how needs would be satisfied in the changed organization. For example, customer service and engineering departments had to negotiate how customer complains specific to engineering issues would be directed (Balogun, 2006) and whether the new organization culture was one of doing favors for other departments, or working according to set contracts (Balogun, 2006). Her research uncovered an unintended outcome here in the form of inter-departmental tension resulting from the new contractual assignment of responsibilities between departments, which replaced a more ad-hoc “I’ll help you, you help me” working relationship (2006, p. 37).

Likewise, the process of aligning interpretations requires “a two-way process of sharing and negotiating interpretations through many different communication genre” (Balogun, 2006, p. 43). In the author’s view, this means that even in the case of top-down change efforts, the change itself occurs from the bottom-up because the implementers that enact the change interpret and make sense of the change directives. Participatory change efforts don't just stimulate buy-in and reduce resistance; they offer greater opportunity for alignment of interpretations throughout the organization.

Significance for the study of unintended outcomes. The Anonco and Utilco case studies offered empirical evidence of the unintended outcomes that may result from middle manager sensemaking during an organization change initiative. The authors
noted the effect that social construction of meaning can have on the implementation of an organization change plan, prompting them to suggest that change cannot be directed from the top-down, but rather will be created by from the bottom-up by change recipients and their interpretation of change imperatives and the change process. In order to best facilitate change in organizations, the authors recommend that change initiatives be designed with the goal of aligning interpretations around intended outcomes, allowing members of the organization to participate in the interpretation of the path to the desired change, rather than by developing specific plans for change to be delivered formally and vertically (but which will then be subject to lateral, informal interpretation by change recipients).

**Sensemaking Limitations and Future Development**

Although Weick’s sensemaking perspective has been widely cited and only lightly critiqued, its use in various organizational situations has not yet been broadly researched or written about (Sandberg & Tsoukas, 2014). Weick et al. (2005) note the broad applicability of sensemaking and the multitude of research applications it could be applied to and suggested that “almost any kind of work is likely to enhance our understanding of a largely invisible, taken-for-granted social process that is woven into communication and activity” (p. 417).

Sandberg and Tsoukas (2014) postulated that the “underrepresentation” of the sensemaking perspective in empirical research suggests “conceptual challenges” and make the case that a re-evaluation of the elements and assumptions would broaden its
research applicability. The authors note that, as of 2013, only 147 sensemaking perspective articles could be found in Organization Studies literature (including the *Academy of Management Journal, Administrative Science Quarterly, Human Relations, Journal of Management, Journal of Management Studies, Journal of Organizational Behavior, Organization, Organization Science, and Organization Studies*), with most of those articles applied to the study of “strategy and change” and “organizational crises and accidents” (p. S10). In pointing out the limited use of sensemaking in empirical research, the authors note that the typical research context had been limited to evaluation of specific sensemaking processes and outcomes occurring after specific events, ambiguous in nature, occurring within a defined situational context (2014, p. S16). Sandberg and Tsoukas argue that the use of sensemaking could be expanded if it could be applied prospectively, was presented with a more thorough explanation of process, exemplified in larger organizational contexts, and expanded the view of “reality” beyond that of “subjective understanding” (2014, p. 15). The authors also note the “tension” created by the foundational principle that sensemaking is prompted by “distinct episodes”, but yet is defined as an “ongoing process” (2014, p. S22).

Sandberg and Tsoukas (2015) suggest that future sensemaking research can also widen the scope by focusing more equally on all three of the perspective’s fundamental elements – creation, interpretation and enactment – rather than primarily on interpretation (p. S22), though without a focus on differentiating between them because they are part of a singular process. Additionally, the authors cite the work of several other scholars that note that sensemaking may require some adaptation to equally relevant in virtual environments (2015, p. 23).
**Business Model Change**

This subset of business model change literature was reviewed to provide an introduction to the business model as a unit of analysis, differentiate “sensemaking” from “cognition” in the study of business model change, and to introduce the prevailing theories detailing the reasons that business model change efforts are subject to change. The need for additional research is also justified by researchers that noted gaps in the literature with respect to events that may prompt the re-alignment of shared schemata, which this study describes through the framework of the sensemaking perspective.

**The Business Model as a Unit of Analysis**

Interest in the business model as a unit of analysis has grown steadily in recent years, but researchers do not necessarily share one definition (Zott, Amit, & Massa, 2011). Rather, the inquiries have been ‘silenced’ and focused in three primary areas which represent aspects of business model or business model change: e-commerce, strategy and innovation/technology (Zott et al., 2011). To sum up the “state of the art” for business model research, the authors examined top-ranked journals in management and organization science from 1975 through 2009 for articles containing the term ‘business model’ in the title or key words, but the initial search of 11 top journals yielded only 70 articles (the majority of which came from the practitioner journals). The study was expanded to the 1,300 business journals that were part of EBSCO Host in 2011 and the search terms expanded to seek ‘business model’ in the abstract and title and keywords. The expanded search resulted in 1,202 articles (19 of which were already represented in
the first search) for a total of 1,253 articles meeting the search criterion. After
eliminating articles that made an insignificant reference to “business model”, or were
focused on environmental conditions (outside of the firm), limiting the results to those
journals ranked in the IS Web of Knowledge, adding relevant books and white papers on
the subject, the authors’ search yielded 103 total publications.

Zott et al. (2011) found that, although the concept of the business model is not
new, it represents a growing focus in contemporary literature. A previous scan of the
literature for the term ‘business model’ revealed an 89% increase in prevalence of the
term in the 1995 - 2000 timeframe, over the period of 1975 – 1994. A large share of the
references were dedicated to “electronic commerce business models”, a growing
opportunity during the research period, as well as structures, linkages, performance,
capabilities, sustainability, and innovation. The literature on linkages and innovation, the
two categories most likely to be related to this research, focused on parallel topics of
departmental interdependences and opportunities and barriers to innovation. With
respect to barriers to business model innovation, the authors note the “cognitive inability
of managers to understand the value potential of the new business model” and note the
recommended techniques of “experimentation” and “flexibility” so that leaders can “learn
actively at multiple levels and engage conflict” (Zott et al., 2011, p. 1033).

Chesbrough (2007) offers a general guide to the functions of a business model,
noting its role as the identification of an organization’s value proposition, market
segment, value chain, approach to monetization, place in the distribution channel, and
competitive strategy. He also noted various levels of sophistication in business models,
spanning from commodity (price-based) to models designed to be highly tuned to
changes in technology platforms and consumer preferences, with the latter being the most
dependent on successful business model change for organizational survival.

**Differentiating Sensemaking from Cognition**

A small body of literature has developed dedicated to managerial cognition during
business model transformation, and while the literature on cognition is parallel in its
focus on managers’ influence on meaning-making activities in organizations, the two
fields differ in that the primary focus in the research on cognition is on the ultimate
meaning created, whereas the sensemaking perspective literature focuses instead on the
process of arriving at a perceived meaning. Aspara et al. (2013) define “managerial
cognition” as the “frame of beliefs and logic” that go along with the “how” things get
done (p. 460). Specifically, “unit managers’ perceived logic of how the unit in question
functions and creates value, in connection with both its market environment, and within
the corporation” (2013, p. 460). In this way, changing the business model requires
“changing the perceived logic of how value is created” (2013, p. 460). Weick et al.
(2005) specified that while the research on cognition is focused on the meaning
developed by actors in an organization, sensemaking is focused on the process by which
the actors in the organization arrive at “equivalent” interpretations that allow for action
(p. 418). In sensemaking, the actual meaning assigned to events is less important than the
process (recognition, interpretation and enactment) used to arrive at a socially constructed
reality.
Despite the distinctions between the perspectives, though, the business model/managerial cognition literature does speak to the need for additional research, such as is possible with the sensemaking perspective. Cavalacate et al. (2011) noted the need for additional research on the triggers or events that “drive an agent away from existing routines towards a search for alternatives” (p. 1337), noting the value of understanding what prompts members of the organization to change existing patterns without resistance or inertia. This study’s use of the sensemaking perspective will examine the ambiguous events that lead to bracketing (Weick 1995, Weick et al., 2005) and track the shifting of radial paradigms (Weick et al., 2005) as frameworks are updated based on new interpretations.

**Business Models as Subject to Change**

A variety of internal and external forces put pressure on organizations to change, and sometimes what begins as a product-level change necessitates changes to the business model in order to maintain alignment between the organization's value proposition and its markets and distribution channels, etc. Brown and Eisenhardt (1997) focused primarily on improvisation at the product level and studied organizations’ efforts to create a product while simultaneously adapting to changes in the environment (p. 15). The authors studied continuous change in the computer industry between 1993 and 1995, a time when the organization was generally undergoing rapid change because the growing popularity of the internet as well as growth in media and personal communications devices, which created new opportunities and competition for the
The authors’ findings were counter to previous thinking that the flexibility of an organization’s structure was directly and positively related to the organization’s ability to innovate. Instead, the authors found that a mix of very directive priorities and communication with great flexibility in the design process was most supportive of successful product innovation in the organizations studied (1997, p. 10). In other words, the authors noted that priority-driven, not process-driven, companies had the most successful product portfolios. Interviewees noted that markets often change quickly and new priorities emerge during development, requiring mid-project adjustments that may be counter to a pre-established ‘process’ (1997, p. 14).

Although not specific to business model change, Brown and Eisenhardt’s (1997) research into continuous product innovation arguably laid some foundation for subsequent work exploring improvisation in larger scale change initiatives like a business model change effort. It does not address, however, how ambiguity perceived by change recipient/change implementers contributed to the less successful product launches (similar to the realization of unintended outcomes).

As noted in Brown and Eisenhardt’s work, advancements in technology are a common trigger for business model change, as the advancement of technology often changes the value proposition and/or distribution channel of an organization’s offerings (Chesbrough, 2010). Chesborough notes Clay Christensen’s summary of disruptive innovation, in which new offerings either create entirely new markets or disrupt the value chain of existing markets, and suggests that the resulting mismatch between the existing business model and the nature of new technology requires organizations to change their business model in order to reap the economic benefits of their new offerings.
Once business model change has been initiated, though, the change effort itself may be subject to change as an organization’s leadership receives feedback from the market and other sources. Chesborough (2010) identifies a ‘cognitive barrier’ in which successful organizations filter out information that does not fit the framework used by the firm to create its current value streams. This work builds on Prehalad and Bettis’s (1995) concept of dominant logic, in which actionable information is filtered out of all of the available environmental data with existing knowledge acting as a ‘filter’ that determines what information is collected and what information is ignored. The authors postulate that managers exist in an information-rich but interpretation-poor environment where data and actionable knowledge are confused. Although this filtering approach does help organizations zero in on critical information as they refine value propositions, the filtering may cause them to miss other relevant information. Both Bettis and Prahalad and Chesbrough suggest this issue may contribute to the difficulty that many organizations have in executing change, even when leadership is aware of fluctuations in the environment that may necessitate it.

The literature reviewed in the following sections build on these foundational principles - the advancement of technology as a trigger for business model change, and the “information poor” perspective from which most organizational leaders have to lead when a business model change initiative takes the organization away from its “dominant logic” – as evidence that business model change initiatives are likely to change throughout the course of their implementation. Relevant literature (Chesbrough, 2010, Gunther McGrath, 2010, 2013) has tended to respond to these foundational principles with the recommendation that organizations remain agile throughout their change
initiatives, changing course when technology advances or feedback from the environment clarifies details of the new strategy. This study’s findings will add to this literature, as well as the sensemaking literature, because of its focus on sensemaking in the context of a business model change initiative that evolves over the course of implementation.

**Continuous Reconfiguration**

Gunther McGrath (2010) notes the value of thinking in terms of “business models” rather than “core competencies” in terms of value creation because business models help companies conceptualize their offerings from the external perspective. In other words, it is not the offerings themselves, but rather the consumers’ valuing of the offerings that is important. This distinction is important because it highlights the need for organizations to keep pace with customer preferences as markets evolve, and McGrath makes the case that learning and experimentation are important to remaining relevant as the competitive environment changes. Additionally, the author suggests that an organization’s business model itself will “evolve and mature” (p. 249) as the leadership experiments and gains proficiency with the organization’s competitive strategy.

Gunther McGrath (2010) provides examples of “evolving” business models, noting Cemex, a cement company, whose offers value to customers with specialized delivery options (p. 250). Although the company’s tangible goods haven’t changed, the business model evolved based on customer preferences and their competitive strategy is based primarily around their services, not just their goods. Dell similarly differentiated itself – while still selling the same basic product – by building its computers to order.
Gunther McGrath uses Dell again to illustrate her point about change, however, noting that Dell’s once-profitable differentiation efforts became irrelevant as consumer preferences shifted toward product and service solutions that were difficult for the hardware giant to adapt to (p. 252). As changing conditions render an old business mode irrelevant, however, opportunities for few business models emerge.

The use of Dell as an example is an important one because it makes the point that the need to refresh or change a business model is not limited to small or generally unsuccessful organizations. Nor is the need for experimentation in evolving markets where the “rules” have not yet been established for easy reference. Gunther McGrath makes this point by referencing “Moore’s Law” (2010, p. 253), which notes pricing anomalies in the computer industry (rather than prices trending upward, the price of electronics has generally trended downward). In new or fluctuating markets it can be impossible for companies to have knowledge about the best course to take, so “experimentation” (2010, p. 254) is often necessary to move ahead while the path is still being blazed.

Gunther McGrath’s (2010) points are salient and offer a complimentary view to Chesbrough’s (2010) observations regarding the “filtered worldview” in which organizations’ interpretation of available data are filtered through the lens of their previous experience – and especially by the institutionalization of what knowledge has contributed to their past success. These two viewpoints span a broad spectrum of circumstances regarding the need for business model change, whether the market is new and the rules haven’t been established yet, as well as in markets where a great deal of data are available but the interpretation of that data into actionable information is
unwittingly filtered by the lens of the organization’s existing way of doing business. That broad applicability to organizations and the general lack of research directly related to the effect of the inherent ambiguities of this type of experimentation lend significance to this study.

Gunther McGrath (2013) builds on her 2010 work with an empirical analysis of 5,000 companies, noting that the organizations most able to adapt to the transient-advantage economy “embed change in their normal routines”, and that “change” was defined within the organization as a “shift”, rather than McGrath noted that, “the interesting thing about how these companies exited areas is that they followed a far more evolutionary path than their competitors” (p. 21), which meant that, functionally, profit centers weren’t “chopped off”, but rather de-prioritized and the leadership re-purposed.

Stability and flexibility are a “paradoxical combination” and Gunther McGrath (2013) notes that change tended to be “evolutionary” and the actual changes “modest” in the companies she studied. Consistent with other researchers, McGrath recommends that “continuous change” is best accomplished with a predominant focus on priorities (like corporate values), rather than on a set plan for change (p. 22). This approach to business model change, while desirable from the standpoint of flexibility and experimentation, requires that the organization navigate considerable ambiguity and continually seek balance between retrospection (existing knowledge) and the interpretation of new data into actionable information.

McGrath (2013) makes the case that stability actually enables evolution, insomuch as when some things remain stable (ex: culture), the members of the organization feel safer and more empowered to experiment. Gunther McGrath also
suggests that continuous small changes may prevent the need for more radical changes because the organization has kept itself more current with the market fluctuations (2013, p. 22). That observation, however, did not go so far as to address ambiguity and mix of retrospection and interpretation necessary to act during experimentation, though the point about stability within the context of experimentation was noted in preparation for this research with respect to analysis of the effect of continuous reconfiguration on leadershps’ assessment of the likelihood of reconfiguration of elements throughout the organization.

McGrath sums up her 2013 research with a statement about the need for balance between stability and innovation, “The leadership and management challenge is thus maintaining an organizational system that can manage the complementary forces of innovation and stability” (p. 23). Her call for experimentation and innovation within change initiatives underscores the importance of understanding how the recipients and implementers of change make sense of the demand to balance flexibility with stability.

**Conceptual Framework**

Merriam (1998) notes that, although “qualitative research is designed to inductively build rather than to test concepts, hypotheses, and theories” (p. 44), qualitative researchers still start with a framework reflective of their ontology or worldview. This framework represents the ‘assumptions, expectations, beliefs and theories – and their presumed relationships – that direct one’s research’ (Miles & Huberman, 1994). Conceptual frameworks scope and direct research interests and
provide a jumping-off-point for the investigation, based on what the researcher thinks is happening, and why.

The conceptual framework of this study draws from the pragmatic and constructivist ontologies, assuming that knowledge is “created” by the knowers and influenced by existing knowledge and past experience. Corbin and Strauss (2008) note the connection between the constructivist ontology and research methodology, explaining that existing knowledge prompts action, and action results in the creation of new knowledge. As such, this study recognizes the role of the researcher (Creswell, 2013) in describing the phenomenon under evaluation, and takes a constructivist perspective on the phenomenon itself.

Within the constructivist framework, the study leverages Weick’s sensemaking perspective as a tool for tracking the social construction of shared schema related as it relates to the ambiguity associated with changes to a business model change effort. A significant subset of the business model change literature promotes experimentation as a means through which to stay current with market trends and demands, but the sensemaking literature reveals the potential for unintended outcomes where ambiguity needs to be translated by change recipients. This study draws from both perspectives and is designed to describe the sensemaking process associated with evolution in the business model change process in order to characterize the sense of ambiguity created and the need for interpretation by change recipients.
Chapter Summary

Researchers have recommended that organizations approach business model change initiatives with “agility” in order to allow for mid-course corrections as necessitated by the continued advancement of technology, and/or feedback from the market that improves the accuracy of relevant decision-making. Weick’s sensemaking perspective, which is useful for the study of the process through which members of an organization interpret ambiguity and socially construct actionable meaning, provided researchers with a framework through which to study unintended outcomes of change initiatives in organizations. Since this study was designed to describe middle manager sensemaking in the context of a business model change effort, relevant business model change literature was also reviewed to provide some evidence for this study’s assumption that business model change efforts are typically edited through the course of their implementation.

Within the context of this study, Weick’s (1995, 2005) sensemaking perspective provides a means to reframe the pilot study observation – managers’ interpretation that the business model change initiative was itself subject to change – and to understand it in terms of middle managers’ efforts to “make sense” of the ambiguity resulting from the mid-course corrections. The body of knowledge pertaining to sensemaking perspective was detailed, including the usefulness of sensemaking as a tool where process, and not just outcome, is of interest.

A small body of literature detailing the unintended consequences of middle manager sensemaking was also reviewed in the interest of following-up on the pilot
organization’s CEO’s mention that the inconsistent implementation of the change effort across the organization was resulting in unwanted “turbulence” throughout the organization. The research on the unintended outcomes of middle manager sensemaking offered case study observations and organization change recommendations, including a key observation that change recipients edit change directives through their interpretation, and for that reason, top-down change initiatives are not recommended because of their capacity to generate unintended outcomes.

A subset of the business model change literature was also reviewed to provide relevant context for this study. After establishing the business model as its own unit of analysis, the distinction was made between managerial “sensemaking” and managerial “cognition”, as there is an emerging field of study focused on managerial cognition in business model change initiatives. Having established that sensemaking focuses on the assignment of meaning, rather than on the meaning assigned (as in the case of cognition), priorities for future research are drawn from the cognition literature which may be addressed by this and other studies that explore sensemaking in the context of a business model change initiative.
Chapter 3

Method

This study has been largely modeled after similar work done by Balogun and Johnson (2004, 2005) in which the authors researched the unintended outcomes of middle manager sensemaking (Weick, 1995) during a corporate reorganization. This study sets a precedent for using the single case study methodology with sensemaking perspective as a framework through which to study “recipient interpretations of change plans, and how these interpretations are mediated by their existing context of action” (Balogun & Johnson, 2005, p. 2). The authors used a real time, case-based approach to collect data related to sensemaking activities and then related those sensemaking activities to change outcomes, and specifically to unintended change outcomes (2004, 2006). Balogun and Johnson (2004, 2005) and Balogun (2006) were able to publish their work in top peer reviewed journals, suggesting that their methods were rigorous and the use of sensemaking as a framework was relevant.

Balogun and Johnson differentiated their work from other sensemaking perspective research by tailoring their study to focus on the unintended outcomes, where others have focused on components of sensemaking itself (for example, the process of interpretation) or studied sensemaking within the context of quantitative measures of firm performance. This is important because it enables qualitative analysis of the affect that ambiguity has on change outcomes. This study takes on a similar analysis of the unintended outcomes of sensemaking, but within the different and specific context of continuous reconfiguration of a business model change implementation. These
unintended outcomes challenge some of the underlying assumptions of the existing literature which has recommended continuous reconfiguration as a way to remain relevant in constantly changing market environments without necessarily accounting for change outcomes. First and second order analysis (Van Mannan, 1979) of the data yielded rich narrative descriptions, patterns and themes illustrative of the way that relevant change-related ambiguity was interpreted and acted upon, and experienced by the participants as a change-related outcome. Per the precedent set by Balogun and Johnson (2004), the first order analysis consists of a narrative description from the participants’ perspective and the second order analysis denotes the researcher’s abstraction of higher level categories and themes. The data analyzed for this study was collected after years of intermitted engagement with the case study organization, making this a prolonged engagement and adding to the qualitative validity of the research.

**Research Design**

Research design is a flexible set of guidelines connecting theoretical frameworks to strategies of inquiry and data collection (Denzin & Lincoln, 2008). This study employed a qualitative research design to enable inquiry into the “meaning individuals or groups ascribe to a social or human problem” (Creswell, 2014, p. 4). Specifically, case study analysis was the basis for this study because it allowed for the flexible study of the phenomenon in its natural setting, enabling rich description of leader’s sensemaking activities within the context of a business model change effort that was subject to continuous reconfiguration.
Yin (1994) defined case study analysis as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident” (p. 13). The case study approach was deemed to be appropriate for this study because of the research interest in how changes in the business model change plan (context) were interpreted by participating leaders, and how those interpretations contributed to unintended outcomes relevant to the business model change effort (phenomenon). Data collection and analysis were guided by theoretical propositions which the researcher abstracted from data collected during the first phase of the case study, and nonequivalent dependent variables were examined with pattern-matching logic (Yin, 1994, p. 106). Data was collected from a variety of sources which were triangulated into a “convergence of evidence” (Yin, 1994, p. 93) in support of construct validity and a “chain of evidence” was maintained throughout data collection and analysis to increase the reliability of the findings (p. 98). More details on the specifics of the research methodology are provided in the following sections.

**Case Study Organization and Context**

The design of this study, including the theoretical propositions and research questions, were derived from an earlier phase of research conducted with the same organization on which this phase of data collection and analysis has been based. This earlier work represents the researcher’s efforts to refine her research questions and data collection plan, which Yin (1994) recognizes as a pilot test (p. 74). As such, the research
has been divided into two phases: Phase 1, the pilot test, which spanned from the fall of 2013 through the spring of 2016, and Phase 2, this dissertation research study which spanned from the summer of 2016 through the winter of 2016.

The case study organization is a small engineering and electronics manufacturing organization which has ranged in size between 85 and 41 employees and $14.2 and $12.4 million dollars in annual sales, respectively, since the pilot test began in 2013. The company was founded in 1997 with an engineering services business model through which the company specialized in the contract development of optical media technology (namely DVD, Blu Ray and in-flight entertainment applications) for companies like Intel and Bombardier, among others. The company’s founder still served as the CEO, and a small team of co-founders were also serving in leadership positions when Phase 1 of the case study was initiated.

The researcher was referred to the case organization through a regional economic development assistance organization. The case organization selected for study based on their ongoing efforts to “pivot” their business model from engineering services to market-driven technology platform development. This move was prompted by the rapid rise in online streaming media, which was coming at the expense of optical media technologies like DVDs and other physical media. The change from engineering services to market-driven marked a fundamental shift in the way the company did business: engineering services was safe and reactive insomuch as technology development was prompted by client requests and done within the parameters of a contract, while market-driven technology development meant the company was anticipating customer demand and developing technology platforms that it was proactively pushing out to clients.
Engagement with the case study organization began casually in October of 2013 with a lunch meeting with the CEO to discuss his company’s pivot several months into its implementation. The stated goal at that meeting was to derive research questions related to business model change that would be directly relevant to industry. The CEO offered the opportunity to meet with his leadership team and ask for their perspective on what made business model change initiatives uniquely challenging. The first phase of data collection was planned without any a priori hypotheses and data was collected through semi-structured interviews with the company’s department heads which ranged in duration from 40 to 90 minutes.

The first round of interviews was conducted in December of 2013. A copy the IRB approval is provided in the appendix. Discussion prompts were developed in advance of the interviews including questions about the challenges the company faced in implementing the business model change and where the leaders saw the company in one and five years. In large part, the data from this first phase of data collection suggested great trust in the CEO’s vision, but uncertainty about the end result of the pivot. During this early phase of the change, the department heads were largely focused on how the change impacted their role within the company.

A follow-up round of interviews was conducted in December of 2014 and similar questions, tailored to follow-up on leads from the 2013 data, were posed to the same group of company leadership. Interviews, once again, were semi-structured and varied in duration between 60 and 120 minutes. The data collection instrument used during this 2014 engagement with the case organization is included in Appendix C. At the time of this engagement, the company had pivoted (in large part) from its old engineering
services business model to the new product-based business model, but it was still learning how to create value. By the CEO’s own admission, he did not know how to lead a product-based company, and he characterized the company’s approach to navigating in uncharted territory as “fail fast, fail forward”, denotive of some trial-and-error with respect to creating value with this new business model. Data from the 2014 interviews suggested that the change implementation plan was often “tweaked” during management meetings, leading one of the department heads to downplay the fundamental nature of the business model change effort by noting how often the plan for change was changed. During these 2014 interviews, the CEO noted that the department heads were implementing the business model change directives “at dramatically different rates and to different degrees” (confidential participant, personal communication, October 11, 2014) and remarked that this inconsistent implementation of the business model change initiative created “turbulence” throughout the organization.

In the spring of 2016 the CEO expressed interest in a third round of analysis in light of additional business model change efforts (both already made and anticipated for fall, 2016). The company still had a product-based business model, but was making a strategic shift of their position in the value chain for streaming media. This strategic shift required changes to the business model with respect to distribution channels, value proposition and competitive strategy. The CEO explained the business model reconfiguration in terms of Why, What and How. The Why represented their primary focus on the “job” that their core technology platform could perform for the customer (for example, enable streaming media between any two devices), while the What and How represented the final form the technology took on and how it is distributed to the
customer, which were subject to change based on the company’s business partnerships and distribution channels. He further clarified with a fishing analogy: the “What” was the bait (value proposition) and the “How” was the boat (distribution channel). They would test bait and try a boat, but if they weren’t catching any fish, they could change bait and/or move to a new boat in different waters (competitive strategy).

The research for this study was designated as Phase 2 of the case study because it was designed and conducted to address very specific theoretical propositions and research questions which were derived from Phase 1. Specifically, while the research in Phase 1 made inquiry into the challenge of changing a business model a priori, Phase 2 made inquiry into a very specific challenge of changing the business model: continuous reconfiguration of a business model change initiative. Phase 2 was planned for the Fall of 2016 because the company was preparing for a period of continuous reconfiguration of their business model while their best guesses about how best to enter the market with their new technology were going to be tested with a series of industry trade shows where the company would leverage feedback from a September 2016 trade show into actionable intelligence which would inform the company’s offerings for a January 2017 trade show.

**Theoretical Propositions**

Yin (1994) notes the importance of propositions to help focus a research study, suggesting that, “without such propositions, an investigator might be tempted to collect “everything,” which is impossible to do” (p. 22). As such, the researcher developed the
following propositions to guide data collection and analysis and to keep the inquiry and analysis in alignment with the research questions:

1. Continuous reconfiguration of a business model change effort contributes to overall ambiguity of the change process.

2. Interpretation of change-related ambiguity laterally across functional units will be recognized by leadership as a source of unintended outcomes because of the various frames of reference (ex: technical feasibility vs. market acceptance).

3. Leadership will respond to continuous reconfiguration of a business model change effort by hesitating to move forward with the implementation of fundamental changes.

4. Managing messaging around the change will be recognized as the source of some unintended outcomes because the desire for communication will be high but the availability of information and the capacity to formally communicate it during continuous reconfiguration will be limited.

**Research Questions**

Consistent with the goals of qualitative research methodology, the following qualitative research questions were proposed:

1. What ambiguity does continuous reconfiguration create within the context of the overall change effort?

2. How do leaders’ sensemaking activities (bracketing, retrospective interpretation of ambiguity, alignment of shared interpretations and action on the interpretations) affect the implementation of the business model change effort?

3. How has this sensemaking resulted in unintended outcomes in the overall change effort? (“Unintended” per the judgement of the researcher and confirmation from participants during member-checking.)
Unit of Analysis

Yin (1994) encouraged researchers to define their “case” (p. 21), noting that this can vary based on the research interest of the study, as well as the “unit of analysis”, which is the agent competent to produce the phenomenon – though not necessarily the phenomenon itself (I. Baptise, personal communication, May 27, 2015). In this case study, both the case and the unit of analysis are defined as the leadership team implementing a continuously reconfigured business model change initiative. Specifically, the case was focused on sensemaking activities of those leaders as prompted by continuous reconfiguration of the business model change effort, and unintended outcomes resulting from that sensemaking. This was not a study of the entire organization, and the study did not include comprehensive analysis of all change outcomes.

Linking Data to Propositions

Yin (1994) offered a number of ways to link study data to the study’s propositions, including “pattern-matching” (p. 25). Utilizing pattern-matching in case study analysis can be accomplished through an “effects” and a “no effects” proposition, through which the researcher can use “rival propositions” to help illustrate their theoretical position. Although no precise directions are offered, Yin (1994) does suggest that researchers compare at least two contrasting propositions in the course of their analysis.
In this study, four nonequivalent dependent variables (Yin, 1994) were predicted to help link the propositions (which presume “effects” of the continuous reconfiguration):

1. Continuous reconfiguration-related events are perceived by participating leadership as “ambiguous” and contribute to disruption in work routines.
2. Unintended outcomes in the change process related to the continuous reconfiguration.
3. Unintended outcomes in the implementation of change content.
4. Messaging related to the continuous reconfiguration will be recognized as the source of some unintended outcomes and this will be most evident in informal and lateral communications.

This pattern helped to corroborate the “effects” of the continuous reconfiguration related to the unintended outcomes and the researcher uses the “no effects” of continuous reconfiguration as the contrasting proposition against which to compare the data patterns.

**Data Collection**

The goal during data collection was to collect data descriptive of ambiguity (as noted by the participants), sensemaking and unintended outcomes. The data collected consisted of multiple sources of evidence and convergent lines of inquiry (Yin, 1994, p. 92) to corroborate findings and contribute to rich description of the change effort as it reconfigured across a five month period during which the company attended a series of major industry trade shows to collect market intelligence which would inform their new business model. To promote qualitative validity (Creswell, 2014), data was collected in
real time from multiple sources and via multiple methods including semi-structured interviews, relevant office documents, bi-weekly online communications, as well as clarifying communications with participants as a means of member-checking. This approach, adapted from Balogun and Johnson (2004, 2005) and outlined in detail in the following sections, is consistent with Yin’s (1994) principles of data collection. Further detail of the data collection and organization protocols are provided in the following sections.

**Sampling Strategy**

Sampling in qualitative studies is typically purposeful, based on a perception of theoretical value (Creswell, 2014) and directed by the goal of, “…exploration, description or explanation of a particular situation” (Crabtree & Miller, 1992, p. 258). Case selection is usually based on the researcher’s judgment about the case organization’s likelihood to yield the most knowledge about the central phenomenon (Merriam, 1998, p. 61). In practice, case selection is directed by the research questions and, as Stake (2006) noted, “it is often better to pick the cases that most enhance our understanding than to pick the most typical cases” (p. vii).

Given that the research questions were developed based on earlier data collection and analysis with the case organization, the researcher determined that the case most likely to enhance understanding of the central phenomenon in this study was in fact to engage in a second phase of data collection and analysis with that same organization. This second phase of research, although conducted within the same organization as the
first phase of research, is unique from the earlier work in its theoretical propositions, research questions and analysis and the two phases of the case study may be considered apart from one another.

Sampling was also conducted within the case organization for the individuals that would actively participate in the continuous reconfiguration of the business model. Within case sampling was purposeful (Merriam, 1998, p. 66) and participating leaders were identified by the case organization’s CEO as those who would be most impacted by change-related ambiguity, as well as those with whom the impacted individuals would have to work to align interpretations in order to restore work routines as the business model change effort was reconfigured throughout the study period. Given the particular reconfigurations the company was anticipating, the selected participants included the CEO (to represent competitive strategy), the Product Appliance and Marketing & Communications Managers (to represent the demands of the distribution channel), the VPs of Engineering and Manufacturing (to represent the product form and function, as it relates to value proposition), and the Director of Human Resources (to represent the organizational and human capital perspective). Other members of the organization were not actively engaged for data collection during this phase of research.

Sources of Data

To bolster construct validity and maximize the richness of description, data was collected in multiple forms (Yin, 1994). Examining multiple sources helped the researcher *triangulate* (Jick, 1979), or view the phenomenon from multiple perspectives,
and allowed for greater depth of perspective and analysis (Stake, 2006, p. 77). Yin (1994) advocated for “converging lines of inquiry”, such that different data sources be used to provide different perspectives of the same point of analysis, such that the various sources of data become “multiple measures of the same phenomena” (p. 92). As such, the researcher collected multiple forms of data relevant to each of the theoretical propositions, as outlined in Figure 1-1 in the chapter summary.

Yin (1994) identified at least six sources of data, including interview, documents, physical artifacts, observation, participant observation, archival records. Biklen & Bogdan (2007) differentiated between “personal” (for example, emails) and “office” (for example, meeting handouts) documents. This study drew the majority of its data from personal documents including bi-weekly communications with participants, public archival data including website information and relevant press releases, semi-structured focused interviews, and from a culminating focus group with the participants.

Drawing extensively from the work of Balogun and Johnson (2004, 2005) and Balogun (2006), this study took cues from write-ups published in top peer-reviewed journals where the authors studied unintended outcomes from middle manager sensemaking during the restructuring and privatization of a formerly public utility. In the Balogun and Johnson (2004, 2005) and Balogun (2006) case study, the data collection began several months into the change process, once the change initiative had been formally announced but before the plan for change had been fully implemented throughout the organization and before new work contracts had been defined and issued to employees. The authors initiated their study with interviews and then collected bi-weekly hand-written “diaries” (via fax) in which participants responded to questions
about the change effort designed to capture perceptions about what was going well, and what was not (Balogun & Johnson, 2004, p. 528). Balogun & Johnson (2004, 2005, 2006) contacted participants by phone when they had questions about data submitted in the diaries, and they concluded their research by coordinating a focus group with participants to gather data in a group setting. This approach allowed the authors to collect data about the sensemaking process of participants by identifying “bracketed” events (representing ambiguity in the change effort), capturing interpretations, alignment of interpretations and assignment of meaning to interpretations, as then to analyze the interpretations in terms of the efficiency, effectiveness and operational outcomes of the change effort (which in these cases was a company reorganization).

This study, with guidance from Yin’s principles of data collection, collected data in a fashion similar to the Balogun and Johnson (2004, 2005) and Balogun (2006) case study (which consisted of one study and multiple publications). As such, data was collected from multiple sources including:

- Publicly available information (drawn from the company’s website) about the organization, its industry and its change effort.

- Semi-structured focused interview with the company’s CEO for his description of the overall change initiative. (Conducted at the onset of the study.)

- Semi-structured focused interview with seven leaders from the organization for their description of the change and their interpretation of their role in implementation. (Conducted at the onset of the study.)
• Bi-weekly online exchanges with participants (to function as Balogun & Johnson’s faxed diary entries did during the 1990s when email was not as prevalent.) These exchanges were analyzed as “personal documents” (Biklen & Bogdan, 2007) functioning as “logs” rather than “intimate accounts” to track participant sensemaking in real time (Balogun & Johnson, 2004).

• Follow-up communications (via phone or electronic communication) for clarification when there are questions regarding information in the bi-weekly requests for information.

• Periodic follow-up communications in which the developing description emerging from data collection and analysis was “fed back” to participants. This feedback process was used as a form of member checking of the data and analysis and focused primarily on ensuring that the researcher had a correct understanding of descriptions and events.

• Office documents including a change-related PowerPoint Presentation, industry analysis (as compiled by the company and publically available on the “Resources” tab of their website), and select formal communications pertaining to the change effort.

• Focus group with participants to debrief on the research, member-check the emerging description and analysis and solicit any data that may have been missed.
Collection of Data

Human Subjects Review Board (HRB) approval preceded the initiation of study with the case study organization (see approval in the appendix). Following HRB approval of the study, informed consent was obtained from the study participants. In committing to the study, the CEO agreed to provide the researcher with relevant office documents (detailed above) related to the change effort and to participate in the communications detailed above. Commitment was also garnered to allow for regular communications with participants. Dedoose Qualitative Data Analysis software tools were utilized to code and analyze data and to maintain memos throughout analysis.

Prior to the interviews, the researcher communicated with the CEO to verify that the organization’s change effort aligned with the study’s definition of continuous reconfiguration of a business model change effort. Interview questions and bi-weekly prompts were developed in advance of the interviews based on information provided by the CEO about the nature of the changes he was anticipating as well as information publically available on the company’s website, however, the electronic communications were updated throughout the study to reflect the participants own terms and descriptions. This was done to follow emergent leads in the data (Creswell, 2014). The researcher had already interviewed more than half (five) of the participants in prior phases of this case study and the CEO made a point to mention that the foundation for trust and open communication had been established. Introductory conversations were held with the other (two) participants to lay the foundation for similar trust and open communication. All of these interviews, conducted between 2013 and the summer of 2016, contributed to
prolonged engagement with case organization and served as a means of improving the qualitative validity of the study’s design (Creswell, 2014).

During the interview process, the researcher began by briefly explaining the goals of qualitative research and positioned herself as a student there to learn from the case organization participants. Interviews with all participants were intentionally conducted on the same day to minimize any influence of time, gossip or other events on the data. Each participant was given a written description of the study which they were asked to sign confirming their understanding of the study and how any data resulting from their participation would be used. Interviews were semi-structured and interview questions were open-ended and adapted as appropriate to reflect details about the change effort that emerged throughout the data collection process. Interviews were audiotaped, transcribed by the researcher and returned to participants to review and revise (if necessary) as a means of member-checking (Creswell, 2014). All direct and indirect identifiers were removed and confidentiality of all data (including during data transfer and relevant communication) was maintained as directed by the Office of Research Protections.

Other field notes were collected, categorized and recorded according to their type (notes about the case, about the participant, or about the researcher’s emerging sense of the data). As much detail as possible was captured while still in the field to maximize accuracy and recall of detail, and field notes were reviewed within 24 hours of collection and the researcher’s impressions synthesized in a memo (the use of memos are detailed in the following Data Analysis section) to maximize the richness and accuracy of descriptive value.
The study plan called for one interview, bi-weekly online correspondences, as many follow-up communications as appropriate to clarify the data collected, and a focus group with all available participants in November 2016, as plans for a new product launch (representative of the goals of the business model change initiative) were solidified. Following this protocol, the study assumed *exhaustion of sources* (Gall, Borg & Gall, 1996, p. 561) and data collection was ended.

**Data Analysis**

Qualitative research allows for simultaneous data collection and analysis, which enabled the researcher to adapt the inquiry to be responsive to emerging themes (Creswell, 2014). This study’s goal – description of the unintended outcomes of leader’s sensemaking activities prompted by ambiguity related to continuous reconfiguration of a business model change effort – necessitated analysis that would capture the ‘bracketing’ (Weick 1995, 2005) of ambiguity and the resulting efforts to interpret and then align interpretations so as to allow for the resumption of work routines between participants (and their respective departments). As such, the data collection prompts in the bi-weekly communications were adapted as needed in order to follow emerging themes in the data. Consistent with data collection, data analysis was guided by the researcher’s theoretical propositions and by the methods published in the Balogun & Johnson (2004, 2005) and Balogun (2006) and designed to produce a narrative description of the events (ambiguity, bracketing) that prompted the process that participants went through in order to interpret
and construct meaning to the ambiguity (sensemaking) in order to resume work routines (sensemaking outcomes, for which this study focused on the unintended outcomes).

Analysis of the data was specifically focused on ambiguity related specifically to the continuous reconfiguration of the change effort, with pattern-matching logic efforts directed toward four nonequivalent dependent variables related to the theoretical propositions. The researcher addressed rival explanations by noting potential counter-arguments regarding the relationship between independent and dependent variables, but was able to dispel them the same data as was used to substantiate the pattern of “effects” in the data (Yin, 1994, p. 106). Corroboration of the pattern-matching logic was substantiated through convergent lines of inquiry and a chain of evidence was maintained as a basis for the conclusions drawn (1994, p. 90). The quality of the analysis was ensured throughout the process of data analysis by considering all relevant evidence, examining the most plausible alternative explanations, maintaining focus on the major themes set forth by the theoretical propositions and by leveraging the researcher’s own “prior, expert knowledge” (1994, p. 123).

Gaining a Sense of the Data

The first step in analyzing the data was converging the multiple sources of data to get a sense of the case in context. The researcher transcribed all of the interviews and the focus group herself in order to deepen her familiarity with the data. Memos were created frequently throughout this process to record the researcher’s observations about the participants and about the change effort. Coding (described in detail in the following
section) took place over four phases throughout the course of the study, which enabled to researcher to become deeply familiar with the data and to make connections between the data collected across time.

In gaining a sense of the data, the researcher sought to identify the “bracketed events” (the sources of ambiguity) related to the continuous reconfiguration of the business model change effort, the process that participants went through in interpreting ambiguity to restore work routines (sensemaking), and the unintended outcomes related to that sensemaking process. The intention was to study the interactions between the dependent and independent variables and to help construct a chain of evidence to support the findings.

**Coding the Data**

In qualitative research, the coding process involves segmenting, naming and categorizing the data collected (Creswell, 2014, p. 198). Again drawing from the work of Balogun and Johnson (2004, 2005), this study used a first and second order coding approach to first categorize the participants’ in vivo terms (first order codes) and then abstract from those first order codes axial codes representative of relationships among the data (Van Mannan, 1979). Gioia et al. (2013) noted that the “tandem reporting” of in vivo data with the researcher’s thematic analysis provides a foundation for high-quality research and the “linking of data with new concepts” (p. 18). A dictionary of codes was maintained to define each code created, and definitions were updated periodically as code categories were expanded or collapsed into groups. Ultimately, the groups of codes were
organized according to their relationship with the research questions and theoretical propositions.

First order codes were used to identify and describe “bracketed events” (indicating ambiguity), sensemaking (including interpreting and the alignment of interpretations) related to the bracketed events, and the participants’ descriptions of unintended outcomes. First order codes were highlighted as data was collected, and axial coding (Bryant & Charmaz, 2007, p. 138) was conducted to categorize the data in answer to each of the study’s research questions (Gioia et al., 2013, p. 20; Creswell, 2014, p. 195).

Second order themes were developed out of the thematically-relevant first order codes, and then compared against initial memos and interview transcripts for consistency of meaning and intent. Internal documents and publically available data were reviewed in the same manner, and codes generated were noted as to their origin. Gioia et al. (2013) noted that second order analysis is where the researcher functions as a knowledge agent and abstracts descriptions from the data that help answer the question, “what’s going on here?” (p. 20), based on the application of her prior knowledge and expertise to the in-vivo data collected. In particular, the researcher focused second order coding efforts on differences between the case study organization’s change outcomes and her prior and expert knowledge about the ideal outcomes of a business model change initiative, with “ideal outcomes” generally defined in terms of organizational effectiveness in the judgement of the researcher. Member-checking of the codes was done by feeding back the developing narrative (which was inclusive of first and second order codes) in future correspondence, and the participants’ reactions was also collected and analyzed as data.
Memos were kept to record the researcher’s thought process and rational throughout the entire coding process (as detailed in the following “Use of Memos” section). All memos, including those generated during coding, were considered to be part of the formal analysis. Per the recommendations of Corbin and Strauss (2008), the memos made during coding made note any of the researcher’s questions about the participant’s intended meaning of certain words and phrases as well as possible meanings and alternative explanations of the data. Diagrams were also sketched periodically to track the researcher’s analysis of ambiguous events and interpretation, particularly as it varied between departments and as interpretations evolved over time.

Peer debriefing was employed to promote interrater reliability throughout the coding process, as Creswell (2013) noted that the reliability of qualitative research may be assessed in part by the consistency of codes between different coders. Dr. Mark Gagnon, a Penn State professor with specific expertise in sensemaking and in organization science, reviewed and coded the data as a means of member checking. Dr. Gagnon and asked series of clarifying questions which helped to identify areas for improvement in the analysis and report. There were few instances of dispute and they were focused primarily around how specifically to define the ambiguity directly resulting from continuous reconfiguration. Codes were adapted where necessary, and where the codes were not adapted, the researcher provided justification for her position with the data and memos. Even where the original coding was kept intact following a dispute, the dispute was noted in the data, in memo and in the write-up (where appropriate).
Use of Memos

Charmaz (2006) urged researchers to logically order memos to help organize relationships between the data and structuring early analyses. In this study, memos were created following each significant collection of data (including interviews, bi-weekly communications, review of office documents, member-checking and the focus group), as well as throughout the processes of coding and analyzing the data, to aid the researcher in keeping track of initial thoughts and emerging concepts (Cresswell, 2014). Memos were also reviewed frequently to help the researcher maintain a sense of the entirety of the data.

Memos were used to clarify data, record the researcher’s thoughts, inform future data collection efforts and provide an early opportunity to “sort, code and identify patterns in the data” (Bryant & Charmaz, 2013, p. 245). Memos were created during every significant data collection and analysis session, beginning as the first data was collected and continuing throughout the study period. Memos were also created to capture the researcher’s analytic reflections after reviewing other memos, as well as to capture thoughts and ideas as they arose. Although not treated as ‘data’, memos served as important records of analysis across time and were used for both recall and comparison during analysis (Corbin & Strauss, 2008). Memos were dated, given a summary headline and stored with the other data in the data management software for ease of accessibility and analysis.
Reflexivity on the Researcher

Qualitative research takes into account the role the researcher plays at every stage, from conceptualization of design, data collection and analysis, and through reporting of results (Creswell, 2014). This study, like all qualitative research, was impacted by the background of the researcher, and especially by the earlier phases of the case study which prompted the research questions and theoretical framework. The researcher’s history with the case study organization provided both benefits in terms of access to rich data, but also contributed to potential pitfalls including participant complacency as the “novelty” of the research wore off, and the omission of details by participants if and when they assumed the researcher already had the information.

Also, it has been pointed out to the researcher that her identity as a female student and her thankful/humble posture likely positively affected efforts to gain entry to the case study organization and was relevant to her access to data. Specifically, the researcher’s personal communication style encouraged uninhibited sharing of information by participants because of the humble student dynamic projected during data collection.

Qualitative Validity

As noted throughout this chapter, the researcher made every effort to check the accuracy of data and description via the methods recommended for qualitative researchers to ensure qualitative validity (Creswell, 2014). Yin (1994) proposed four primary criteria for judging the quality of research designs, including construct validity,
internal validity, external validity and reliability and offers several tactics to help researchers approach these four “tests”.

Per Yin’s (1994) guidance, the researcher pursued construct validity through the use of aforementioned multiple sources of evidence, the demonstration of a “chain of evidence” throughout data collection and reporting, and through periodic member-checking of the data and analysis (p. 33) to guide the researcher toward the correct research measures. Internal validity was sought during data analysis by following Yin’s (1994) recommendations of pattern-matching as a means through which to link the data to the study’s propositions. No claim of external validity is made at this time, without the benefit of replication logic to link the case findings to theory (Yin, 1994, p. 36). Rather, the descriptions generated from this case study will inform a future research agenda with the goal of greater generalizability. Use of the aforementioned case study protocol and case study database (Dedoose) helped to minimize error and biases and to make the study repeatable, contributing to the reliability of its design (Yin, 1994, p. 36). Additionally, Lincoln and Guba’s (1985) recommendations to ensure qualitative validity which have been utilized in this case study, including real time data collection, prolonged engagement with the case organization, and the use of thick descriptions in the case report.

Limitations

There are limitations inherent to any research methodology, including qualitative case study analysis. Yin (1994) noted the historical bias that case studies suffer from a
“lack of rigor” as compared with “experiments or surveys” (p. 9). With this in mind, the researcher took care to build as much rigor as possible by modeling the study after the similar peer-reviewed and thrice published case study done by Balogun and Johnson (2004, 2005) and Balogun (2006). Additionally, the researcher actively sought the input of other researchers regarding the study’s design, including Balogun herself, with whom the researcher exchanged emails to discuss her work.

Yin (1994) also noted that case studies “provide little basis for scientific generalization” (p. 10). This study’s single case design is in fact limited in terms of generalizability because of its focus on the specific case. However, as Yin (1994) suggested, “case studies, like experiments, are generalizable to theoretical propositions”. On this issue Stake (2006) provided that, although the primary contribution of case study analysis is particularization, not necessarily generalization. Likewise, Corbin and Strauss (2008) concur that case study analysis can contribute to the development of theory insomuch as “description is basic to theorizing” (p. 54). Like Yin, Stake (2006) and Corbin and Strauss (2008) agree that case study analyses do contribute to the overall understanding of complex phenomena, even if the goal of the research is not broad generalizability.

**Chapter Summary**

The approach outlined draws from the case study design and methodology described by Yin (1994) and from the similar case study analyses of unintended outcomes of sensemaking by Balogun and Johnson (2004, 2005) and Balogun (2006).
Data collection and analysis were guided by theoretical propositions developed during an earlier phase of research with the case organization, and coding and analysis during this phase of analysis focused on the identification of relevant ambiguity, sensemaking activities, and unintended change outcomes. The table at the end of this chapter, Table 3.1, briefly summarizes the theoretical propositions, dependent variables, relationship to the research questions as well as the data collection sources and analysis goals and methods.

Table 3.1: Summary of methodology.

<table>
<thead>
<tr>
<th>Theoretical Proposition</th>
<th>Dependent Variables</th>
<th>Research Question</th>
<th>Sources and Collection of Data</th>
<th>Method of Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Continuous reconfiguration of a business model change effort contributes to overall ambiguity of the change process.</td>
<td>Continuous reconfiguration-related events perceived by participating leadership as “ambiguous” and contribute to disruption in work routines.</td>
<td>RQ1</td>
<td>Bi-weekly emails, select communication threads, focus group</td>
<td>First-order coding: in-vivo notations and descriptions of ambiguous events. Second-order coding: abstraction of categories of ambiguity (change process versus change content).</td>
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| 2. Interpretation of continuous reconfiguration-related ambiguity laterally across different functional units will be recognized by leadership as a source of unintended outcomes. | Unintended outcomes in the change process related to the continuous reconfiguration.  
Example: Interdepartmental tensions resulting from interpretation efforts. | RQ2, RQ3 | Bi-weekly email data, selected communication threads, member checking communications, focus group | First order analysis of in-vivo data indicating leadership’s discord, misunderstanding or conflict related to interpretation of ambiguity.  
Second order analysis of the researcher’s abstraction of change process issues, based on her expert assessment of an effective change initiative. |
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<td>3. Leadership will respond to continuous reconfiguration of a business</td>
<td>Unintended outcomes in the implementation of change content.</td>
<td>RQ2, RQ3</td>
<td>Interview data, bi-weekly emails, focus group, office and</td>
<td>First order analysis of in-vivo data indicating that the flux has prompted</td>
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model change effort by hesitating to move forward with the implementation of fundamental changes.

**Example:**

*The shared interpretation that plans will continue to change prompts leadership to hold back on implementing change directives.*

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<th></th>
<th>archival documents</th>
<th>leadership to holding back on change directives and/or has contributed to a “wait and see” approach to the change. Second order analysis based on comparisons of data across time to abstract any evidence of hesitation to implement the change directives which is not necessarily represented as in-vivo mentions of hesitation.</th>
</tr>
</thead>
</table>
| 4. Messaging related to the continuous reconfiguration will be recognized as the source of some unintended outcomes and this will be most evident in informal and lateral | Leadership’s in-vivo observations about change-related messaging and communications, both vertical and lateral.  

**Example:**

*The pace of change will confound* | RQ1, RQ2, RQ3 | Office documents, archival documents, interview and bi-weekly email data and selected communication threads | First order analysis of in-vivo references to messaging and communications  
Second order analysis of in-vivo references to messaging and communications as compared with formal communications.
communications.

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<th>communication efforts and messaging and interpreting will overlap each other, contributing to frustration when leaders desire clear change-related communication.</th>
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<tr>
<td>Second order analysis of all data for themes regarding the impact of continuous reconfiguration on an organization’s ability to manage change-related communications.</td>
</tr>
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Chapter 4

Findings

This study explored the unintended outcomes of leadership sensemaking within the context of a continuously reconfigured business model change effort. The methodology for this research was drawn from the published works of Balogun and Johnson (2004, 2005) and Balogun (2006) and designed to enable the analysis of unintended change outcomes in a framework that related them to the conditions (namely ambiguity and interpretive processes) which prompted them. Seven individuals representing the leadership team of the case study organization participated in this research during the four months which represented the most intense period of the business model reconfiguration, which proved to be an ideal period over which to examine related unintended outcomes.

This chapter is divided into three parts. In Part One, background is offered regarding the case study organization, and the context of the business model change effort is reviewed. In Part Two, the data and analysis are presented, organized with respect to the corresponding research questions to maintain focus on the study as it was proposed. In Part Three, the researcher’s analysis of patterns in the datum is presented, organized according to the study’s theoretical propositions. Part Three also includes some detail regarding noteworthy data and themes deemed relevant to the study, but which did not directly align with the research questions or theoretical propositions. A summary of the findings is also provided at the end of the chapter.
Summary of the Case and Participants

The research was conducted with a small, nineteen-year-old technology company with annual sales of approximately $14 million dollars per year and a workforce fluctuating between 84 and 45 employees during the three years preceding the study, depending on the company’s contract and sales volumes. The company both designs and manufactures technology products. The case study organization was selected for this research because of its efforts to change its business model from that of an “engineering services” company, involving little ambiguity, toward that of a “product company”, involving significant ambiguity – the specifics of which are outlined in the following section on the context for change. The business model change began in 2013, prompted by changing technology and consumption patterns in the industry, but the company was still making fundamental changes through 2016, characterized by a significant effort to design and deploy a proprietary technology platform that would enable the company to have greater control over their revenues and profitability. The case study was conducted while the company was in the midst of changing their business model, and specifically during a period in which the company’s position in the value chain, its end customer and the details of its value proposition were being continuously reconfigured according to market intelligence being collected from a series of fall 2016 trade shows.

The Context for Change

The case organization was founded in 1997 with an “engineering services” business model, wherein its customers would contract for engineering and manufacturing
services and provide the case organization with detailed product specifications to guide technology development. There was very little ambiguity in this business model; the case organization not only had a detailed list of specifications from which to design the product, but it also had a guarantee of payment for the work it completed. This business model allowed the company to grow rapidly during its first fifteen years of operation, at times 10-15% annually. In a 2013 interview with the company’s then Chief Technology Officer, the predictability and security of the engineering services business model was called “addictive” and compared with crack cocaine (confidential informant, December 11, 2013, personal communication).

Despite the historical success of the engineering services business model, the company’s founder and CEO decided to lead the company through a business model change in 2013, noting significant changes in the industry that would threaten the company’s ability to remain viable in their current market with an engineering services business model. Specifically, the company had built its success around “optical media” which includes physical discs read by a laser (namely DVDs and Blu Ray discs), but streaming media was rapidly gaining popularity and cutting into the market for DVDs in particular. Streaming media technology was not standardized, as had been the case with optical media, and the case study organization recognized that the lack of standardization of streaming media technology meant that it needed to get out in front of its customer and be proactive in developing technology solutions to remain broadly relevant in the market. As such, the company decided to undergo a fundamental pivot from engineering services to “product company”. This meant that the case organization needed to take on the task of interpreting market information and translating it into relevant technologies, which it
would then sell to its clients. This change brought with it a dramatic increase in the degree of ambiguity that the company needed to interpret in its daily operations, as compared with its years with an engineering services business model.

In its first attempt to move from engineering services to product company, the case organization aimed deep in the value chain with a product to enable the end consumer to stream media between their various devices (ex: cell phone to television). While their first proprietary product offering was a technical and market success – meaning it worked and consumers bought it – the revenues associated with its success were insufficient and the company realized it needed to re-design its product-based business model. In pursuit of a more profitable product–based strategy, the company decided to move back in the value chain with an industrial/commercial product designed to enable the compression of Ultra High Definition (UHD) media for more efficient and effective streaming.

Although neither streaming media nor UHD are new technologies, the business models and use cases of the two together are still being worked out by the industry. While the origination of streamed content is primarily generated by commercial or institutional applications (including education and house of worship), industry experts predict that individuals will increasingly demand the ability to stream things like children’s sports games, which will dramatically alter the market for streaming media products and technologies. These and other changes in the market are contributing to a high degree of ambiguity, relative to the standardized optical media market. To guide the development and launch of its new business model and first new product, the case organization was actively pursuing market and customer intelligence from a series of
industry trade shows which contributed to a rapid evolution of the case organization’s plans throughout the fall of 2016.

**Research Participants**

The company’s leadership was comprised largely of individuals that had been with the company since its inception, including the CEO who founded the company in 1997 and three others from its founding team – the Director of Human Resources, the President and the Vice President (VP) of Manufacturing. The other research participants from the leadership team – the Product Appliance Manager, the Manager of Marketing Communications and the VP of Engineering – were all newer to the company with tenures ranging between one and six years. Individuals were identified by the CEO for participation in the study based on their role in interpreting ambiguity related to the change effort. One participant left the company during the research period and the circumstances are described in the analysis.

**Participants’ Role in Leading the Change**

The individuals participating in this research were the strategic and functional leaders of the business model change for the case study organization. This meant that the participants were responsible for collaborating to establish the new business model at the strategic level, and for operationalizing the business model into tactical steps at the functional/departmental level. The analysis suggested that individuals’ role within the
company influenced their perception of the change, and specifically at where they
directed the majority of their focus regarding the higher-level strategic change versus the
more tactical product change. Although this phenomenon was not central to the research,
examples are noted throughout this chapter with the idea that this may be an area for
future research.

The participants reported having various levels of meetings with each other and
with select individuals from their departments with respect to interpreting and
operationalizing the business model change. Specifically, the VPs on the leadership team
met formally to set the organization’s strategy and establish a five-year plan for the
company. The participants from the leadership team met formally to discuss how the
established strategy would affect the product development efforts (for example,
establishing the most desirable target market for the product, based on their business
model). Individuals from the leadership team met with each other both formally and
informally to work out tactical details of product development (for example, the
Appliance Manager, who has a marketing background, would meet with Engineering to
discuss the technical feasibility of product features desired by potential customers).
Individuals with a technical background, including the CEO, President and VP of
Engineering were called on as needed to participate in product design and customer
meetings to help with the translation market desires into features and functionality in the
product. (The company maintains a Board, but the role of the board was not mentioned
at any point in data collection.)

Although individuals’ roles were not a central focus in this research, some noted
that those on the leadership team working on the technical (versus market) side of the
change effort felt the most profound effect of ambiguity. This excerpt from the VP of Manufacturing illustrates the differing tolerances for ambiguity between functional departments in the organization (key points bolded for readability):

I think Marketing certainly embraces ambiguity much better than the other teams just because they [the technical teams, ex: engineering] are working to something that is very concrete. You can’t design electronic hardware. Like you have to know exactly what it needs to be and unfortunately it will be perceived as “how did we not see it” or “a miss” or a mistake that we didn’t see that this was needed.

The data was consistent with this observation, with those involved with marketing expressing they were generally unaffected by ambiguity and those on the technical side expressing that ambiguity affected them and was something to be managed. There was considerable contrast between references to ambiguity during the Appliance Manager’s interview versus the President’s interview. This contrast is noted because ambiguity is fundamental to sensemaking, and the data suggested that individuals’ roles affected their perceptions of and reactions to ambiguity. These quotes illustrate some of the differences between the way the Appliance Manager (with a background in marketing) and the President (with a technical and financial background) reacted to ambiguity:

I know some people say, “Oh I love change.” But change is hard. It’s scary. It’s a lot of ambiguity. Like you’re not exactly sure how to get there or what you’re going to do to get there. And a lot of times that’s tough for people. That ambiguity. But that’s the world I live in and I’m totally OK with that. Not knowing. But a lot of times, when you’re very black and white, you don’t like that ambiguity. [Appliance Manager]

The ambiguity is just continuous, at least from what I can tell. We have risks, and the biggest risk is ambiguity. We don’t have a 400 page spec that says exactly the color, the flow diagram that we want the product to work to. So the ambiguity is, basically you say, “We want to display video.” And
The contextual effect of an individual’s role on their perception of ambiguity is noted, but was not further analyzed because it was deemed tangential to the study’s research questions, which were specifically focused on sensemaking and resulting unintended outcomes. It is noted in this chapter as a practical implication and area for further study.

**Analysis of the Data**

Analysis of the data took place in multiple coding sessions, with the researcher first transcribing the interviews. An initial round of coding was conducted as each portion of data (interview, office document, publicly available information, etc.) was collected so the researcher could gain a sense of the data. The data in its entirety was then revisited the data throughout data collection to add codes and memos as the analysis progressed. In all, the data was reviewed by the researcher six times for coding.

A second coder with relevant expertise also coded the data, and several sessions were conducted between the researcher and second coder to resolve any disputes between how the data was coded. There was a great deal of consensus between the two coders, with the primary differences being noted where the second coder coded some phenomena not deemed to be related to the continuous reconfiguration. In these cases, the researcher did not revise her original codes. There were some instances, however, where she agreed...
with the assessment of the second coder and added several codes to the original analysis.

The findings from the data are presented in sections, organized first by research question and secondly by theoretical proposition as a representation of patterns in the data. A third section includes a summary of emergent data and second order themes which the researcher felt were noteworthy and relevant, but which did not directly align with the original research questions.

Data and Findings by Research Question

The research questions were established before the start of data collection and the data collection instruments and protocols were based on the research questions. Although the data collection questions were updated several times throughout the study, the research questions remained consistent throughout. The following sections detail the data and analyses as they correspond with the study’s research questions, and a summary of the findings for each research question is provided. In the following section, patterns in the data are examined as they correspond with the study’s theoretical propositions.

Research Question #1: What ambiguity does continuous reconfiguration create within the context of the overall change effort?

There was significant evidence in the data that continuous reconfiguration of the case study organization’s business model change effort contributed to ambiguity, and that the ambiguity manifested itself in a variety of ways. The President and the CEO (note, these are different individuals – it was not a combined role) in particular were focused on
high-level and strategic ambiguity related to the pursuit of the new business model, while the other participants tended to focus on how ambiguity affected the day-to-day activities of implementing the change effort. The ambiguity created by the continuous reconfiguration was reportedly wide-ranging with multiple impacts on the day-to-day functioning of the organization.

The CEO explained how ambiguity had increased when the company initiated its business model change effort away from offering engineering services to other companies in favor of focusing on their own product development. In the quote below, the CEO references the optical media market, around which the previous engineering services business model had been designed, and notes that both the technology and the way that media was consumed had been standardized, which significantly reduced the amount of ambiguity the company faced in their work. Operating with their new business model in the unstandardized streaming media market meant the company needed to process multiple sources of data in a dynamic environment, which contributed to a significant amount of ambiguity, as he colorfully references:

But the big thing for us has been, when you take a look at optical disk. Optical disk was relatively easy. Somebody came up with the standard and said, “We should put a movie on a digital format. Disk is going to be delivered…” and they established the entire chain. So we played in that market, but all we really did was “blank”, and it was established by a series of events. So now, how do people consume content? There are dozens, hundreds of ways, where do you apply, what goes on? Now you really have to figure out the dynamics of the market, versus the market being defined. It’s absolutely fascinating. If you don’t like ambiguity, you’ll die!

The ambiguity created by continuous reconfiguration of the company’s specific plan for changing the business model was described in terms of the difference between receiving detailed specifications from the client in the old business model, to now having
to interpret the market and create those specifications by translating market intelligence into product functionality and value propositions. The ambiguity in this case is amplified by the fact that the market is dynamic and technology trends and requirements are still evolving:

Yea, the company has changed where we used to be company X would come to us and say, “We want this product with these requirements,” and it could be anywhere to a 2 page document to a 400 page document of what they wanted. So now we’re changing and we had a clear defined, not much ambiguity in what the customer wanted (in most cases) specification of what they wanted. We’re switching over to being market driven, where we take to our customers a product and we determine what the customer and the market needs. Versus the customer giving us a big spec. So in that regard there is a lot of ambiguity because we have to figure out where the technology is going, um, where technology is going where the market is going.

A specific example of ambiguity at the product-level was provided by the VP of Manufacturing. This excerpt references Engineering’s need to translate market feedback into very specific product features:

So the ambiguity is, basically you say, “We want to display video.” And engineering, “Well, how big? What’s the resolution? How many bits?”

Although a certain amount of ambiguity is likely to accompany any business model change effort or foray into new business territory, the study data suggests that the continuous reconfiguration of the case organization’s change effort did intensify the perceived ambiguity. In the quote below, the VP of Manufacturing notes the effect of changes made in the product plan, recognizing that every small change creates a ripple-effect through the company, compressing deadlines for product launch and adding complexity to the process of sensemaking:
Because it’s all a serial process. **So if, for example, the hardware would change, then not only would marketing or whoever comes back from the show be articulating what the messaging, what the change is going to be, then instantly the doers in the organization have to start with the planning and scheduling to physically get hardware still at this date, you have to work backwards and everything will be compressed.**

Here participants reference the ambiguity related to external dependencies, like the need to work with vendors for certain parts. Ongoing changes to the project plan and product details contributed to a constant state of ambiguity related to the sourcing of component parts, and at times, difficulty finding the necessary parts in stock required the case organization rework their product design:

*So there’s a level of ambiguity when company X is going to provide us a solution, so what do we need to do to manage that. Let’s figure out the milestone date and do the dependencies and determine as of September 5th, if we don’t get this drop from company X, we do this contingency plan. We’ve done that 2-3 times in the past week or two.*

The continuous reconfiguration also created issues in projecting delivery dates for the case organization’s own customers, as noted by the VP of Engineering:

*Because, you wind up with business pressures and your customer wants to know exactly without a doubt when this will be delivered and there’s a high degree of uncertainty based on complexity and uncertainties. And the complexity in estimating work you haven’t done before. That which is always the case when you’re working in emerging technology. All three of those things are risks, so we just wind up having to, we try, if we’re partnering with someone, we try to get them an estimate and set some realistic expectations on that estimate being at the beginning of the project a high degree of uncertainty.*

Participants noted that the issue of re-working product specifications, as illustrated above, is amplified by the continuous reconfiguration which, reportedly, lead some in the company to question the finality of a work order because of the tendency for product plan to change. When asked about how continuous reconfiguration affected the company’s workflow the company President remarked:
It has an ability to really blow it out of the water. Because, like I was saying, we try to set an MVP and try not to change that MVP because if you continuously change the requirements that people are trying develop a product to, deadlines go out the window. It’s like, “OK, we can work on the new requirements, but it’s going to change next week anyway, why strive to get it done.”

A number of very practical ambiguities were also reported by the participants, including questions about the company’s ability to perform up to the market’s demands, and resource issues as the company transitioned away from the steady revenue stream of their old business model toward the more speculative new business model:

When you think of ambiguity, it was, “Can engineering actually do what marketing/sales needs engineering to do?” How was that ambiguity addressed? VP of Engineering is gone, new head of engineering is in. That has some tectonic shift kind of things and so that creates a lot of ambiguity. How much money is coming in? So now you’re taking a service company and dropping down how much service revenue is coming in so you can dedicate people to new product development. So you’re playing this very, very fine balance – how much money do you need versus how much money do you not need.

Summary of Findings for RQ1

Analysis of the data responsive to Research Question One suggested that the continuous reconfiguration of a business model change effort introduces an additional degree of ambiguity. Factors contributing to the added ambiguity include both the internal need to continually interpret new information and adjust project plans, and from external dependencies affected by the continual change which introduce additional ambiguity into the company’s operations. Specifically, participants noted that ambiguity specific to the continuous reconfiguration of the company’s business model change effort included:
• Project plans were affected by ambiguity because workflows had to keep up with the company’s evolving interpretation of market feedback and their relevant opportunity in this market. As interpretations of the target customer and their desired product features changed, the company had to adapt product plans, organizational workflows and timelines to accommodate the changes.

• Continuous reconfiguration of the business model change effort resulted in some rework which contributed to ambiguity on behalf of some staff who, participants noted, may disengage from their work with the feeling, “Why bother? Things will change again next week anyway.”

• Ambiguity was noted where the continuous reconfiguration of the business model change effort intersected with external dependencies. This was the case both in the company’s effort to source new component parts in response to a product-level change and in the company’s efforts to estimate when they could deliver product to their customers.

• The company’s need to manage practical and operational challenges was affected by the continuous reconfiguration. Specifically, the company noted there were questions about whether it could deliver on the market’s demands for technical functionality. Additionally, leadership noted that the need to fund the new
business model with some residual activity from its old business model contributed to some ambiguity among staff.

Research Question #2: How do leaders’ sensemaking activities (bracketing, retrospective interpretation of ambiguity, alignment of shared interpretations and action on the interpretations) affect the implementation of the business model change effort?

The most significant theme to emerge regarding the leadership team’s sensemaking activities had to do with the sensemaking processes themselves. Multiple participants noted that both formal and informal mechanisms were in place to support the recognition and interpretation of ambiguity, reflective of the team’s various areas of expertise (in the context of sensemaking, this expertise would represent “trusted frameworks”). Two participants referred to these processes as “clunky” and noted that the company was generally new to the need to engage in this type of sensemaking. The effects of these sensemaking activities on the implementation of the business model change effort are noted below with several specific examples.

First, the CEO put the issue into perspective with a fishing analogy illustrative of his role and the roles of others in making sense of the many issues affecting the business model change:

Yea, so, I put it in terms of fishing. So, here’s how I illustrate this. As a CEO, I look at the company and I look at our assets and I say, “We’re not too far away from the Atlantic Ocean, I think we can go out and do very well with those fish. Go do it.” Well, that requires a whole bunch more steps before you actually have fish on the boat. So the CEO has to set the overall vision. “We’re going to catch fish by going out in a boat.” The next role that I play is the VP of Strategic Marketing. And the VP of Strategic Marketing needs to look at life and say, “Hum, there’s an ocean out there. And the currents and the water temperature look like this, and the boat that we have looks like
this. And the fish in that particular area look like this. And the rods and reels that we can get look like that. And based on these multi-variable equation points being brought together, we need to take a boat that looks like this to the Outer Banks and we need to go out 52 miles and we need to do X.” So my job is to say, “We’re going to go catch fish, and we’re going to catch fish 52 miles off the Outer Banks. And we’re going to go catch blue fish.” So I need to direct people to that point. And once it gets to that point, I turn it over to Marketing Communication. So marketing communication is there and they look at life and they say, “Hum, we’re sitting 52 miles out in the Outer Bank and the fish are looking like this and the boat is here and the temperature is this, “OK, I’m going to design some bait, and my bait is going to attract the fish.” And so they figure out how to communicate and how to bring the fish up. And ultimately the sales person is taking that bait, putting it on a rod, and they just cast all day long, all day long. So, my job is to start to put those pieces together.

The CEO also addressed the perspective of the leadership team on the business model change, noting a readiness to make the fundamental shift away from their former way of doing business, which had required a series of layoffs and was, according to the CEO, was “becoming less and less fun.”

So I think that, even though we are a 20-year-old company, I think that emotionally, we’re ready to take a big step and we’re all in to accept the risk that this might lead to. Because the status quo is becoming less and less fun. If we’re going to run an engineering service company, then we need to run it as an engineering service company. That is, be prepared to hire and fire people at a rapid rate. If we are going to run a product company, run it that way and bet on the market and go in full board. Stop playing both sides. And I think that, we, organizationally, especially the senior leadership are saying “It’s time to make a decision. Let’s just go. Let’s take this to its logical conclusion.”

The Marketing Communications Manager addressed the issue more directly, noting that the leadership was “inventing the process as we invent the product”, relying on workflows and information that were new to the members of the leadership team. Notably, this Manager compared the leaderships’ current sensemaking processes to those
used during the last business model change effort. Specifically, she noted that the previous change effort was a “long and iterative process” and that the company was intentionally trying to better define the goals at the front-end of the project with respect to the current change effort:

**It’s really not business as usual for us.** One of the biggest changes for us in this process working to be intentional about what that MVP will be previously, most of our products have been developed for a specific customer with a very specific set of requirements. We tried to come up with our own product, but it was a very long and iterative process because we didn’t define exactly what we wanted it to be upfront. So, with this new UHD product, the MVP everyone is talking about, what we are really trying to do, starting now, is define exactly what we want it to be and, of those things that we want it to be, what can we have in our timeframe. What is feasible? And then of the features that we want but can’t get right away, what can we release this winter or this spring, and what are we going to start working on immediately to start making it better. So, I would say that I am a little bit concerned about the process because it is new to pretty much everyone in this company. We are inventing the process as we invent the product. Which is a lot of ambiguity.

In addition to the participant observations made about the way that ambiguity was handled from a *procedural* perspective, several participants also noted that the role an individual’s department played in the implementation of business model change affected their *individual* sensemaking perspectives. One frequently reported example was the difference between the sensemaking perspectives between individuals in Marketing versus Engineering, with those in Engineering being the most affected by the ambiguity that characterized this particular business model change initiative:

*Marketing certainly embraces ambiguity much better than the other teams just because they are [the other teams] working to something that is very concrete.*

*We don’t have a 400 page spec that says exactly the color, the flow diagram that we want the product to work to. So the ambiguity is, basically you say, “We want to display video.” And engineering, “Well, how big? What’s the
resolution? How many bits?” They could come up with 500 questions so there’s ambiguity, so its continuously messaging what the product does, what the customer needs, and describing the user story and everything in more detail. So it’s a lot of communication and making decisions. One of my big pet peeves is, “Oh, we don’t know it, so therefore we’re paralyzed.” Make a best case decision, a best guess about what is required and go forward. If it is wrong, we iterate. I’d rather fail fast than fail slow.

You can’t design electronic hardware. Like you have to know exactly what it needs to be and unfortunately it will be perceived as “how did we not see it” or “a miss” or a mistake that we didn’t see that this was needed. Engineering. I’m not saying they can’t work in ambiguity, but as a leadership team you’ve got to be constantly reminding them we’re in ambiguity.

So when you’re doing smaller runs of a product and you’re in development, they can’t sometimes function that well because the quality folks job is to have everything documented and have every “I” dotted and “t” crossed, but you’re not there yet.

So you have to manage change you have to give the person what’s in it for them, you have to understand the way that they see it. So you might see through your lens that something is blue. Through somebody else’s lens, they see “That’s a little bit blue with some green...” They are so detail-oriented, if you say “this has to be blue”, they are going to say, “I don’t know what’s blue.”

In the closing statement of his interview, the CEO put the importance of sensemaking into perspective with a noteworthy statement noting the possibility that his assumptions may be wrong and posing the question, “at what point do we realize we’re right or wrong?” Although the evaluation of the “right” or “wrongness” of the assumptions are beyond the scope of this research, it was noted that CEO raised the issue that the leadership team’s best sensemaking efforts could result in unintended outcomes, and that there was some question about when they would even become aware of their misjudgments.

Well the fascinating thing will be to see how people see their roles within that flow. Because some people will see their roles very differently, and depending on
what happens with our product introduction, **we might be wrong! And at what point do we realize we’re right or wrong, and what tension does that lead to?** You know. Where, OK, the CEO who is also the VP of marketing is wrong about his assumptions.

Indications of this concern are evident in the second of the data collected during the researcher’s bi-weekly information requests. Here the VP of Manufacturing notes some jockeying between Engineering and Marketing with respect to solidifying versus continuing to adapt the plans in order to perfect the product in time for launch:

**Getting final MVP (minimal viable product) was challenging because as Engineering is trying to commit, marketing is appearing to add features.** [The President] mediated and kept project moving forward.

This back-and-forth between departments was also described by the President as “tension”, though he noted that it was a constructive tension because it served as an indication that the team was processing a lot of information, and that a lack of tension with respect to the design elements of the MVP may be an indication that they had not taken enough variables into consideration with respect to development.

Interestingly, by the end of the data collection period the participants reported a much more formalized process for interpreting market feedback, including the development of spreadsheets to guide the specifics of development and more formal work sessions which included engagement with customers to promote better accuracy in interpreting and translating market feedback:

Researcher: So when we spoke in August it sounded like the plan, this is all relatively new to the company, but was a lot of meetings, formal and informal meetings. Is that mostly how the interpretation has taken place?

Research Participant: I think it’s both. We have meetings when we need to have meetings, but then it’s a lot of work too. And it’s a lot of working meetings
where we’re pulling up spreadsheets and three of us are working on them together and we’re calling customers together just so we can all understand the customer’s needs and the market’s needs a little better. [Appliance Manager]

Notably, during the summary focus group, the participants revealed that sensemaking throughout the continuous reconfiguration had indeed had a direct and fundamental effect on their implementation of the business model change initiative. Specifically, the leadership noted that they had changed their strategy from a technology focus to a customer service focus after realizing that they could better edge out their competition by offering tailoring the design of their product to best integrate with key customers’ products, rather than focusing on developing the most state-of-the-art and newest technologies. This realization significantly affected the direction of their business model change effort, moving their short-term focus away from launching the new, state-of-the-art UHD product and toward a “mass customization” strategy for their existing HD product. In other words, through the course of the continuous reconfiguration, the leadership changed their go-to-market strategy from seeking broad appeal based on leading-edge technology toward a very targeted approach to sales based on customizing existing technologies for a small set of high-value customers:

I would also say, in my view, the customer service aspect is higher. And not customer services as in “We are going to respond to you in 5 minutes”, but more, “If you need this feature or this control mechanism specific for your implementation, we’re going to do that because you have a high enough volume.” E1 talks about his checkerboard and we’re going after one or two people in each market and submarket and customizing a few features for each customer in that market. So, it’s almost like a mass customization from a software standpoint. Where the competition won’t do that because they sell their product and their software, so the realizing of the importance of mass customization, it wasn’t a shock, but a finding.
If you look back, four months ago, we said we need to come out with this new UHD product right now, we’re going to sell a couple of these current products, and then it is going to go away. Now, where are we? It’s the reverse!

We sold a couple 4K because the markets not ready for 4K. But we can sell a lot of 2K because with our value proposition we can actually gain pretty good sales with it.

These realizations and the resulting adapted approach to the market are an example of why the existing literature on continuous reconfiguration views it as a favorable strategy. Through a process of continually probing the market with respect to their change assumptions, the case organization learned that they were more likely to realize commercial success with their new business model through a strategy based on service, rather than on technology.

**Summary of Findings for Research Question #2**

It was evident in the data that both the continuous reconfiguration and the participants’ efforts to make sense of it affected the business model change initiative in a number of ways. Specifically:

- There were indications in the data that one’s role in the company tended to be related to their tolerance of ambiguity and therefore to their sensemaking perspective. Specifically, individuals in Marketing were reportedly more tolerant to ambiguity than individuals in Engineering and their efforts to make sense of the continuous reconfiguration generally more robust. Once alignment of shared interpretations was reached, however, no differences between the roles or departments were noted.

- Sensemaking activities themselves were not recognized by the participants by name. For example, interpreting and aligning interpretations were
described as “meetings” characterized by various levels of structure and formality. Based on the data, it seems that, once ambiguity was bracketed, sensemaking activities consisted of collaborative processes operationalized as both formal and informal meetings with representatives from across the organization. These efforts became more formalized throughout the reconfiguration period and expanded to involve customers by the end of the data collection period.

- The data suggests that the continuous reconfiguration (and leaderships’ related sensemaking activities) resulted in generally positive outcomes from a change content standpoint, including a fundamental change in focus away from developing a broadly applicable leading-edge technology and toward customizing an existing/established technology for a few high-value customers. This finding is consistent with the existing literature, which is focused on the benefits of continuous reconfiguration. In the following section, however, the findings related to this study’s third research question revealed some unintended outcomes related to the continuous reconfiguration and leadership’s efforts to make sense of it.

**Research Question #3: How has this sensemaking resulted in unintended outcomes in the overall change effort? (“Unintended” per the judgement of the researcher and confirmation from participants during member-checking.)**

A key area of focus in this study were unintended outcomes specifically related to the continuous reconfiguration of the business model change effort, as there is currently a gap in the literature in this area. The unintended outcomes noted in the data included both internal/organizational outcomes, as well as external/customer and market outcomes. The assessment of an outcome as “unintended” was the researcher’s discretion, though efforts were made to frame questions very specifically, and to member-check analysis throughout the data collection period. The bi-weekly check-ins between the researcher and participants were particularly fruitful with respect to this research question.
One of the unintended outcomes identified in the data was a generalized sense of anxiety and risk. That anxiety and sense of risk were considered to be unintended outcomes of the continuous reconfiguration because both were viewed as challenges to the case organization’s efforts to successfully implement their new business model. With respect to risk, the most vocal of all the participants was the company’s president; the concept of risk, as it relates to ambiguity and the business model change, came up multiple times in his interview and he went so far as to suggest the biggest risk facing the company was ambiguity from the continuous reconfiguration:

The ambiguity is just continuous, at least from what I can tell. **We have risks, and the biggest risk is ambiguity.**

The president noted that other individuals in the organization were also anxious in response to the ambiguity that had accompanied the continuous reconfiguration:

**I think that folks are feeling the anxiety of the ambiguity in what’s going to be happening throughout that change.**

In fact, the President defined his job in terms of the need to reduce ambiguity and thereby reduce risks so that members of the organization are able to resume their work routines without being unnecessarily held back by unchecked ambiguity (and the risk associated with it):

**My job is to determine the risks, reduce the risks, and try to clear up ambiguity.** So that people can actually get their job done - what we need done in the time that we need to get it done.
Also remarkable was how the CEO (who is also the company’s founder) describes the effect that the continuous reconfiguration had on his leadership of the company. In particular, he noted the stress that the ambiguity and continuous change have caused and expressed deep fatigue and a sense of unrest as a result:

Speaking personally, I mean I’m 52. I’ve been doing this for 20 years. Twenty-five years between company one and company two. Until you sit in this seat it’s really, really hard to understand the variables in the equation and, knowing that each day are responsible for every single element of the company and if you make one misstep you can lose the entire company and you could lose your entire life savings, and realizing that more and more the external influences, and I’ll speaking very candidly – government influences – are driving decision making process, and not in a positive way. It becomes tiring. So, I’m a little bit more brittle. And I’m not able to play the game of chicken as I used to. To say “I’ll blink last.” I’m actually waking up in the middle of the night and my heart will race and I’ll feel sick to my stomach, and I’m getting a little tired of that.

Beyond the more generalized issues of risk and anxiety, some specific outcomes were also identified in the data, including the effect that ambiguity was having on the leadership’s definition of key project details, like the tactical and operational details of the product (referred to by participants as the minimum viable product, or “MVP”) which the reconfiguration was informing. Here the Marketing Communications Manager described this unintended outcome:

So we have already turned up ambiguity. People in the company are using the term MVP in slightly different ways. This is my understanding. So, some people are talking about a goal MVP as in this is what we want to be able to release. This is, if we get to at least this much stuff, this many features in our appliance, we will release it this winter. Other people are talking about a very, very, very minimum viable product, which is just taking our current product and putting on a different platform.
The communication and interpretation issues were also noted with respect to timelines for the MVP’s release. According to data collected in real-time from the bi-weekly check-ins with the participants, the departments within the organization got “out of synch” with each other with respect to the project timeline:

Currently, there is a lack of synchronization between departments about goal dates for early prototype releases. Stakeholders disagree on what dates are achievable and how important meeting those dates is to the overall success of the project.

The Marketing Communications Manager noted another issue related to the risk that subsequent layers of the organizations may fail to buy-in to the current business model change effort because of a feeling or belief that the change would not “stick” because of the continuous nature of the change (compounded by the overall frequency of change the company has experienced over the course of the preceding three years). In this case, reluctance to buy in to the current change exists as an unintended outcome of the continuous reconfiguration (following on the heels of an extended period of change for the company):

My worry would be that people see how often things have changed around here and think, “Why is this any different. This whole product strategy. Whatever. We’ll be over it in six months.” That would be my worry. Because there’s been a lot of change, there’s less faith in this particular direction.

Elaborating on this issue, the Marketing Communications Manager explained that the messaging related to change in general (and the continuous reconfiguration in particular) may have contributed to unintended outcomes related to reluctance to buy-in to the current change initiative. Specifically, the Manager noted the tendency to launch
each new change initiative with statements proclaiming that “This time we got it right!” but to do so more than once and in the process undermine appreciation for change as a process of continual improvement:

I think there is also a tendency for some of the people on senior staff, when they talk about those changes or refinements, to talk about it as, “We’ve reinvented the wheel and got it right this time!” And then a little bit later, “We’ve reinvented the wheel and got it right THIS time!” Which probably doesn’t foster that understanding of continual change and improvement. It’s like someone looks at the scientific process and thinks that science is always wrong because new information is always coming along, or they think that it is continually self-correcting. That’s kind of how I understand the ambiguity in that area.

Notably, one of the most significant unintended outcomes of this continuous reconfiguration was the separation of two key employees from the company’s Engineering Department: the Vice President of Engineering (and a participant in this study), as well as a key project leader. The following data excerpts were drawn from the study’s bi-weekly communication with participants and the excerpts track the evolution of the separations, which began with the project leader threatening to leave the organization in response to his frustration with the way that the VP of Engineering was handling ambiguity, progressed through his being repositioned within the company, and then his ultimate departure from the organization. This particular team leader was highly valued in the organization and evidently had a significant role in the product development process, as he was mentioned by name by several of the study participants:

First bi-weekly check-in:

The VP of engineering will be taking on a much more hands on approach to the product development. Separate from this there are changes about to happen in the leadership of the company that will significantly change how the ambiguity is managed.
Second bi-weekly check-in:

One of our key resources quit last week as he was frustrated by engineering not being supportive of ambiguity. He did not want to quit the company but felt this was his only option. We ultimately have moved him to marketing. But it illustrates how challenging engineering is to work with, i.e. they do not want to work in ambiguity.

Third bi-weekly check-in:

We moved an engineering resource to marketing as it was clear engineering was not his right place. In doing so we are seeing that he can do things faster/better than engineering in some ways. This will lead to bypassing engineering on some instances. That will lead to tension.

Shortly after the third bi-weekly check-in, the CEO notified me that the VP of Engineering was being relieved of his duties. Data from the fourth bi-weekly check-in suggested that, rather than the tension predicted during the previous check-in, the changes in personnel had instead resulted in a different unintended outcome: the need to consider re-scoping the project plan in light of the loss of the Engineering leaders. Communication issues related to this re-scoping are also foreshadowed in the excerpt below:

We eliminated our VP of Engineering. That is pretty big. This leads us to having to rescope what we may/may not do as it relates to the exact implementation of the UHD appliance.

In addition to the loss of the VP of Engineering, it was reported during the study’s focus group session that several others from the Engineering staff also separated from the company:

But most of an engineer’s typical personality, there’s a lot of stability. That’s a big base of their personality, most engineers. So, with ambiguity and continuous change and implement type of things, it pushes engineers out of
their comfort zone. So, an unintended but perfectly, I mean, if we didn’t expect it we would be insane, some of the engineers, they kind of fell off the bus. It was just too much change and it paralyzes them almost.

In summarizing the unintended outcomes for his organization, however, the CEO noted that there were also some positives, including some pleasant surprises regarding individuals in the company who stepped-up in the face of ambiguity and exceeded expectations:

So, an unintended outcome is that you never know in the world of ambiguity who is going to step up and start doing things that are more amazing than what you even thought. So, we have a team member, L, who started out as a Psychology and HR grad, so she works with P3 in HR and she transitions to Sales and Marketing. And now, she’s kill ‘in it in Sales and Marketing! She’s now on a variable comp plan, she is anticipatory of future trends, we sat with her just the other day and we listened to her interpretation of future events and her brain is out there, so you never know when someone, through ambiguity, is going to activate in a very positive way.

This is an important addition to the discussion of unintended outcomes – “unintended” does not always necessarily equate with “negative”. Rather, companies operating within the context of a continuous reconfiguration may find that serendipity plays a role in the realization of some unexpected positive outcomes.

Summary of findings for Research Question #3

Analysis of the data suggested that there were unintended outcomes traceable back to the continuous reconfiguration of the business model change effort. These outcomes were noted in a variety of manifestations, from employee anxiety and eroded commitment to change through product output and customer outcomes. Specifically:
• Two participants noted a generalized sense of anxiety and “brittleness” directly related to the need to be continuously changing their tactical and operational plans, especially when the company’s former business model afforded them considerable stability and predictability.

• Ambiguity stemming from the continuous reconfiguration was cited in cases of missed communications and missed product deliveries.

• The continuous change affected the alignment of leaderships’ interpretations of product specifications, resulting in different interpretations between different individuals.

• Two key members of the organization’s Engineering Department separated from the company during the data collection period due to the continuous reconfiguration.

Notably, however, the CEO also referenced positive “unintended outcomes”, in which case members of the organization had surprised management by surpassing expectations and sizing the opportunity to solve problems and provide leadership where it was needed.

Data Patterns and Findings by Theoretical Proposition

In addition to looking for answers to the research questions in the data, pattern-matching of the data to the theoretical propositions was undertaken to assess whether continuous reconfiguration of the business model change effort resulted in “effects” or “no effects” on the case organization’s business model change effort (Yin, 1994).
Analysis of the data suggested that continuous reconfiguration did have an effect on the business model change effort, with all four of the study’s propositions finding support in the data, suggesting that the continuous reconfiguration corresponded with a predictable pattern. Although an “effects” pattern was noted, the strength of the dependent and intendent variables was not necessarily equal across the four propositions. Rather, a stronger relationship was noted in the data between continuous reconfiguration and Theoretical Propositions 1, 2 and 4 with a weaker relationship being noted with Proposition #3. The following section details the data supporting each of the theoretical propositions (which were developed prior to the start of data collection), and is then followed by a second section which details emergent concepts which fell outside of both the research questions and theoretical propositions but have been noted for completeness in reporting.

**Theoretical Proposition #1: Continuous reconfiguration of a business model change effort contributes to overall ambiguity of the change process.**

There was support in the data for the relationship between ambiguity and continuous reconfiguration. Specifically, the pattern suggested by the data was that the continuous reconfiguration created “complexity and uncertainty” that affected interpretation of technology and market trends, estimating of costs and delivery schedules for clients, and the actual engineering of products for maximum consumer appeal. To illustrate the ambiguity in engineering, the case organization created an industry report which addressed the disparity between the most sophisticated technology available – which at this time is 8K – and the majority of the existing media infrastructure – which is
standard HD, or 1080p. This gap between what is possible and what represents the current industry standard is significant. With this gap in mind, the company began the business model change initiative focused on the “4K UHD upgrade cycle”, but notes that customers must make choices about how to upgrade their equipment:

This raises an important question. Some businesses are asking whether they need to participate in the 4K UHD upgrade cycle, since we know that 8K will be coming soon. Should they wait for 8K? We don’t think so. 8K has been demonstrated, it’s true, but 4K was demonstrated in the early 2000s, and it’s still not widely available. Additionally, different industries adopt and deploy new technologies at their own pace. Cable, for example, still widely uses MPEG-2 technology. It might seem like you can skip 4K because 8K is almost here, but that’s just not the case.

Additionally, the company is trying to take into account the many media consumption options in the market and determine what all of these options will mean for the production and streaming of media, which is where the case organization is aiming with their new business model:

So now, how do people consume content? There are dozens, hundreds of ways, where do you apply, what goes on? Now you really have to figure out the dynamics of the market, versus the market being defined. It’s absolutely fascinating. If you don’t like ambiguity, you’ll die!

The continuous reconfiguration itself has been necessitated both by the nature of the market itself, as well as by the nature of the company’s new business model, which is based on interpreting the market (rather than fulfilling customer’s detailed engineering requests):

We’re switching over to being market driven, where we take to our customers a product and we determine what the customer and the market needs. Versus the
customer giving us a big spec. So in that regard there is a lot of ambiguity because we have to figure out where the technology is going, um, where technology is going where the market is going.

In addition to the challenges of interpreting technology trends and market demands, the VP of Engineering also noted ambiguity in estimating work for the company’s clients, based on the various unknowns and complexities, and based on the fact that this type of work was new to the organization:

Because, you wind up with business pressures and your customer wants to know exactly without a doubt when this will be delivered and there’s a high degree of uncertainty based on complexity and uncertainties. And the complexity in estimating work you haven’t done before. That which is always the case when you’re working in emerging technology. All three of those things are risks, so we just wind up having to, we try, if we’re partnering with someone, we try to get them an estimate and set some realistic expectations on that estimate being at the beginning of the project a high degree of uncertainty.

OK, you know what, we’re in a period of higher unknowns with the new product, we really need to make some traction on that before we can be sure of the schedule that we had.

In addition to these external ambiguities, ambiguity was noted within the organization with respect to how the continuous reconfiguration affects the actual engineering work necessary to bring products to market. While it is the job of the marketing staff to collect market data and information about use cases, the engineering staff has to react quickly to the ever-changing intelligence about the market and respond with respect to technical feasibility and technical planning to ensure that the company’s product was relevant:
You know, **what the company will experience in those four months, engineering might experience it in four days, where things might change five times. And they have to react to that each time.** Engineering has to participate in this so it rubs off there as well.

*Theoretical Proposition #2: Interpretation of change-related ambiguity laterally across functional units will be recognized by leadership as a source of unintended outcomes because of the various frames of reference (ex: technical feasibility vs. market acceptance).*

There was considerable evidence in the data that various units and interfaces within the case study organization were recognized for their potential to contribute to unintended outcomes. Most notable was the focus on engineering, which was singled out with respect to that unit’s overall intolerance for ambiguity, as well as for the potential for ambiguity in engineering’s interpretation of specifications to lead to unintended outcomes. The “concreteness” of a unit’s contribution to product output was noted with respect to their overall tolerance for ambiguity:

*Marketing certainly embraces ambiguity much better than the other teams just because they [the other teams] are working to something that is very concrete.*

It was also noted that the company had not yet worked out a formal solution with respect to project management across departments. Instead, this role was being spearheaded by an engineering department team leader “wearing many hats”, which had the propensity to lead to miscommunications:

*And the other is just, from a project management point of view, who is being the task master? Because we have an engineering project manager. So R is our engineering project manager. But he is really managing the project and others*
from within engineering. So not the interface between departments. He ends up playing that role because we all wear so many hats, but one of the things that we find, and that we as a group are consciously trying to prove is that, since there’s no one that sits up kind of at a higher level talking to everyone and dealing with all of the details, sometimes there are miscommunications...

This same engineering team leader contributed to another type of unintended outcome when he became frustrated with the way that the engineering department was operating and tendered his resignation from the company. The company responded by offering to move him to marketing, where he might be in a better position to play the role of project manager between departments, though as noted in later data excerpts, he ultimately left the company:

We moved an engineering resource to marketing as it was clear engineering was not his right place. In doing so we are seeing that he can do things faster/better than engineering in some ways. This will lead to bypassing engineering on some instances. That will lead to tension.

The challenge of working across departments was amplified by the very practical challenges having to do with interpreting information from the market and from customers – without a detailed spec sheet – for the first time:

Yes, that is a challenge. Not specifically in terms of me interpreting what I hear, but in terms of each of us in the team who is giving market feedback deciding how to fit it together. Because we hear different things. Even when we’re in the same conversation sometimes we hear different things.
Especially since we’re actually usually in different conversations. K was at a trade show last week. T is going to a trade show next week. We’re all getting slightly different messages and trying to figure out how to combine those, um, to get to what’s most important to us.

The difficulty aligning interpretations across the units within the company was evident in a number of unintended outcomes including “a lack of synchronization”
related to the manifestation of the business model change effort – the design and launch of their first physical product:

**Currently, there is a lack of synchronization between departments about goal dates for early prototype releases.** Stakeholders disagree on what dates are achievable and how important meeting those dates is to the overall success of the project.

Difficulty managing expectations was noted as a source of friction between Quality Control and the other departments:

So, when you’re doing smaller runs of a product and you’re in development, they [Engineering] can’t sometimes function that well because the quality folks job is to have everything documented and have every “I” dotted and “t” crossed, but you’re not there yet.

It was noted several times that engineering was generally less tolerant of ambiguity. The following excerpt came from the interview with the company president with respect to how the interpretation of market intelligence is undertaken by the company. As noted previously, engineering’s relative intolerance for ambiguity may be traceable back to the precision required in their work, which does not allow for ambiguity in design, but in this excerpt the president was speaking with respect to ambiguity in communications about the business model change effort on the whole:

**Yes, Engineering tends to get stuck and is not as efficient in the presence of ambiguity.**

Engineering’s tolerance to ambiguity – what engineering thinks is risky versus what I think or what E1 thinks is risky… So the fact that E1 is sitting there saying, “You have to know the market data before you move forward – don’t waste your time.” Engineering will sit there and say, “The stuff that E1 brought to me is not, it’s too risky.”
You have people in manufacturing that accept ambiguity and will do anything to break through that wall. I mean anything. People in engineering who look at life, and because they have not had the correct leadership, will immediately identify risk in every single thing, including walking in the building.

Theoretical Proposition #3: Leadership will respond to continuous reconfiguration of a business model change effort by hesitating to move forward with the implementation of fundamental changes.

Overall, this proposition had the least amount of support from the data. There were only a few indications that the continuous reconfiguration contributed to any hesitancy on behalf of leadership to implement details of the business model change initiative. There were some indications that the other layers of the organization – outside of the leadership team – may be affected by the perception of “flip flopping” with respect to the change effort. Specifically, the Marketing Communications Manager had this to say when asked about how continuous reconfiguration was affecting the implementation of the business model change:

My worry would be that people see how often things have changed around here and think, “Why is this any different. This whole product strategy. Whatever. We’ll be over it in six months.” That would be my worry. Because there’s been a lot of change, there’s less faith in this particular direction. My hope is that more people in the company share the feeling that I have, which is that yea, we’ve been through a lot of change and a lot of iterations, we’re kind of getting closer to a direction. And I think we’re doing a lot of what needs to happen right now to lay the foundation for really, a really strong direction. So, I suppose it’s a question of interpretation, whether people see the constant change as a cycle of improvement and refinement, or flip-flopping. I think of it as improvement and refinement, but I can see how, especially some people who aren’t as deeply involved in these strategic conversations, it would seem like flip flopping.
The company’s President made similar comments when asked about how the continuous reconfiguration could affect the company’s workflow:

It has an ability to really blow it out of the water. Because, like I was saying, we try to set an MVP and try not to change that MVP because if you continuously change the requirements that people are trying develop a product to, deadlines go out the window. *It’s like, “OK, we can work on the new requirements, but it’s going to change next week anyway, why strive to get it done.”* So I’m trying to be almost less flexible in that regard to say “We have an MVP. Unless there’s a massive change…” Because with marketing and sales, it’s always what the last customer has asked… So, “Oh, we went to this customer, they want this feature. So, we’re adding or changing the feature.” And engineering is sitting there saying, *“Well, there goes two weeks that I worked on that other feature…that’s out the window.”* Or changed greatly. So, managing that is a challenge. So, we’re trying to keep the core design, what we call the MVP, consistent with engineering. Unless there is a massive customer, or massive market change.

With respect to this theoretical proposition, the researcher concluded that there is evidence that continuous reconfiguration may affect individuals’ perception of a change initiative, and may have a demotivating effect when the continuous reconfiguration affects work that has already been completed, but the data from this study is insufficient to draw strong conclusions on this particular unintended outcome. More research is needed to fully explore the issue.
Theoretical Proposition #4: Managing messaging around the change will be recognized as the source of some unintended outcomes because the desire for communication will be high but the availability of information and the capacity to formally communicate it during continuous reconfiguration will be limited.

There was strong support for this theoretical proposition in the data, which is not unexpected, given the importance of messaging to the concept of sensemaking. In the first excerpt, the company’s President speaks to the challenge of moving the expectation of the company’s Engineering staff away from the “400-page spec document” they received from customers under the old business model toward being comfortable working with a “one page idea” under the new business model:

So initially, when we were working with customers doing service, and here is the spec of what we want, that’s one type of employee. That’s one type of engineer. OK, I’m pulled, here’s a 400-page spec – it’s perfect. That’s not necessarily a good engineer doing that is not necessarily a good engineer with a one page idea. Now we’ve got to implement it. Both are great engineers, but one is going to be better at one, and one is going to be better at another.

The case organization’s President elaborated on the issue of messaging and unintended outcomes by noting that, in detail-oriented situations (and with a detail-oriented engineering workforce), simple messaging may be deemed insufficient by those desiring more specific information. In the excerpt below, the President outlines the frustration of managing messaging with an Engineering staff that may either take too many liberties with their interpretation of a message, or not take enough:

Sometimes, if you don’t define it in small enough or detailed enough steps, they’ll give you what they thought you asked, you have to say, “Yea, I did say that… didn’t mean it that way…” That’s another thing I went through the Bartell and Bartell and they had the thing of lenses. So you have to manage change you have to give the person what’s in it for them, you have to understand the way that they see it. So you might see through your lens that something is blue. Through somebody else’s lens, they see “That’s a little bit blue with some
green…” They are so detail-oriented, if you say “this has to be blue”, they are going to say, “I don’t know what’s blue.”

The president also expressed some frustration over individuals’ reluctance to act when facing any gaps in information or knowledge, noting that in their context of continuous change and ambiguity, members of the organization needed to take initiative and make decisions to keep the change effort progressing:

One of my big pet peeves is, “Oh, we don’t know it, so therefore we’re paralyzed.” Make a best-case decision, a best guess about what is required and go forward. If it is wrong, we iterate. I’d rather fail fast than fail slow.

The VP of Manufacturing noted that messaging was needed to specifically address ambiguity, and to help manage individuals’ expectations regarding the future of the change initiative and the likelihood of future evolutions of the implementation plan:

So, really, the whole company probably struggles with the ambiguity, but I think the more you kind of message that as an expectation, like expect ambiguity. I know personally I deal with it better if I know going into it that, “Oh, this could change, this could change five more times.”

**Emergent Concepts**

While the majority of the data could be categorized according to the research questions and Theoretical Propositions, a number of emergent themes were noted, including the nature of this change effort as “different”, “exciting and positive” and more directed and focused than past change initiatives. Additionally, employee separations – voluntary and involuntary – were noted, though there was some indication that the
separations had been positive with respect to their impact on the company’s overall
tolerance of ambiguity and change.

One of the themes that emerged very early in the analysis of this phase of the case
study was that this change initiative was viewed as being “different” than other recent
initiatives. The President of the company referred to the difference as the company
having a single “North Star”, or well-defined direction they were driving towards, which
had not necessarily been the case in the previous business model change efforts, when the
ultimate target was less clear:

And we’re getting better and better at defining what we’re going to do, and keep
marching at it. **So, we have a North Star. Before we had two or three. And they might not have been in the same area.** So, you had some people going this
way, some people going to this star, and we were getting further and further apart.
**So, we at least now, the pivots that we made, we’re all heading the same
general direction.** Now, there’s some avoiding asteroids, so we’re not heading
directly toward the North Star, but we’re making progress that way. So I think
the big thing with the pivots that we’ve made over the last few years, **we’ve
gotten rid of the multiple end goals. Now we’re focused on the one North
Star.**

However, the President reiterated the point that, although they have a clear
direction and a shining star to aim for, the path they are taking is “varying” (referring to
the continuous reconfiguration):

**We have a North Star that we’re heading to, but we’re always not exactly at
North Star. We’re heading toward it in a varying path.** That’s probably the
wrong word. We’re heading toward it, but not in a straight line. So that is where
the change is coming.

The Marketing Communications Manager mirrored the sentiment that this
business model change effort was both a significant change, and qualitatively different
from previous change efforts (namely, the company’s first attempt to move from
engineering services to product company, at which point the goal was less defined and the company launched a mobile application. She also expressed hope specific to this particular change effort and new direction:

We tried to come up with our own product, but it was a very long and iterative process because we didn’t define exactly what we wanted it to be upfront. So, with this new UHD product, the MVP everyone is talking about, what we are really trying to do, starting now, is define exactly what we want it to be and, of those things that we want it to be, what can we have in our timeframe.

Yea, I think that the change process involved in UHD is a component of a larger change that the company has experienced from being an engineering services company to being a product company, so developing a product line and marketing it to a live streaming AV market, in my mind, is the bigger change. And UHD is a component of that.

My hope is that more people in the company share the feeling that I have, which is that yea, we’ve been through a lot of change and a lot of iterations, and we’re kind of getting closer to a direction.

Relatedly, multiple participants spoke of this change as “exciting” and referred to it as a good thing for the company:

I think it’s definitely a good thing in looking more towards a product company. I think the markets that we were in previously, I don’t know if they’ll produce the revenue that we wanted. So, we had to make a change. So, just understanding what business we actually want to be in, yes, it’s going to be very beneficial to make this change.

I think it is going to be very good for our company.

Let’s just go. Let’s take this to its logical conclusion. And we think that will be very positive.

We will probably put it in all of, we will go to all of the IME companies that we normally work with now, we’ve intersected with all of them, and The Company is viewed as the expert for UHD, so I think that makes it exciting too. It’s not like you’re pivoting or doing something completely different. You are behaving completely different, but you are still in a core area of expertise. So, I think a lot of people are excited.
This positive outlook throughout the leadership group is notable from a sensemaking perspective because it suggests something about the alignment of interpretations about the change effort. In sensemaking, shared interpretations in an organizational group suggest that active interpretation has resulted in the alignment of paradigms, meaning that the group has come together to reach a shared conclusion (Weick, 1995, 2005). This outcome is in contrast to the data collected during the previous engagement with the case study organization, two years prior, at which time the company was in the midst of its first attempt at moving toward being a product company. At that time, the feelings about the change were much more reserved and characteristic of a “wait and see” feeling about what the change would mean for the company.

Another theme that emerged from the data was that of employee separations. The issue was generally cast in a positive light, with participants mainly noting that individuals who were not comfortable with ambiguity and change exited the company, leaving those that remained relatively unfettered by their resistance to change:

I think some of the attrition we had last year had some of the most change fatigue. We shrank as an organization, fairly significantly, and part of that was layoff and part of that was attrition, and I think that some of the people that had the most change fatigue, or were the least comfort with ambiguity that comes with this kind of self-definition, a lot of them left. A lot of the people left are lot more comfortable looking at something and saying, “We don’t have all the information now, we know we’re going to have to change in a month”, which I think is valuable.

Notably, according to the VP of Engineering, the engineering department had undergone some separations prior to his arrival – including his predecessor (the previous
VP of Engineering). This bears note because of the various mentions by participants that those in Engineering tend to be the least tolerant of ambiguity.

When I first came here engineering was in a certain state and I was needed more to help rebuild and stabilize engineering because they had a number of people leave, including the VP of engineering.

Although this same VP of Engineering separated from the company during this study, it is worth noting that he was not dismissed because of his intolerance of ambiguity per say, but because he was reportedly not an active listener and tended to approach the change effort with pre-conceived notions (as discussed in the summary of findings for Research Question #3). According to the President and CEO, this represents an issue with leadership, not necessarily an issue with ambiguity, though the President noted that the context of continuous reconfiguration did exacerbate the situation.

Chapter Summary

Data was collected and analyzed from a variety of sources, including interviews, publicly available data, office documents, bi-weekly information requests from participants, and a summary focus group. The data was revisited by the researcher six times for coding, contributing to findings that inform each of the study’s three research questions. The findings indicated the following related to the research questions:

- RQ1: The data did reveal ambiguity resulting from the continuous reconfiguration of the business model change initiative, which affected the organization at a number of strategic and tactical levels. Specifically,
there was ambiguity noted with respect to the new product design, product delivery timelines, external dependencies, and operational details (including funding for the development of opportunities relevant to the new business model)

- **RQ2:** Leadership sensemaking throughout the continuous reconfiguration did affect the implementation of the business model change effort. The data indicated that one’s role in the company tended to be related to one’s tolerance of ambiguity, with marketing noted as the most tolerant and engineering as the least. Overall, the impact of continuous reconfiguration was viewed by participants as positive based on the belief that it was leading the company toward a well-informed and responsive position from which to implement its new business model.

- **RQ3:** While the impact of continuous reconfiguration on the business model change initiative was generally positive, the data did indicate a number of related unintended outcomes. Specifically, the data indicated a generalized anxiety (directly related to the ambiguity created by the continuous reconfiguration), missed communications and deadlines, misalignment of leadership interpretations of product specifications and some resistance to change (most notable in layers of the organization subsequent to the participating leadership).
Analysis of the data in relation to the theoretical propositions was indicative of an “effects” pattern in the data, suggesting that continuous reconfiguration of the business model change effort did indeed have an effect on both leadership sensemaking and unintended change outcomes. In addition to the data which was coded according to research question and theoretical proposition, a number of emergent themes were present in the data, including the relationship between risk and ambiguity and the general consensus that the change represented a positive new direction for the case organization.
Chapter 5

Summary, Conclusions and Recommendations

At the time this study was conducted, the published literature relating to continuous reconfiguration of a business model change effort views continuous reconfiguration as overwhelmingly positive, noting only in passing that it may present “management challenges” for organizations (Gunther McGrath, 2013). This researcher’s findings in earlier research, however, suggested that continuous reconfiguration of a fundamental change effort may contribute to a number of unintended outcomes related to how members of an organization responded to the change initiative when it was subject to ongoing fluctuation.

To best explore this issue, which is currently unaddressed in the literature, Weick’s (1995, 2005) sensemaking perspective was utilized as a framework through which to examine the phenomenon in detail. Weick’s (1995, 2005) sensemaking perspective is based on the premise that productivity in an organization is interrupted by ambiguity (specifically referred to as “bracketed events”), and that the members of an organization must interpret ambiguity - and then align interpretations throughout the organization - in order to create meaning which allows for the resumption of work routines (p. 413). The researcher’s decision to utilize sensemaking perspective as a framework through which to study the phenomenon was based in part on the published works of Balogun and Johnson (2004, 2005) and Balogun (2006) in which sensemaking
perspective served as the lens through which to trace ambiguity and through the process of interpretation and to ultimately relate sensemaking activities to unintended outcomes. In the case of this study, sensemaking perspective became the framework through which to understand how continuous reconfiguration contributed to ambiguity, how leaders of a case organization interpreted that ambiguity, and then how the ambiguity (and leadership’s interpretation of it) contributed to unintended change outcomes.

This study was designed around three research questions which focused on what ambiguity was created by continuous reconfiguration of a business model change effort, the way(s) in which leaders’ efforts to “make sense” of said ambiguity affected the implementation of the business model change effort, and then the unintended change outcomes that resulted from that sensemaking. Methodology was guided both by Balogun and Johnson’s (2004) methodology and by Yin’s (1994) recommendations pertaining to the design and analysis of case study research. Based on Yin’s (1994) recommendations, the researcher developed four theoretical propositions to guide the study and facilitate analysis of patterns in the data. These propositions include the researcher’s predictions about the effect that continuous reconfiguration would have on the change effort and included the following: continuous reconfiguration will contribute to ambiguity, efforts to align interpretations across units of the organization will contribute to unintended outcomes, the continuous reconfiguration will cause leadership to hesitate to implement aspects of the change initiative, and the want for information about the change initiative, on behalf of the members of the organization, will surpass leadership’s ability to provide it.
Analysis of the data yielded information in support of each of the three research questions and an “effects” (as opposed to a “no effects”) pattern in the data respective to the theoretical propositions. In other words, analysis of the data indicated that the continuous reconfiguration did contribute to ambiguity which prompted leadership sensemaking which affected the business model change effort and resulted in unintended change outcomes. The strength of the “effect” pattern in the data varied across the researcher’s propositions, being most pronounced with respect to the relationship between continuous reconfiguration and ambiguity, the effect of organizational role on the interpretation of ambiguity, and the desire for messaging outstripping the availability of it. There was only modest indication of hesitation on behalf of leadership to implement the change imperatives in response to the continuous reconfiguration.

While this study represents the first exploration of this phenomenon and does not constitute the basis for theory development or broad generalization of findings, it does surface some topics for further inquiry. Next steps for this research may include similar case analyses of organizations implementing change in contexts necessitating continuous reconfiguration, as well as further study of what practical implications the findings may have for both organizations implementing change and for Workforce and Organization Development (OD) professionals who have a vested interest in equipping organizations to manage change and operate effectively.
**Strengths**

This study addresses a gap in the research with respect to the relationship between continuous reconfiguration of a business model change initiative and unintended change outcomes. This work is highly relevant to the field of OD because it introduces several topics which are generally under-represented in the existing literature: business model change, and change characterized by continuous reconfiguration. This type of change is increasingly necessitated by rapidly evolving conditions in many markets, but Burke (2014) noted that traditional OD methods tend to be based on episodic change, and therefore may not be as suitable for situations of continuous change. This work takes the first step of beginning to explore the issue and to propose an agenda for future research.

The case study organization reinforced the practical and importance of this research by inviting the researcher to return year after year to study their progress as the company navigated a series of changes to their business model. There was evidence in the data that change will continue to characterize the case organization’s industry, both with respect to rapid advance of technology and the much slower pace of market adoption of that technology, suggesting that continuous reconfiguration may continue to be required of the company (and many others like it) as technology and customers change at different rates, making change a constant in the industry.

Prolonged engagement with the case study organization is another strength of this research, insomuch as it helped the researcher earn the trust of the participants and gain access to data which was critical to exploring this phenomenon. As noted, the researcher conducted three rounds of interviews with the case study organization between 2013 and
2016, a timeframe which accounts for a majority of the time that the case study organization was endeavoring to change its business model from engineering services toward product company. In fact, it was the data collected from the 2013 and 2014 interviews that contributed to the development of the research questions for this 2016 study, making the research questions and findings highly relevant to the case study organization’s specific context. (Note: the prolonged engagement is also addressed in the following section on Limitations, due to the risk of “going native”.)

There was also evidence in the data that participant perspectives and outcomes of the continuous reconfiguration varied across the units of the organization, so it is noted as another strength of this study that the researcher purposefully selected participants from across the company to contribute to the study. The variety of perspectives proved to be incredibly valuable in assessing the study’s theoretical propositions related to messaging and cross-unit collaborations.

A real-time approach to data collection was utilized to maximize the validity of the data (Lincoln & Guba, 1985). This strategy minimized the risk of insufficient or inaccurate data recall and also lent a dynamism to the data which resulted in a richness of detail which was useful in the analysis. Tracking the onset of unintended outcomes by starting at their source – ambiguity and sensemaking – gave the researcher a more complete perspective on the issues in context, which is fundamental to a quality case study (Yin, 1994). Additionally, the researcher, as a knowledge agent (Gioia et al., 2013), played a role in identifying “unintended outcomes”, rather than relying on the participants as a sole source of information related to negative results pursuant to their leadership activates, as this may have been a source of bias in the research.
Limitations

Prolonged engagement with a case study organization can affect data collection if the researcher allows herself to “go native” (Lincoln & Guba, 1985), however the periodic nature of the engagement in the case of this study (and its preceding phases) are deemed to have limited the danger that the researcher would suffer a loss of perspective. To guard against the potential for loss of perspective, the researcher was reflective throughout the study and the reflexivity is evident at various points in the analysis where the impact of the previous engagements with the company are specifically noted.

While the data collection methods were drawn directly from the literature (specifically the Balogun and Johnson study), relying on participants to complete the bi-weekly information requests did prove challenging at times, and response rates ranged between 50% and 100%. Overall, response rates would most likely have been higher if the researcher had scheduled bi-weekly communications that were either in-person or in the form of phone calls, though this presented scheduling challenges for the participants (busy leadership in the midst of a significant organizational initiative) and may have led to other accessibility challenges if the CEO of the organization deemed the study requirements to be beyond what he was willing to commit on behalf of the organization.

Additionally, the researcher notes that studying a greater cross-section of the organization, inclusive of those outside of the leadership team, would have yielded additional perspectives and may have revealed more unintended outcomes. Likewise, if the duration of the study had extended beyond the changeover to the new business model to encompass evaluation of the outcomes once it had been in place for some period of
time. There are other researchers focused on the economic outcomes and the overall accuracy of business model change initiatives, however, so the need for this research is not as pressing as the need for research to address the organizational impact of continuous reconfiguration, ambiguity and sensemaking on business model change implementations.

Based on the precedent set by the literature, this study was designed around a single case. While that single case approach allows for a greater degree of focus on that one case, it also limits the ability for cross-case analysis. Cross-case or multi-case analysis can be beneficial in substantiating the findings of pattern-matching analyses and help to establish the status of the phenomenon as being more than an idiosyncrasy of any single case. Future research, informed by the findings of this case study, may be able to expand the researcher’s lens to include more case organizations. Additionally, the characteristics of the case study organization (suburban, small, entrepreneur/founder-lead) most likely had an impact on the data collected, meaning that both this analysis and future research should take into account organizational factors related to each case study organization and intentionally select organizations representing a variety of contexts (including larger organizations, other industries, and participants representing non-executive roles) if the goal is to advance theory.


Conclusions

Practical Implications

Organizational Change Implications

In the case study organization’s situation, opportunity for them tends to be driven by “technology upheaval”, which will put them, and organizations like them, in a position where related change initiatives are more likely to be characterized by continuous reconfiguration, as their markets will tend to be generally unstable and subject to ongoing fluctuations. This research lays the foundation for describing some of the sources of ambiguity related to continuous reconfiguration, as well as some of the unintended outcomes that may result from that ambiguity. Understanding the sources and outcomes of continuous change-related ambiguity can help both companies and OD practitioners plan and address issues of organizational effectiveness with greater understanding of relevant change initiatives.

The themes of risk related to ambiguity, and leadership’s need to focus on reducing that risk, emerged from the data and suggest that managing risk may be a primary concern, and perhaps even more urgent in the mind of management than the cultivation of organizational buy-in and collaborative participation in the change effort. Understanding this management perspective is relevant for OD practitioners wishing to aid in the facilitation of effective organization change. This is an area that would benefit from more research by OD scholars, as the facilitation of change in some situations may require better understanding of how leadership’s perception of constant (and constantly
changing) risk affects their ability to develop a shared vision, champion the change, and effectively cultivate participation in the context of continuously reconfigured change effort.

Interestingly, when asked about change fatigue, the participants noted that the individuals with the most change fatigue had departed the company, either voluntarily or through a series of layoffs. Although the leadership team noted how difficult the layoffs were for them and for the organization, the end result was a qualitatively different organization in which the remaining members of the organization were those that tended to be more adapted continuous change and less adversely affected by the accompanying ambiguity. This sentiment was voiced by multiple members of the leadership team, and it was evident from the data that each of the leaders participating in the research had a positive outlook on the current business model change initiative and the operational details that were involved in its implementation. Although the President in particular noted that he wished that the path to the new business model was a bit more straightforward and did not require so much attention to continuous reconfiguration, the overall sentiment was noticeably positive among the leaders that were retained by the organization. The possibility that frequent change may have an effect – whether intentional or unintended – on the voluntary and involuntary separation of personnel from a company is an area for further study.

A concept noted in the data and related to the overall positive outlook on the change effort seemed to be the idea that the new business model gave the company “control over its own destiny” for the first time. This idea was voiced by both the President and CEO to characterize the difference between their engineering services
business model – where they had to rely more on their customer’s success and good
cJudgement for success in the market – to a business model where the case study
organization was in a position to read the market and initiate development of new
products without relying on their customers to lead them with respect to innovation.

This research also shed some light on how the ambiguity related to continuous
reconfiguration may affect functional departments within the organization differently,
depending on how much ambiguity affects the nature of one’s work. For example,
according to the data, marketing is less affected because their role in product
development is more interpretive and less concrete, whereas engineering is more affected
because their role is extremely concrete and leaves little-to-no room for interpretation.
This is important for organizational leaders and OD practitioners to understand as they
conceptualize and seek participation and buy-in to change initiatives. Specifically,
championing and helping to build consensus and shared vision for the change may
operationalize very differently between, for example, Marketing and Engineering
departments.

Additionally, the data suggested that active listening (as opposed to harboring pre-
conceived notions) is critical in the case of continuous reconfiguration of an
organizational change initiative. Continuous reconfiguration is inherently likely to
correlate with ambiguous situations, meaning that interpretations of ambiguity throughout
the course of the change effort may materially affect the goals and the tactical specifics of
the change plan itself, so it is important for members of the organization to remain
engaged with sensemaking activities so as not to fall out of alignment with the rest of the
organization. In the case study organization, the failure in active listening was noted on
part of the VP of Engineering, and the company’s President and CEO noted that the entire Engineering department was becoming misaligned with the rest of the organization. The President and CEO feared a host of potential unintended outcomes if the misalignment progressed, prompting his release from the company and leading to a degree of disruption to the change effort and rescaling of project goals.

Although outside the focus of this research, it is notable that one very practical hurdle to successful implementation of the new business model was mentioned several times by the company’s President: financial constraints. As a small, private company, the case study organization was implementing the new business model and the associated product development initiative while remaining financially dependent on the revenues from its existing lines of business. The financial pressures of funding the new business model with the operations of the old business model did reportedly create some ambiguity for the company’s staff, some of whom were pulled off the new product development project to work on an engineering services contract. Although he expressed some concern this could confuse staff with respect to the company’s overall commitment to the new direction, he underscored the practical necessity of operating with respect to financial constraints and doing what was necessary to fund business operations.

**Operational Implications**

The case study data suggested that the continuous reconfiguration may have contributed to some misalignments between individuals and departments regarding the specifics of the tactical product plan. These misalignments were significant in terms of
both the product feature sets as well as the schedule with which the various product functions were to be rolled out. This type of misalignment can be costly during both organizational change efforts and new product development efforts, slowing time to market and creating the risk for expensive re-working of product plans. As noted in the data, it can be difficult to verify that everyone’s interpretation is the same, both because it is usually impractical for the leaders of change to go to each individual involved in the effort to ask them to articulate their interpretation of project specifics, but also because, as noted by the President, individuals may be reluctant to voice any source of potential misalignment – particularly to a superior. The case organization remedied this issue by creating their own specification documents which specified critical details so as to minimize unintentional misalignments.

Importantly, the data revealed that the company’s approach to dealing with the continuous reconfiguration was, in essence, designed on the fly. As such, the leadership team’s efforts to translate market feedback into a coherent plan for a new product – particularly within the context of a new business model and new ways of operating – resulted in both formal and informal means of interpretation which were, according to the participants, “cobbled together” as they went. This approach to interpreting market feedback across the units of the organization was described as “clunky” by multiple members of the leadership team. While this mix of formal and informal interpretation is consistent with the principles of sensemaking, it is important for change champions to keep in mind, given the impact (positive or negative) that informal interpretation can have on a change initiative.
The case study data also suggested that continuous reconfiguration may have an impact on project timelines and the time it takes to produce cost estimates and project completion dates for customers. The data revealed several reasons for this, including the uncertainty of working in an environment where factors may change (and then change again), and the added complexity of having to continuously revisit internal design details, and the potential for significant timeline disruption based on the lead times and availability of parts and supplies when project details are tweaked. Customers reportedly put some amount of pressure on the case study organization to be very specific with delivery dates. Leaders from the case study organization recommend that companies facing similar challenges would work with their customers and develop project milestones and delivery dates together, to raise customers’ awareness of project complexities. Additionally, the case study organization intentionally involved representatives from their supply chain management team in all product design meetings so any changes would be noted immediately, triggering a search for necessary components with lead times that would keep the project on schedule.

**Recommendations**

**Recommendations for Future Research**

This study was exploratory in nature and marks the beginning of the process of fully describing the phenomenon and its research and practical applications. The potential for unintended outcomes as a result of leadership sensemaking during a
continuously reconfigured business model change initiative represents a new direction for the current research with implications for organizations, scholars, and practitioners. The importance of unintended change outcomes is particularly important in light of the rapid change that characterizes many modern markets. Of particular interest would be the impact on the OD change facilitation models and recommendations, as well as the insights for training and development professionals that may seek to equip organizational leaders (and other members of the organization) with the skills necessary to lead change within the context of continuous reconfiguration.

**OD and Organization Change Scholars**

This study was exploratory in nature and more research is needed in this area to more fully characterize the effects of continuous reconfiguration on organization change efforts in general, and business model change efforts in particular. This issue should be of keen interest to researchers because of implication on the applicability of traditional organizational change recommendations and tactics (which generally presume a more episodic change), and because the rapid fluctuation of modern markets makes this type of change effort more common, particularly in technology sectors. Understanding the changing nature of change in organizations is important to the future of fields like OD, where the facilitation of change is a key focus.

Additionally, this study was narrowly focused on the unintended outcomes of leadership sensemaking during a continuously reconfigured business model change effort, but there are many other areas for study which would be of potential interest to
researchers, including how continuous reconfiguration of a change effort may affect other layers of the organization. A more comprehensive study may also reframe the study to take into account the nature of the change facilitation, as an added perspective on sensemaking and/or unintended outcomes. For example, is there a difference between the effects of continuous reconfiguration on a more top-down versus bottom-up approach to facilitating change? Understanding the affect that continuous reconfiguration of a change effort has with respect to the Action Research Model (Lewin, 1947) and related organization change models may be of particular interest to OD scholars and practitioners looking to update these classic approaches to reflect modern change environments.

The issue of managing risk in the context of continuous reconfiguration was specifically mentioned on several occasions by the President of the organization, which prompted the researcher to question whether change efforts characterized by continuous reconfiguration, rather than a more traditional “unfreeze – change – refreeze” approach (Lewin, 1947), would be affected by either the perception or reality of a higher level of relative risk, based on the conditions which tend to prompt continuous reconfiguration. It may be worth investigating if the mitigation of risk (and the perception of risk) overtakes the cultivation of buy-in as a top priority when change is characterized by continuous reconfiguration. Notably, managing risk and the perception of risk may be more of an issue in the case of a business model change, which involves higher level strategic reconfiguration, as opposed to departmental or issue-specific change initiatives.
Workforce Education Practitioners

Organizational leaders are often expected to lead change efforts without any particular experience or training in change management or facilitation. While this issue represents its own area for additional research, it may be the case that training should be reflective of the context in which the change effort is most likely to occur. As noted in the case study organization’s industry analyses, change for them has been prompted by “technology upheaval”, which was important, contextually, to the fact that the company’s change effort is characterized by continuous reconfiguration. It may be the case that companies operating in similar contexts may also be experiencing change as a continuous reconfiguration, and if so, the leadership training in facilitating organization change would ideally be reflective of the context in which the organization was most likely to be operating so leaders can better facilitate change in fluctuating market conditions.

In addition to training and development implications for those leading changes within organizations, there may be opportunities to improve the effectiveness of change efforts by offering some training to members of the organization at all levels. Additional understanding of how continuous reconfiguration of a change effort affects its implementation would be in support of the OD principle of bottom-up change characterized by broad participation across the organization. Conceivably, members of an organization may respond more favorably to flux in the change effort if they are prepared for that potential and have an understanding of why it is happening. This research may be parlayed into the foundation of additional and more targeted research
focused on how change facilitators may better equip organizations to navigate a change effort likely to be characterized by continuous reconfiguration.

Likewise, Workforce Development scholars and professionals may benefit from the application of sensemaking perspective to their understanding of how members of an organization perceive and interpret change (and the ambiguity that often accompanies it – particularly when the change is continuous in nature). This understanding, especially if expanded to illuminate the ways that individuals across an organization work through the process of interpretation to arrive at a shared consensus, may help trainers and change facilitators better anticipate the needs of clients and develop training and facilitative measures which are anticipatory of how individuals “make sense” of change and ambiguity.

It is also worth noting that the case organization ultimately decided to build their new product-based business model on the competitive strategy of customizing an existing HD technology for key customers, which is in stark contrast to the strategy of focusing on technology leadership through the development of an all-new UHD technology, which is where the change effort started. Interestingly, this product customization approach will in many ways mirror the company’s old engineering services business model. With respect to practical implications, this speaks to the fact that change efforts – even when the change is continuous in nature – may not necessarily lead organizations far away from their previous modes of operating, but rather help them recognize how to apply their existing strengths in new ways.


Organizations

This research may help to inform members of organizations of potential challenges specific to organization change which is characterized by continuous reconfiguration. There are a variety of outcomes which may be of interest to individuals across the organization, but particularly to those with responsibility for the planning and leadership of change initiatives. Leaders from all posts may take note of the importance of stakeholder communication – both internal and external – and prioritize the development of a stakeholder communication protocol as part of their change implementation planning. This preparation may help to alleviate some of the unintended outcomes noted in the case study, including misalignments in interpretations between departments, missed communications internally, and missed product deliveries or deadlines with customers.

Those leading HR efforts may take note of the implications that the continuous reconfiguration had on the make-up of the organization, noting both the voluntary and involuntary separations, as well as the net outcome of those separations (namely an organization made up of individuals more adaptable to change). These outcomes may have an impact on how organizations view the prioritization of skills and competencies in hiring and promotion if the future is likely to include change characterized by continuous reconfiguration. Additionally, when this type of organization change is anticipated, retention efforts may be adapted to account for the overall positive effects of turnover, when the end result is an organization comprised of individuals who are most adaptable and who hold a generally positive outlook with respect to change.

Organizations may also note this research and elect to engage help facilitating their change in effort to minimize the likelihood of encountering unintended outcomes. Change facilitators – particularly those that are adept at working with organizations implementing change
in dynamic environments – may bring techniques to bear which would help the company leverage its own expertise to predict and avoid some of the more preventable outcomes in the context of a continuously reconfigured change effort.

**Chapter Summary**

In summary, while this study was exploratory in nature, it was able to produce data suggestive of a pattern of “effect” with respect to the relationship between continuous reconfiguration of a business model change effort and unintended change outcomes. Additionally, this study’s findings suggest that Weick’s (1995, 2005) sensemaking perspective is an effective framework through which to study ambiguity, leadership’s response to ambiguity, and resulting unintended outcomes. Although the findings of this study are not designed to be used directly in the generation of theory or to be broadly applicable to other organizations, this study may serve as the basis for further inquiry into the aforementioned issues.

The practical implications for the case organization are many, especially for organizations in rapidly changing industries where change efforts are likely to be characterized by continuous reconfiguration, as this one was. Practical implications yielded by this study include:

- Understanding the sources and outcomes of continuous change-related ambiguity can help both companies and OD practitioners plan and address issues of organizational effectiveness with greater understanding of relevant change initiatives.
• Managing risk may be a primary concern, and perhaps even more urgent in the mind of management than the cultivation of organizational buy-in and collaborative participation.

• Understanding of how leadership’s perception of constant (and constantly changing) risk affects their ability to develop a shared vision, champion the change, and effectively cultivate participation in the context of continuously reconfigured change effort.

• Continuous reconfiguration may be related to events which change the make-up of the organization, contributing to separations (voluntary and involuntary) after which the remaining members of the organization are those that tended to be more adapted continuous change and less adversely affected by the accompanying ambiguity.

• Following the continuous reconfiguration-related separations, the remaining leaders had a positive outlook on the current business model change initiative and the operational details that were involved in its implementation.

• The continuous reconfiguration contributed to a sense of “control over the destiny” of the company, noted as a positive by leadership.

• The ambiguity related to continuous reconfiguration may affect functional departments within the organization differently, depending on how much ambiguity affects the nature of one’s work. This is important for organizational leaders and OD practitioners to understand as they conceptualize and seek participation and buy-in to change initiatives. Specifically, championing and
helping to build consensus and shared vision for the change may operationalize very differently between, for example, Marketing and Engineering departments.

- Continuous reconfiguration requires continued engagement in the sensemaking process, as opposed to the harboring of pre-conceived notions, because these change scenarios are likely to correlate with ambiguous situations, meaning that interpretations of ambiguity throughout the course of the change effort may materially affect the goals and the tactical specifics of the change plan itself, so it is important for members of the organization to remain engaged with sensemaking activities so as not to fall out of alignment with the rest of the organization.

Operational Implications

- Continuous reconfiguration may have contributed to some misalignments between individuals and departments regarding the specifics of the tactical product plan. The case organization remedied this issue by creating their own specification documents which specified critical details so as to minimize unintentional misalignments.

- The data revealed that the company’s approach to dealing with the continuous reconfiguration was, in essence, designed on the fly. This mix of formal and informal interpretation is consistent with the principles of sensemaking, it is important for change champions to keep in mind, given the impact (positive or negative) that informal interpretation can have on a change initiative.
Continuous reconfiguration may have an impact on project timelines and the time it takes to produce cost estimates and project completion dates for customers for reasons including: the uncertainty of working in an environment where factors may change, and the added complexity of having to continuously revisit internal design details, and the potential for significant timeline disruption based on the lead times when component parts change. Supply chain involvement is recommended.

Customers may put pressure on organizations to be very specific with delivery dates. Organizations facing similar challenges are advised to work with their customers and develop project milestones and delivery dates together, to raise customers’ awareness of project complexities.

The data suggested that the organization itself had adapted to the continuous change, insomuch as the individuals remaining with the company (following a series of voluntary and involuntary separations) were reportedly those most comfortable and effective within the context of organization change. Additionally, the participants noted a relationship between risk and ambiguity specific to the continuous reconfiguration of the change effort, which bears attention from both companies and from change facilitators because of the impact that real and/or perceived risk can have on buy-in and participation from members of the organization.

The researcher asserts these issues may be interesting to practitioners due to their potential to impact organization change-related training and facilitation approaches. Additional research is needed before the findings of this study may be broadly
generalized to other organizations, however. Scholars may follow this study with focused inquiry into how continuous reconfiguration of a change effort, as necessitated by some modern markets, may affect traditional OD change models, and how Workforce and Organization Development professionals may best train and equip leaders and members of organizations to implement change in relevant contexts.

**Final Summary**

This research will become increasingly important as companies in many markets face an increase in the pace of change. The prevalence of business model change research is likely to continue growing as changing markets require companies to continually adapt their approaches to product development, marketing, sales, distribution, and other activities fundamental to value creation. While the existing research has focused on the benefits of “continuous reconfiguration” for companies in fluctuating markets, there has been no exploration of the effect that continuous reconfiguration has on the change process itself. This study was designed as a first exploration of the potential for unintended change outcomes in a continuously reconfigured business model change effort.

Weick’s (1995, 2005) sensemaking perspective was utilized as a framework through which to study the phenomenon. Sensemaking perspective is based on the premise that ambiguity in organizations interrupts workflow and requires members of the organization to align their interpretations of ambiguous events to create an agreed-upon meaning which allows for the resumption of work routines. The methodology was
adapted from the published works of Balogun and Johnson (2004, 2005) and Balogun (2006), in which sensemaking was used as the framework through which to study unintended outcomes of managers’ sensemaking through the course of a corporate restructuring. Balogun generously reviewed the proposal for this research and determined that the methodology was consistent with that of the study that it was designed to emulate.

Data was collected from a small technology firm that was continuously reconfiguring their approach toward a new business model based on market intelligence collected from a series of trade shows which took place throughout the fall of 2016. This study was designed as a single case analysis and data was collected in real-time with a focus on the organization’s leadership team. The research questions were designed to explore the ambiguity created by continuous reconfiguration, the leadership team’s interpretation of that ambiguity, and the unintended outcomes of their pursuant sensemaking. Four theoretical propositions were developed to guide the inquiry and to study the data for a pattern of “effects” or “no effects” from the continuous reconfiguration. The theoretical propositions predicted an “effects” pattern in the data and proposed that cross-unit interpretation and individuals’ desire for more information than was available would contribute to unintended change outcomes, including hesitance on behalf of the leadership to implement certain aspects of the change plan.

The data, which was triangulated between different sources, suggested there was an effects pattern in the data. Of particular note was the emphasis on the contribution of continuous reconfiguration to change-related ambiguity, which was realized in a variety of forms both internal and external to the case organization. Leaders’ sensemaking
activities were also noted to be both formal and informal, and there was indication in the data that sensemaking did indeed affect the business model change initiative in significant ways – ultimately leading to a change of the company’s competitive strategy, which moved away from a technology focus toward a customer service focus. Unintended outcomes were also noted in the data, including the separation of two key employees (including the head of the Engineering department).

The findings serve as a starting point for future research, as the issues described here would benefit from additional inquiry to generate theory and contribute more substantially to the field of workforce education and development. Specifically, researchers may probe the issues of ambiguity and risk in a continuously reconfigured change effort to more fully describe the related challenges and remedies. Additionally, workforce development professionals may incorporate the findings of future research into training for change facilitators and consider expanding the training to other members of the organization who must work within the context of continuous change. Future research focused on the change process and change-related outcomes would complement the existing body of work by cognitive researchers who have been examining the economic outcomes of business model change initiatives, but who have called for more research into the interpretation and decision-making processes that underlie business model change plans.

The findings presented here suggest continuous reconfiguration does have an effect on the implementation of a fundamental change effort, and the effect can contribute to unintended change outcomes. This research serves as an important first step in fully characterizing the phenomenon and thereby serving as the basis for future theory
development and generalizable practical implications. The sensemaking framework may be a valuable tool in future research as well, since it highlights ambiguity, which played a significant role in the “effects” pattern in this study’s data. This research is likely to become increasingly important as markets continue to change more continuously and more rapidly, requiring affected organizations to change accordingly, or risk irrelevance. Scholars and practitioners wishing to contribute to knowledge or practice in this area must then develop an understanding of the effects of continuous reconfiguration on organization change outcomes, particularly with fundamental organization change, where the effects of ambiguity from a continuous reconfiguration are most profound. While this work has produced practical implications for both the case organization and other organizations in similar contexts, researchers and practitioners may also draw from this first exploratory study to inform future inquiry and to further refine research questions and methods to generate more broadly applicable findings and implications.
References


Appendix A

Project Plan

A project plan was developed to plot the resource-consuming tasks involved in data collection and analysis for this study. This plan assumes a successful comprehensive exam in September, 2016.

The project plan is accessible either through the free Gantter app (http://gantter.com), which is a web-based program requiring only a user name and password (no downloads). All committee members have been granted permission to view and edit the file. To view an editable version of the project plan in the Gantter app, please click here.

The project plan is also available as a .png file, which will display the Gantt chart but will not allow for editing. The .png file is accessible through a shared file in the student’s Box account, to which the committee members have been granted access. To view a .png version of the project plan in Box, please click here.
Appendix B

IRB HRP 591

Every effort was taken to ensure the protection of human subjects throughout the course of this research. To view the IRB form HRP 591 for this study, please click here.
Appendix C

Data Collection Instruments and Summary of Findings from Phase 1 Engagement with Case Organization

Interview Questions:

Q1: What have you and the organization learned as you have moved through the business model change?

Q2: What challenges did you face and how did you overcome them?

Q3: What advice would you give an organization about to start the business model change process?
Appendix D

Data Collection Instruments from this Study

The following data collection instruments were developed prior to the initiation of the research for this study and were updated as appropriate to follow emerging leads in the data (Creswell, 2014). The evolution of the instruments can be noted in the email and interview transcripts.

**Participant Interview** – 60 Minute Semi-structured, Focused Interview Questions:

1. Please tell me about your role with the company…?

2. I understand the company is implementing a plan to move the company into the emerging UHD market(s). Can you tell me about what that means with respect to your role/department?

3. I understand that this implementation plan is likely to go through a period of reconfiguration between the trade show in September and the Consumer Electronics Show in January. Can we talk about this reconfiguration and what it might mean, both in terms of the affect it is going to have on workflow, and implications for the company’s success in entering the UHD market?

4. Do you have any questions about the research or your participation in it?
Focus Group Questions

1. There were indications in the data that the continuous reconfiguration affected the product development process, but not as many mentions of the effects(s) on the business model change. Has this last four months of continuous reconfiguration affected the higher-level value creation strategy of the company? Or is the effect felt mostly at the level of product function, features and delivery schedules?

2. I’m interested in the sources of ambiguity related to continuous reconfiguration. There were mentions in the data of designing product features and functions without the benefit of a detailed spec document from the customer, as well as concerns voiced about the effect of continuous reconfiguration on timelines. Where there other forms of ambiguity were created by the continuous reconfiguration?

3. A relationship between ambiguity and risk emerged in the data. Are the risk and ambiguity primarily related to the move from engineering services to product company, or does the continuous reconfiguration account for a good deal of this risk/ambiguity?

4. Based on the interview data, it sounded like the primary means of interpreting data was to have meetings (both formal and informal) between individuals and departments. How has the work of “interpreting” actually played out? Probe if needed: How much of the interpreting work was formal, versus informal?

5. Did the continuous reconfiguration result in any unintended outcomes with respect to either the business model change process or content? Probe if needed: There were indications of concern about project schedules and timelines, and I’m aware that at least
two individuals are no longer with the company. Looking back, did the continuous reconfiguration create or contribute to any other unintended outcomes related to the business model change?

6. Are there any “lessons learned” about continuous reconfiguration of a business model change effort that I should note as part of my research?

7. What advice would you have for another organization heading into a similar change effort?
Appendix E Bi-Weekly Information Requests:

Table A.1

<table>
<thead>
<tr>
<th>Questions</th>
<th>Connection to Research</th>
<th>Connection to Literature</th>
</tr>
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<tbody>
<tr>
<td>Bi-Weekly Prompts: Capture Ambiguity: Has the reconfiguration of the plan to implement the new UHD business model resulted in ambiguity to the degree that it had to be addressed by this team in order for the UHD strategy to continue moving forward?</td>
<td>RQ1</td>
<td>“Ambiguity” specifically referring to an issue related to changes within the business model change implementation which required interpretation by the leadership team in order to enable the “resumption of work routines” (Weick et al., 2005).</td>
</tr>
<tr>
<td>Capture Interpretation and Alignment of organizational paradigms: How has the leadership team manage ambiguity from the ongoing tweaks to the UHD strategy, such that you can keep doing the day-by-day work that is moving the company in the new direction? 1.) How does existing knowledge/experience help or hurt the team’s efforts to make sense of ambiguity? 2.) What factors (technical, cultural, political, etc.) affect the team’s ultimate agreed upon meaning of the aforementioned ambiguity?</td>
<td>RQ2</td>
<td>Weick et al. (2005) highlighted the importance of “trusted frameworks” in the sensemaking process, noting one of the challenges is the evolution of “trusted frameworks” as facts and conditions change. Weick et al. (1995, 2005) and Balogun and Johnson (2004, 2005) noted the social construction of meaning which takes place as part of the interpretation of ambiguity, observing that this process of interpretation can be influenced by the context of power and influence within the organization.</td>
</tr>
<tr>
<td>Capture Unintended Outcomes in the change process: Has the ongoing</td>
<td>RQ2</td>
<td>Balogun &amp; Johnson (2004, 2005) tracked unintended outcomes in</td>
</tr>
</tbody>
</table>
**reconfiguration** of the UHD strategy affected the team’s ability to work effectively? How and why?

| Capture Unintended Outcomes in the change content: How has ambiguity created by the ongoing reconfiguration of the UHD strategy, and/or the team’s efforts to interpret it and resume effective work routines, affected the implementation of the overall effort to implement the UHD strategy? | two ways – change process and change content. In their analysis of change process they looked for discord created within the organization during the sensemaking process (for example, friction between marketing and engineering departments based on questions of who is responsible for what within the new organizational context. |

| RQ3 | Balogun (2006) noted the unintended change outcomes related to sensemaking activities, including changes to the organization’s culture, tension between departments, and middle managers “filling in the gaps” and “editing senior management’s change plans” where details were either unclear or not present. |

*Note: these prompts were adapted as necessary throughout the study to follow leads in the data. The complete record is available upon request.*
VITA

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