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Sensemaking in Enterprise Resource Planning Project Deescalation: An Empirical Study

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Sensemaking in Enterprise Resource Planning Project Deescalation: An Empirical Study

BY

Douglas Aloys Battleson

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

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ACCEPTANCE

This dissertation was prepared under the direction of the Douglas Aloys Battleson Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Executive Doctorate in Business in the J. Mack Robinson College of Business of Georgia State University.

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ABSTRACT

Sensemaking in Enterprise Resource Planning Project Deescalation: An Empirical Study

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Enterprise resource planning (ERP) projects, a type of complex information technology project, are very challenging and expensive to implement. Past research recognizes that escalation, defined as the commitment to a failing course of action, is common in such projects. While the factors that contribute to escalation (e.g., project conditions, psychological, organizational, and social factors) have been extensively examined, the literature on deescalation of projects is very limited. Motivated by this gap in the literature, this research examines deescalation, that is, on breaking the commitment to the failing course of action with a particular focus on ERP projects. This study is organized as a single-case study of a complex ERP project that was undertaken after a merger of two organizations. It examines how the project team members' sensemaking is implicated in deescalation. Applying sensemaking as a theoretical lens, this engaged scholarship research contributes to practice by providing recommendations on how to better manage ERP project deescalation. It contributes to theory by providing a nuanced understanding of ERP project deescalation through project team members' sensemaking activities.

Key words: deescalation, engaged management scholarship, enterprise resource planning, project management, sensemaking

INTRODUCTION

I.I Research Domain

An Enterprise Resource Planning (ERP) system is a business software package that automates and integrates many business functions and processes, such as accounting, sales, distribution, and manufacturing (Nah, Lau, & Kuang, 2001). More specifically, its key abilities include the enterprise wide sharing of common data and providing access to information in real-time. In addition, enterprise wide standard business processes are implemented using an ERP system with the objective of enabling more efficient and effective resource management (e.g., data, materials, finance, human resources, etc.) (Nah, et al., 2001). The market for ERP systems has grown significantly since the 1970's. According to Chen (2009), the rate of growth in 2004 was 14% in a global market totaling $23.6 billion. Over 60% of the Fortune 500 USA companies have implemented ERP systems (Wang, Chou, & Jiang, 2005). While implementations of ERP systems continue to grow, challenges to successful implementations continue to persist, resulting in a high failure rate (Chen, 2009). Though ERP implementations consume significant amount of organizational resources (e.g., time, money, and people) (Keil & Robey, 1999; Markus & Keil, 1994), a Conference Board survey of 117 organizations finds that 40% of ERP projects don't meet the expected outcomes specified in the business cases that were used to justify the investment (Chen, 2009). In addition, 51% of companies across many industries considered their ERP implementations unsuccessful, and an estimated 74% of information technology (IT) projects do not provide the expected functionality on time and within budget. According to Wang et al. (2005), ERP projects typically cost 178% over budget, and take nearly 2.5 times more time compared to the initial schedule and provide only 30% of the intended benefits. Due

to the great expenditure of an organization's time, money, and people, projects simply must be completed more successfully (Keil & Robey, 1999; Markus & Keil, 1994).

I.II Research Perspective

Business problems, rather than technical challenges are the primary cause of failure of ERP projects (Davenport, 1998). These business problems may result from implementing industry best practice business processes which may not be well aligned with the strategic goals of the organization and its culture. Often, these types of alignment issues will result in either project failure or poor organizational performance (Davenport, 1998). Keil et al. (2000) define project escalation as a type of failure which is characterized as the commitment to a failing course of action. Since the escalation of IT projects is very common, developing a deeper understanding of how to deescalate IT projects merits further research (Montealegre & Keil, 2000). Project deescalation refers to projects in trouble that have been successfully redirected or sensibly abandoned (Keil & Robey, 1999). The effectiveness of managerial actions taken to successfully deescalate a project is a key contributing factor. Managerial effectiveness is dependent upon the management identifying problems and taking appropriate corrective actions (Keil & Robey, 1999). Keil and Robey (1999) suggest that many organizational actors can trigger project deescalation. My study seeks to examine how various team members (e.g., project manager, business and IT subject matter experts, integration manager, and director), influence project deescalation from two perspectives: triggering (e.g., key events) and managing project deescalation. To accomplish this I use sensemaking theory which literally is about actors "making of sense" of organizational life (Weick, 1995). In order for practitioners to take a problematic situation and set it up as a problem they must make sense of the uncertain situation,

which at first made no sense (Weick, 1995). Thus, I investigate how *sensemaking by project team members is implicated in project deescalation.*

I.III Research Question

In spite of the tremendous failure rates faced by ERP projects, there is paucity of research on understanding the mechanisms that may be used to deescalate an ERP project. According to Keil and Robey (1999), while many factors that lead to project escalation have been identified, factors contributing to deescalation have not been adequately investigated. A nuanced understanding of deescalation of ERP projects is likely to benefit executives and managers due to the significant benefits associated with deescalation.

A basic premise in my research is that sensemaking capability may influence success in deescalating ERP projects. Specifically, I examine the following research question: *"How is sensemaking by project team members implicated in the deescalation of a run-away enterprise resource planning project?"*

I.IV Research Design

Qualitative methods have been widely used to explore the context in which critical decisions are made and to understand decisions and actions (Myers, 2009). I use a qualitative case study design in this research because deescalation of ERP projects is a relatively unexplored area of research (Yin, 2009). Specifically, I use an exploratory case study to understand how sensemaking influences deescalation and how deescalation influences sensemaking during the deescalation a run-away ERP project implementation. Since this study is engaged scholarship for organizational and social research (Van de Ven, 2007), Table 2 presents the engaged scholarship components for this study (Mathiassen, Chiasson, & Germonprez, 2012).

Table 1: Components of Engaged Scholarship

Engaged Scholarship Component	Research Component
Area of Concern (A)	Understanding how to deescalate a run-away ERP project implementation
Real-World Problem Setting (P)	Escalated ERP project implementations

Framing of Argument/Theoretical Framing (F)
  1. F_A: Theory about Area of Concern
  2. F_I: Theory independent of Area of Concern
	1. Deescalation Theory
	2. Sensemaking Theory

Method (M)
  1. Data Collection (DC)
  2. Data Analysis (DA)
	1. Single-case study, semi-structured questions
	2. Data reduction, drawing and verifying conclusions

Contribution (C) to:
  1. Area of Concern (A)
  2. Theoretical Framing (F)
  3. Method (M)
	1. Understanding how sensemaking is implicated in ERP project deescalation and extends or contradicts prior research by adding value to what is already known
	2. Not Applicable
	3. Not Applicable

Research Question (RQ)	How is sensemaking by project team members implicated in the deescalation of a run-away enterprise resource planning project?

I.V Dissertation Chapter Summaries

These chapter summaries provide a preview of this empirical research.

Chapter II, Literature Review: This chapter provides a review of the literature on project escalation and deescalation—our business context. This review confirms that there are gaps in understanding project deescalation and that no prior studies have used sensemaking as a theoretical lens to study project deescalation.

Chapter III, Sensemaking Theory: This chapter describes sensemaking and its seven properties: Identity, Plausibility, Retrospective, Enactive, Social, Ongoing, and Extracted Cues and its applications. It further illustrates how sensemaking can be used as a theoretical framework for understanding the deescalation process.

Chapter IV, Research Design: This chapter explains why a qualitative and case study approach is used to support this engaged management scholarship empirical study. In addition, the data collection approach and data analysis method are described.

Chapter V, Results: The results from data collection and analysis for the escalation and deescalation periods are reviewed and individual sensemaking is explained for all properties.

Chapter VI, Discussion: This chapter reviews the contributions to both practice and theory. The lessons for practice based on how the individual's sensemaking impacted the deescalation efforts and how the deescalation effort impacted the individual's sensemaking are presented. This research contributes to the literature on ERP project deescalation by examining it using a novel theoretical lens and extends our understanding of this complex phenomenon. The limitations of this study and future research are also reviewed.

Table 2 provides a list of abbreviations for this research project.

Table 2: List of Abbreviations (in Alphabetical Order)

Abbreviation	Definition	Abbreviation	Definition
EMS	Engaged Management Scholarship	IS	Information Systems
ERP	Enterprise Resource Planning	IT	Information Technology
ERP1	Acquiring Company's ERP System	SDLC	System Development Life Cycle
ERP2	Acquired Company's Legacy System	SME	Subject Matter Expert

LITERATURE REVIEW

II.I A Guide to the Project Management Body of Knowledge

This study will refer to key terminology that is defined by **A GUIDE TO THE PROJECT MANAGEMENT BODY OF KNOWLEDGE (PMBOK GUIDE)**. These are summarized in Table 3.

Table 3: Project Management Process and Process Group Definitions

Term	Definition	Reference
Process	A set of interrelated actions and activities performed to achieve a pre-specified product, result, or service. Each process is characterized by its inputs, the tools and techniques that can be applied, and the resulting outputs.	(PMI, 2008, p. 37)
Initiating Process Group	Those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.	(PMI, 2008, p. 39)
Planning Process Group	Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.	(PMI, 2008, p. 39)
Executing Process Group	Those processes performed to complete the work defined in the project management plan to satisfy the project specifications.	(PMI, 2008, p. 39)
Monitoring and Controlling Process Group	Those processes required to track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes.	(PMI, 2008, p. 39)
Closing Process Group	Those processes performed to finalize all activities across all process groups to formally close the project or phase.	(PMI, 2008, p. 39)

II.II Enterprise Resource Planning Projects

An organization's strategies and performance are affected by ERP systems because of their integration into core business processes; hence, many organization's IT strategies include ERP systems as key components (Ke & Wei, 2008). According to Poston and Grabski (2001), in 1998 70% of Fortune 1000 organizations either had or were implementing ERP systems and this industry "experienced a compounded annual growth rate of 35%" (p. 272). In 2002, AMR research indicates that a significant proportion of an organization's application budget, at 34%, was directed towards the ERP market (Aloini, Dulmin, & Mininno, 2007). The key benefits of ERP systems include reducing asset bases and costs, accessing accurate and timely information across an integrated enterprise and supply chain, and increasing customer satisfaction by increasing the consistency of data (Poston & Grabski, 2001). These benefits are enabled by ERP systems that typically include a database and applications that provide the business an enterprise wide view (Wickramasinghe & Gunawardena, 2010).

Despite these benefits, ERP system implementations are complex, difficult, ambiguous, costly with time and budget, and continue to have a high failure rate (Aloini, et al., 2007; Ke & Wei, 2008; Poston & Grabski, 2001; Wickramasinghe & Gunawardena, 2010). The characteristics of ERP projects result from technology, business process integration, management, psychological, and sociological factors (Aloini, et al., 2007; Poston & Grabski, 2001).

Though complexity can be attributed to the IT task of integrating the ERP system with hardware, database, and other organizational systems, additional complexities exist because of enterprise wide changes that result from ERP implementations (Poston & Grabski, 2001). Such changes include enterprise wide business process changes with prepackaged industry best

practices which, though meant to reduce implementation time and cost, create a confirmatory context and adds complexity which in turn results in project delays and failures (Poston & Grabski, 2001). Enterprise systems (ES) such as ERP, were viewed as IT challenges and many chief executives held the IT department responsible for their successful implementation (Davenport, 1998). The only proper meditator capable of managing the IT and business imperatives is a general manager (Davenport, 1998). In addition, most project managers view risk management processes as additional overhead; therefore, a lack of risk management is closely associated with software project failures (Aloini, et al., 2007).

Organizational culture aligning with information systems (IS) is considered critical for successfully benefiting from an ERP system (Ke & Wei, 2008). Martinson and Chong (1999) suggest that "even good technology can be sabotaged if it is perceived to interfere with the established social network". These culture and IT conflicts manifest by either rejecting the system or modifying it to the existing culture (Ke & Wei, 2008). Yet, leadership can create a new culture to counter cultural resistance and mitigate this conflict with IT, thereby increasing the ERP implementation success. Moreover, top management's role and especially its leadership is a critical factor for a successful ERP implementation (Ke & Wei, 2008).

ERP projects are costly, with an average implementation time of 6 months to 2 years and average cost of US$1 million (Aloini, et al., 2007). A META Group survey in 1999 of large multinational companies reported an average cost of US$15 million per year with an implementation duration average of 23 months (Poston & Grabski, 2001). In addition, a recent META Group survey of 63 companies with corporate revenues between $12 million and $43 billion reports that these projects cost an average of $10.6 million and took an average of 23 months to implement (Umble, Haft, & Umble, 2003). Despite these investments in time and

money, ERP projects have a high failure rate, with 90% of ERP implementations experiencing schedule delays or budget overruns (Umble, et al., 2003). Ke and Wei (2008) report that, "According to the survey conducted by Deloitte, the rate of on-time and within budget ERP implementation is less than 20%" (p. 429). In addition, according to (Aloini, et al., 2007), "a study of 7400 IT projects showed that 34% were late or over budget, 31% were abandoned, scaled or modified, and only 24% were completed on time and on budget" (p. 548). These IT projects, which include ERP projects, can incur these budgets and time overruns due to becoming escalated.

I use the term escalation to refer to a "commitment to a failing course of action" (Brockner, 1992; Keil & Robey, 1999). Brockner (1992) describes all escalation situations, independent of context, as having, "decision making in the face of negative feedback about prior resource allocations, uncertainty surrounding the likelihood of goal attainment, and choice about whether to continue" (p. 40). In other words, in escalation situations decision makers must decide whether to continue to follow the original course of action or not even after receiving negative feedback (Brockner, 1992; Keil, Depledge, & Rai, 2007).

According to (Keil, 1995), a software project may escalate "when there is continued commitment **and** negative information" (p. 422). His study confirmed that project, psychological, social, and organizational factors contributed to escalation. Further, he also found four additional factors that contributed to escalation: emotional attachment to the project, empire building, inadequate resources, and loose management controls. Keil (1995) concludes that continued funding of an escalated IT project adversely impacts the business investment in the following ways: (1) the additional funding isn't solving the original business problem, (2) it's a continued waste of valuable resources, and (3) opportunity costs are incurred. Therefore, it is

critical to prevent IT project escalation to realize value from IT investments (Markus & Keil, 1994).

Montealegre and Keil (2000) observe that IT projects may be especially prone to escalation due to a variety of reasons such as the difficulty in obtaining accurate work estimates and measurements, dynamic nature of the technology and business environments, and volatile requirements. Also, Keil et al. (2000) report that 30% to 40% of IT projects incur some facet of escalation.

Keil et al. (2007) differentiate between unambiguous negative feedback and ambiguous feedback for escalation to occur or continue. They note that when negative feedback is unambiguous, escalation is not sustained and deescalation occurs (Garland, Sandefur, & Rogers, 1990). Managers can process information and detect a problem when the negative feedback is unambiguous (Keil, et al., 2007). Conversely, when negative feedback is ambiguous and the course of action is unclear, then escalation is likely. In fact, due to these conditions, decision makers may be prone to escalation behavior because cognitive biases influence the interpretation of the situation which impedes problem recognition.

Keil et al. (2000) suggest that in some cases managers are aware of and choose to ignore or heavily discount negative information due to certain cognitive biases; hence, promoting escalation. Keil et al. (2007) study the cognitive biases of selective perception and illusion of control and how they affect the decision processes of problem recognition and escalation. They conclude that escalation behavior is "strongly rooted in problem recognition and decision making and is subject to the effects of cognitive biases" (p. 409). Moreover, selective perception and illusion of control biases will probably be enhanced when the context includes, "unstructured

problems due to the complexities of processing uncertain, ambiguous, or equivocal information that characterize these problems" (p. 409). Relative to the decision process, these cognitive biases can affect the problem recognition stage or the actual decision stage. Keil et al. (2007) provides an understanding of "*why* decision makers may fail to recognize problems and how this can lead to escalation" (p. 413). Their study also highlights that problem recognition and escalation are more prone to occur in the context of complex and ambiguous environments. Such contexts are characteristic of ERP projects which are the focus of my study.

II.III Deescalation of Information Technology Projects

Keil and Robey (1999) define deescalation of commitment "as the reversal of escalating commitments to failing courses of action, either through project termination or redirection" (p. 65). Montealegre and Keil (2000) suggest that deescalation occurs "whenever there is a reduced commitment to a failing course of action" (p.418). Deescalation can result in either project abandonment or redirection where the commitment is moved away from the previous course of action (Montealegre & Keil, 2000). For purposes of my study, I use the term deescalation as reducing the commitment to a failing course of action.

Keil and Robey (1999) observe that deescalation is less common than escalation, and possibly as a result, research on deescalation is very limited. But they argue that research on deescalation is potentially more important than research on escalation because it is likely to provide solutions for a very common and expensive problem. Similarly, Lui and Chan (2008) discuss how recent research has focused on lessons learned from abandoned or successful IT projects and lament that there is very little research on turning around and completing troubled IT projects. Relative to abandoning IS projects, one study determined that 35 percent were

abandoned in the implementation stage, implying a delayed and wasteful consumption of additional resources (Ewusi-Mensha & Przasnyski, 1991; Keil & Robey, 1999).

According to Keil and Robey (1999), effective managerial actions to redirect an escalated project determines project success or failure. This effectiveness is dependent upon the manager's ability to recognize problems and implement a new course of action. Keil and Robey (1999) determined that no specific factors always deescalated a project but deescalation can be triggered by many actors and occurred due to many specific actions to gain control of the project. They evaluated twelve factors that could facilitate movement from escalation to deescalation, independent of whether the project was terminated or successfully redirected. Of the twelve factors, the following seven exhibited significant differences between escalation and deescalation: (a) organizational tolerance for failure, (b) the presence of publicly stated limits, (c) awareness of problems facing the project, (d) clarity of criteria for success and failure, (e) organizational practices for evaluating decision-makers: process versus outcome, (f) regular evaluation of projects, and (g) separation of responsibility for approving and evaluating projects. These factors were often seen as *consequences* versus *causes* of the decision to deescalate by redirection. Keil and Robey (1999) conclude that a factor can be a cause or a consequence depending on the *context*, and many different factors may contribute to deescalation.

Keil and Robey (1999) studied seven categories of actors involved in deescalation: (a) top management, (b) internal IS auditor, (c) external auditor/consultant, (d) IS users, (e) IS project team members, (f) IS management, and (g) unspecified. In addition to determining that top management most frequently triggered deescalation, their study also concludes that actors are more likely to trigger deescalation if they are not directly involved (categories $1 - 3$ listed

above). In other words, the actors with direct project involvement may be too committed or too close to deescalate (Keil & Robey, 1999).

Mahring et al. (2008) also explored the key roles in initiating and executing IT project deescalation and role interactions during deescalation. Their case study research identified the following seven roles that shaped deescalation (p. 463): (a) messenger, (b) exit sponsor, (c) exit champion, (d) exit blocker, (e) exit catalyst, (f) legitimizer, and (g) scapegoat. Roles, viewed as patterns of actions, may, or be perceived to, influence a course of events. Moreover, according to Mahring et al. (2008), "roles are not positions and roles and actors are distinct" (p. 466). Actors can be in several roles and over time a role may be occupied by several actors (Mahring, et al., 2008; Robey, Welke, & Turk, 2001). Also, in the context of escalation and deescalation, organizations can be viewed as performing actions and being an actor due to a dominant coalition of individuals taking action (Mahring, et al., 2008). Mahring et al. (2008) therefore "define a deescalation role as a coherent pattern of actions performed by one or several actors during the process of IT project deescalation" (p. 466).

Mahring et al. (2008) also explored key role interactions. A key finding from Mahring et al. (2008) is that role interaction is closely associated with interpersonal influence, and interpersonal power effects deescalation (Drummond, 1995). With this understanding, they explored the role's resources or means to influence others using the following six bases of power of interpersonal influence (Raven, Schwarzwald, & Koslowsky, 1998): (a) reward, (b) coercive, (c) expert, (d) informational, (e) legitimate, and (f) referent power. These power bases were analyzed based upon the role's actions and comprehensive influence leading to an understanding that actors supporting deescalation depended upon these power bases, which collectively moved the project to deescalation (Mahring, et al., 2008). In sum, enactment of roles and role interaction

influence deescalation which culminated in five propositions by Mahring et al. (2008). According to Mahring et al. (2008), all seven roles and five propositions may or may not apply to deescalation situations, but, deescalation is initiated only after several actors have secured and enacted specific roles and interaction patterns.

Keil and Robey (1999) developed eight categories of actions taken to cause deescalation which were then grouped into either the project management or resource management categories. The project management category included the following actions: (a) redefine the project, (b) improve project management, (c) change in project leadership, (d) subdivide the project, and (e) resolve specific problems. The resource management category included: (a) adding and/or removing resources, (b) layoff and (c) hiring, and training.

A potential common action for resource management is that additional resources and investment may be required to deescalate the project. Though this may align with escalation behavior, the additional resources were carefully managed and critical to completing redefined projects (Keil & Robey, 1999). Moreover, redefining the project and improving project management accounted for 46% of the total actions, whereas adding change in project leadership and adding and/or removing resources accounted for 73% of the total actions. Hence, the top four actions clearly facilitate deescalation better when compared to the bottom four actions. Keil and Robey (1999) propose a project deescalation process model which consists of four actions: (a) actor observing or engaged in project detects negative information and passes this onto, (b) actor with responsibility and authority to take corrective action which responds in one of two ways, (c) continued commitment to failing course of action (escalation) or, (d) action taken to redirect or terminate troubled project (deescalation).

However, the model does not specify the conditions required for the detecting actor to pass on negative information to the authority actor. According to Keil and Robey (1999), many detecting actors may choose not to communicate negative information to authority actors, which is referred to as the mum effect (Tesser & Rosen, 1975), and that authority actors may not be receptive and act upon negative information, which is referred to as the deaf effect. Hence, deescalation can only occur when both the mum effect and the deaf effect are overcome. This requires organizations to provide processes and tools to ensure that negative news is delivered and acted upon. Moving in this direction, Montealegre and Keil (2000) provide a project deescalation model which emphasizes that deescalation is a process and not an event and contains key triggering activities.

Montealegre and Keil (2000) suggest that deescalation is a process that consists of four phases with each containing several triggering activities, rather than an event that occurs once escalation is recognized. Their research also identifies strategies and tactics for achieving deescalation. They observe that that deescalation doesn't immediately start with unambiguous negative information and it is a more complex and gradual process than prior research suggests. The gradual process of deescalation, versus a sudden enactment to a new course of action, is a result of the commitment established to the current course of action during the escalation process. Montealegre and Keil (2000) propose a model of phases where contextualized actions and decisions are made over time without a predetermined ending. In other words, deescalation is an emergent process with unpredictable results. Moreover, retrospection may be required to identify the specific move from escalation to deescalation.

According to Montealegre and Keil (2000), the deescalation process model consists of distinct phases: (a) problem recognition, (b) reexamination of prior courses of action, (c) search

for alternative courses of action, and (d) implementing an exit strategy. In addition, according to Montealegre and Keil (2000), each phase has "certain triggering activities and are associated with context-specific decisions that foster further deescalation" (p. 432). An example of a triggering activity is recognizing negative feedback during the problem recognition phase. Their research suggests that deescalation is supported by many different types of decisions and actions which culminate in reducing the commitment to escalation. Also, they consider deescalation to be a dynamic process that deals concurrently with constraining actions from the preceding escalation circumstances and is still capable of building new acts of commitment to new courses of action.

In addition, according to Keil and Robey (1999), "deescalation studies examine how decision makers extricate themselves from escalating commitments" (p. 67). Project deescalation has the elements of actors, roles and interactions, triggering activities, and unpredictable results. For people involved in deescalation this requires working with ambiguous information, recognizing problems, taking specific actions, and using retrospection. Problems with these characteristics have been studied using sensemaking theory (Gioia & Chittipeddi, 1991; Griffith, 1999; Lewis, Mathiassen, & Rai, 2011; Weick, 1995). Therefore, this study uses sensemaking as a theoretical framework to understand the process of project deescalation.

In summary, while the high frequency of and challenges faced by ERP projects have been well studied, there is paucity of research on understanding deescalating and redirecting ERP projects to success. And though prior research has investigated the challenges to ERP implementations (Wickramasinghe & Gunawardena, 2010), few studies, or if any to the best of my knowledge, examine how project participants' sensemaking is implicated in deescalation, or redirecting to success. Therefore, the goal of this paper is to address these gaps in the literature

and develop a deeper understanding of team members' thinking towards triggers and practices for deescalation. Specifically, the primary goal of this dissertation is exploring how sensemaking by project team members is implicated in the deescalation of a run-away ERP project.

SENSEMAKING THEORY

III.I Overview of Sensemaking Theory

Sensemaking literally means making of sense which includes active agents that construct sensible events (Huber & Daft, 1987; Weick, 1995). In other words, according to Waterman (1990), the active agents "structure the unknown" (p. 41). According to Weick (1995), "How they construct what they construct, why, and with what effects are the central questions for people interested in sensemaking" (p. 4). Weick (1995) argues that sensemaking includes: "placement of items into frameworks, comprehending, redressing surprise, constructing meaning, interacting in pursuit of mutual understanding, and patterning" (p. 6). He explains that sensemaking is not interpretation but interpretation is a component of sensemaking. The key difference explained is that sensemaking includes the activity of "how the text is constructed as well as how it is read" (p.7). Though interpretations include cues (Porac, Thomas, & Baden-Fuller, 1989), Weick (1995) explains that sensemaking includes understanding "how the cues got there in the first place and how these particular cues were singled out from the ongoing flow of experience" (p. 8). He continues that sensemaking also includes "how the interpretations and meanings of these cues were then altered and made more explicit and sensible, as a result of "concrete activities"" (p. 8). In summary, according to Weick (1995), "The process of sensemaking is intended to include the construction and bracketing of the textlike cues that are interpreted, as well as the revision of those interpretations based on action and its consequences" (p. 8).

For practitioners, the problems are constructed from elements in the problematic situations, which includes the element of uncertainty (Weick, 1995). The practitioner must do work to

convert the problematic situation to a problem. This work, according to Weick (1995), is to "make sense of an uncertain situation that initially makes no sense" (p. 9). We do this by interactively naming the elements we will attend to and the framing of context in which to attend to them. In other word, this problem setting process includes the following activities: selecting the elements of the situation, setting our attention boundaries, and imposing our coherence and saying what is wrong and what are the new directions for the situation (Weick, 1995).

Progressive clarification of these problematic situations is a key sensemaking property; yet, Weick (1995) notes that "this clarification often works in reverse" (p. 11). In other words, the outcome develops the prior situation definition by the actor's own actions (Garfinkel, 1967; Weick, 1995). A similar reverse order emphasis is found in cognitive dissonance theory (Festinger, 1957; Weick, 1995) where, according to Weick (1995), the focus is on "*post*decisional efforts to revise the meaning of decisions that have negative consequences (Cooper & Fazio, 1984; Scher & Cooper, 1989; Thibodeau & Aronson, 1992)" (p. 11). In summary, according to Weick (1995), "These operations retrospectively alter the meaning of the decision, the nature of the alternatives, and the "history" of the decision in a manner…" (p. 11). Both sensemaking and cognitive dissonance include an actor that starts with an outcome, such as a choice, and then makes the outcome sensible by developing a plausible story that developed the outcome (Weick, 1995).

In addition to cognitive dissonance, organizational studies includes ideas such as: enactment (Abolafia & Kilduff, 1988; Weick, 1977), commitment (O'Reilly & Caldwell, 1981; Salancik, 1977), and escalation (Staw, 1981) which all share (Weick, 1995, pp. 11-12) "a common set of emphases that can be traced back to dissonance theory. These include the following:

1. Sensemaking by justification, an idea that reflects an earlier emphasis on dissonance reduction by increasing the number of cognitive elements that are consistent with the decision;

2. Choice as the event that focuses sensemaking and justification, an idea that retains the emphasis on postdecision behavior;

3. Sensemaking by retrospect, an idea that retains dissonance theory's emphasis that postdecision outcomes are used to reconstruct predecisional histories;

4. Discrepancy as the occasion for sensemaking, an idea that restates dissonance theory's starting point, namely, action that follows from the obverse of cognitions held by the actor;

5. Social construction of justification, an idea that reflects dissonance reduction by means of social support and proselytizing;

6. Action shapes cognition, an idea that is a composite of Items 2, 3, and 4 above."

Justification, choice, retrospective sensemaking, discrepancies, social construction of justification, and action are all important for any sensemaking account (Weick, 1995). In addition to sensemaking, making sense of actions that did not conform to beliefs and self-concepts and because of cognitive dissonance influence, sensemaking also is focused on, according to (Weick, 1995), "conflict, affect, motivation, and instability as antecedents of change…" (p. 12).

According to Weick (1995), sensemaking is how "people generate what they interpret" (p. 13), an activity or a process, an invention versus just discovery, it precedes interpretation, and is to "construct, filter, frame, create facticity (Turner, 1987), and render the subjective into something more tangible" (p. 14). According to Weick (1995), "To talk about sensemaking is to

talk about reality as an ongoing accomplishment that takes form when people make retrospective sense of the situations in which they find themselves and their creations" (p. 15). In other words, sensemaking is not understanding, interpretation, and attribution; but, it is making something sensible (Weick, 1995).

III.II Sensemaking Properties

There are seven properties that separate sensemaking from understanding, interpretation, and attribution (Weick, 1995). According to Weick (1995, p. 17), "Sensemaking is understood as a process that is

1. Grounded in identity construction

2. Retrospective

3. Enactive of sensible environments

4. Social

5. Ongoing

6. Focused on and by extracted cues

7. Driven by plausibility rather than accuracy"

These properties have practical implications, can each be considered an isolated set of research questions; yet, still relate to the remaining six. Each includes action and context which are very important, and together they can represent a sequence (Weick, 1995). According to Weick (1995), these properties, or characteristics, serve as a guideline by acting as boundaries for sensemaking inquiries because they "suggest what sensemaking is, how it works, and where it can fail" (p. 18).

III.II.i Grounded in identity construction. A core function in sensemaking is the establishment and maintenance of identity which is created out of the interaction process (Weick, 1995). According to Weick (1995), "Identities are constituted out of the process of interaction. To shift among interactions is to shift among definitions of self" (p. 20). As the sensemaker, you work towards deciding which self is appropriate because this will determine your definition of what your situation is. Moreover, this flow between you and the situation is bidirectional so that the situation can also determine a definition of self (Weick, 1995). This is why identity is so important to sensemaking and why "sensemaking begins with a sensemaker" (Weick, 1995, p. 18).

According to Weick (1995), individual sensemaking in organizations is affected by the continuous outcome of self-enhancement, self-efficacy, and self-consistency. According to Erez and Earley (1993, p. 28), self-enhancement is "reflected in seeking and maintaining a positive cognitive and affective state about the self", self-efficacy "is the desire to perceive oneself as competent and efficacious", and self-consistency "is the desire to sense and experience coherence and continuity." These three needs contribute to the processes that create our self-concept and maintain our changing sense of self. Weick (1995) also notes that according to Dutton and Dukerich (1991), based upon our beliefs of how others view our workplace organizations we form and modify our individual self-concepts and personal identities. Because of this closeness between the organization's image and our individual character, individuals have motivation to protect their organization's positive image and fix a negative image by engaging or disengaging issues with actions.

Weick (1995) writes that what affects our view of "what is out there and what it means" is this engaging and disengaging with threats to identities and to images, or opportunities to

repair and assert positively to them (p. 21). In addition, opportunities or alternatives for positive results promote self-enhancement, efficacy, and consistency and allows the organization to be viewed favorably. Negative alternatives or threats to these self-representations may alter our sense of those alternatives or threats and we may even redefine the organizational identity. If this organizational redefinition is unworkable then the individual will not use their organization to adorn, evaluate, and adjust their self. And it is this self that acts, interprets, and becomes committed (Weick, 1995). In other words, "sensemaking begins with a self-conscious sensemaker" (Weick, 1995, p. 22).

Because individuals need a sense of identity, an introduction to situations that maintain esteem and consistency of their self-conceptions, sensemaking processes are started. These sensemaking processes strongly influence how individuals start transacting with others in organizations (Ring & Van de Ven, 1989). Weick (1995) also notes that self-referential in sensemaking may be most important and that self may be the text required to be interpreted rather than the environment. In summary, Weick (1995) writes,

> I make sense of whatever happens around me by asking, what implications do these events have for who I will be? What the situation will have meant to me is dictated by the identity I adopt in dealing with it. And that choice, in turn, is affected by what I think is occurring. What the situation means is defined by who I become while dealing with it or what and who I represent. I derive cues as to what the situation means from the self that feels most appropriate to deal with it, and much less from what is going on out there.
>
> The more selves I have access to, the more meanings I should be able to extract and impose in any situation. (p. 24)

III.II.ii Retrospective. According to Weick (1995), retrospective sensemaking draws from Schutz's (1967) analysis "that people can know what they are doing only after they have done it" (p. 24). In addition, we can only direct our attention to what has already occurred (Weick, 1995). Therefore,

> Only when a response occurs can a plausible stimulus then be defined. This reversal comes about because we can never know the beginning phase. An action can become an object of attention only after it has occurred. At the time it is noticed, several possible antecedents can be posited. The choice of "the" stimulus affects the choice of what the action "means." And both choices are heavily influenced by the situational context. (p. 26)

The meaning of an experience is the result of the kind of attention applied to the experience (Weick, 1995). According to Weick (1995, pp. 26-27), "Whatever is now, at the present moment, underway will determine the meaning of whatever has just occurred." Drawing upon Gioia and Chittipeddi (1991), Weick (1995, p. 27) states, "Meanings change as current projects and goals change." Further, he writes that reflection can be too determined and clarity not confirmed because people may have multiple projects with differing project awareness. Therefore, the elapsed experience can be ambiguous because it makes multiple different types of sense, which may contradict other kinds of sense. This contradiction can be the result of independent diverse projects in tandem with opposing purposes.

What is important to understand is that retrospective sensemaking is an activity where synthesized meanings may be required due to the number of different active projects during reflection (Weick, 1995). Moreover, the sensemaker is confronted with ambiguity and not

uncertainty. Hence, the sensemaker doesn't need more information but, according to Weick (1995, pp. 27-28), "they need value, priorities, and clarity about preferences to help them be clear about which projects matter. Clarity on values clarifies what is important in elapsed experience, which finally gives some sense of what that elapsed experience means."

Researchers do not need to emphasize practicality when using the retrospective sensemaking property (Weick, 1995). If the researcher can account for a retrospective view's effects on remembering when answering why people make sense of their ongoing activity then any retrospective view can be used (Weick, 1995).

Weick (1995) writes that hindsight bias usually focuses on how much the reflection leaves out and the resulting problems. These problems include closer causal couplings and coupled events leading directly to the outcome. According to Weick (1995), this is incorrect. The future is uncertain and unpredictable. Also, the outcome was known when reconstructing the past; hence, activities and events didn't happen exactly as remembered. Lastly, retrospective sensemaking may lose many of the causal sequences that challenged accomplishing the final outcome (Weick, 1995).

Despite these problems with hindsight bias, retrospective sensemaking may provide more effective action (Weick, 1995). Three perspectives are required relative to hindsight bias (Weick, 1995). Firstly, the probability that retrospective sensemaking will have significant distortions is minimized by the fact that it involves short time periods between action and reflection and that people are only reflecting back on a couple of projects at one time. Secondly, retrospection sensemaking "only makes the past clearer than the present or future; it cannot make the past transparent" (Starbuck & Milliken, 1988, pp. 39-40). Though, the past may be partially forgotten

this will not be in totality (Weick, 1995). Thirdly, according to Weick (1995, p. 29), "…the *feeling* of order, clarity, and rationality is an important goal of sensemaking, which means that once this feeling is achieved, further retrospective processing stops."

Drawing from his earlier work Weick (1979) on future perfect thinking and Boland's (1984) experiment, Weick (1995) states that "sensemaking can be extended beyond the present. As a result, present decisions can be made meaningful in a larger context than they usually are and more of the past and future can be brought to bear to inform them" (p. 29). A recurring theme for Weick (1995, p. 30) is, "How can I know what we did until I see what we produced?" In summary, the importance of retrospective sensemaking for future activities such as forecasting, contingency planning, etc. are misleading if they don't include reflective action and history (Weick, 1995).

III.II.iii Enactment of sensible environments. With enactment we move from "sensing" to "making" what was sensed (Weick, 1995, p. 30). Weick (1995) explains that the observers "action is a precondition for sensemaking as, for example, when the action of saying makes it possible for people to then see what they think" (p. 30). Further, with enactment Weick (1995) is able to "preserve the fact that, in organizational life, people often produce part of the environment they face (Pondy & Mitroff, 1979, p. 17)" (p. 30). Weick (1995) explains when people act they create their own environments which may constrain their actions or provide opportunities. Conversely, the environment is not fixed, detached, and external to people. Moreover, for a passive person there isn't an impersonal "they" who create these environments for them, it is more active people. People in organizations who forget this become victims to this blind spot. Their fault is due to considering "the environment" as singular, fixed, and external to the individual, which is "nonsense" (Weick, 1995, pp. 31-32).

Weick (1995) focuses on Follett's idea "that people receive stimuli as a result of their own activity, which is suggested by the word enactment" (p. 32). Especially useful is the metaphor of enactment by Follett of pruning trees that Weick (1995) draws upon,

My farmer neighbors know this: we prune and graft and fertilize certain trees, and as our behavior becomes increasingly that of behavior towards apple-bearing trees, these become increasingly apple-bearing trees. The tree releases energy in me and I in it; it makes me think and plan and work, and I make it bear edible fruit. It is a process of freeing on both sides. And this is a creating process (Follett, 1924, pp. 118-119). (p. 32)

Further, this enactment metaphor is also an example of artificial selection in evolutionary theory (Weick, 1979) which both ideas consider "interdependent activities, process, and continuous change" (p. 32).

Enactment also uses bracketing of experiences and punctuating of the brackets to deal with duration. People will create breaks and impose categories on their experiences in order to cope with duration and discover something (Weick, 1995). According to Weick (1995), invention and construction activities are also part of enactment and apparently move us closer to subjects and subjectivity and away from objects and objectivity. Weick (1995) emphasizes, "brackets and punctuations shape, modify and give substance to whatever other activities the person confronts (e.g., Pondy & Mitroff, 1979, p. 13)" (p. 36). Weick (1995) writes, "This is where sensemaking most clearly become a process that creates objects for sensing or the structures of structuration" (p. 36).

Weick (1995) uses the Hawick group, manufacturers of cashmere sweaters, to illustrate that enactment is about action and not concept. Also, the enacted world is tangible, "subjected,

punctuated, and bracketed because its "origin" is in mental models of causally connected categories that were part of the strategizing that carved out artifacts in the first place" (Weick, 1995, p. 37). In other words, action that creates events and structures and puts them in motion is enactment (Weick, 1988).

According to Weick (1988), as people bracket their experiences they act within them, preconceptions usually guide and shape these bracketed elements (Powers, 1973); hence, preconceptions tend to be confirmed by action. Also, enactment provides a visible construction to observers and a private element for the actor. For the actor an enacted environment provides if-then assertions where actions relate to outcomes and these assertions set expectations about future events (Weick, 1988).

The use of the concept of enactment requires caution. First, be careful to recognize that, according to Weick (1995) "a simple response to a stimulus, observable behavior, or goal attainment" (p. 37) is not action because you may miss how it creates meaning. Though action can result in creating, action can also be inhibited, abandon, redirected, etc. which affects meaning in different ways other than by producing visible consequences (Weick, 1995). Ignoring this caution may cause you to miss how these create meaning. In other words, instead of a senseless act, usually there is clear meaning when the act never gets done, is stopped prematurely, it is never the right time, etc. (Weick, 1995).

Weick (1995) states the second caution is Cartesian anxiety. According to Varela et al. (1991), Cartesian anxiety is a dilemma for either having a fixed and stable knowledge base or we are subject to chaos and confusion. We either have an absolute foundation or all falls apart.

Weick (1995) writes that instead of accepting total and absolute destructiveness or anarchy, that one can accept that "groundlessness is the very condition for the rich textured and interdependent world of human experience…[The world is not fixed and pregiven but] continually shaped by the types of actions in which we engage (Varela, et al., 1991, p. 144)" (p. 38). In summary, self-fulfilling action is put in motion by faith or the lack of faith. Faith is pertinent to sensemaking (Weick, 1995).

III.II.iv Social. Weick (1995) reminds us that sensemaking may prompt us to think only of the individual level of analysis and that can create a blindspot which we must recognize quickly. Weick (1995) draws from Resnick et al. (1991, p. 3) that "human thinking and social functioning…[are] essential aspects of one another." Moreover, Weick (1995) emphasizes the cognitive and social connection realized in organizations as defined by Walsh and Ungson (1991, p. 60): An organization is "a network of intersubjectively shared meanings that are sustained through the development and use of a common language and everyday social interaction".

Sensemaking is a social process that shapes interpretations and interpreting and a person's conduct is contingent on others' conduct (Weick, 1995). Weick (1995, p. 39) draws on Allport's (1985) description of social psychology for understanding the contingent quality of sensemaking as "an attempt to understand and explain how the thought, feeling, and behavior of individuals are influenced by the actual, *imagined, or implied* presence of others (p. 3 italics added)". Burns and Stalker (1961) state that we make decisions knowing that others will have to understand, approve, and implement them. These decisions may or may not be made in the presence of others. Therefore, the decision's set of conditions must be shared or acceptable to others.

Due to this requirement of others approving decisions, we must be careful not to let the imagined presence of others be too influential and prompt us to create theoretical obstacles (Weick, 1995). Yet, Weick (1995) emphasizes, it is our anticipations and efforts to make sense while imagining the presence of others that allow us to make sense during personal interactions, or face-to-face meetings. Blumer (1969) explains that due to our anticipating and rehearsing we are able to refine our sensemaking during the face-to-face interactions. In addition, our rehearsing is as interactive as our face-to-face meetings. Sensemaking, due to social influences, is not just the result of physical presence, and this is the point of *symbolic* interaction (Blumer, 1969).

Sensemaking is not done alone because a person's internal functions are dependent upon others (Weick, 1995). And symbolic interactionism uses "self, action, interaction, interpretation, meaning, and joint action" (Weick, 1995, p. 41). These elements are crucial to sensemaking independent of combining them as a symbolic interactionist would or using them individually (Weick, 1995). In addition, when we use imagery associated with symbolic interactionism, we are able to understand how other's meanings and sensemaking processes are actively shaped by people.

Weick (1995) draws on Blumer (1969) which cautions us not to overestimate the degree that social sensemaking equates to simply shared understanding. Blumer (1969) explains one argument by researchers is that common values hold society together and conflicting values destabilize. Yet, this view is subject to great change if we instead view society fitting together by forming joint actions. These joint actions may not develop due to sharing common values but due to compromise, duress, need to achieve each one's ends, it is sensible, or necessary. In other words, according to Weick (1995), society forms *workable* relations (Blumer, 1969, p. 76, italics

added). Though alignment is just as social as sharing is, alignment includes a bigger variety of inputs and practices in sensemaking and keeps lines of action clearly visible, which is critical (Weick, 1995).

III.II.v Ongoing. Sensemaking is continuous and it is important to understand that people cut, or take, moments out of continuous flows and are always involved with something. In addition, people extract, or take, cues from those moments (Weick, 1995). Burrell and Morgan (1979) explain that, when adapting the hermeneutic circle to social phenomena, "there are no absolute starting points, no self-evident, self-contained certainties on which we can build, because we always find ourselves in the middle of complex situations which we try to disentangle by making, then revising, provisional assumptions" (p. 237).

In addition to the hermeneutic circle, Weick (1995) also discusses the concept of throwness as a second example of sensemaking as an ongoing activity. Winograd and Flores (1986) paraphrase Heidegger's idea that we are thrown into ongoing situations due to interactions with people and our inanimate world and to make sense of these situations of throwness we must make do. According to Weick (1995), Winograd and Flores (1986) describe the properties of situations of throwness as:

1. You cannot avoid acting: Your actions affect the situation and yourself, often against your will.

2. You cannot step back and reflect on your actions. You are thrown on your intuitions and have to deal with whatever comes up as it comes up.

3. The effects of action cannot be predicted: The dynamic nature of social conduct precludes accurate prediction.

4. You do not have a stable representation of the situation: Patterns may be evident after the fact, but at the time the flow unfolds there is nothing but arbitrary fragments capable of being organized into a host of different patterns or possibly no patterns whatsoever.

5. Every representation is an interpretation: There is no way to settle that any interpretation is right or wrong, which means an "objective analysis" of that into which one was thrown, is impossible.

6. Language is action: Whenever people say something, they create rather than describe a situation, which means it is impossible to stay detached from whatever emerges unless you say nothing, which is such a strange way to react that the situation is deflected anyway (pp. 34-36).

The closer we get to organizations the more we see themes such as throwness, ongoing experience, and being in the middle (Weick, 1995). Hence, to the question of being in the middle of what answers "projects" (Weick, 1995, p. 44). When people are in the middle of projects they pay attention to those specific project aspects and flows, especially interruptions to flows. These interruptions induce an emotional response, "which then paves the way for emotion to influence sensemaking. It is precisely because ongoing flows are subject to interruption that sensemaking is infused with feeling" (Weick, 1995, p. 45).

Weick (1995) references Berscheid's (1983) and Mandler's (1984, pp. 180-189) proposed ideas to understand, "The relation between sensemaking, emotion, and the interruption of ongoing projects" (p. 45). They argue that arousal is required for emotion and arousal occurs when ongoing activity is interrupted (Weick, 1995). Moreover, arousal is significant physiologically due to a fight-or-flight reaction and psychologically because it "triggers a rudimentary act of sensemaking" (Weick, 1995, p. 45). Hence, this is when people realize that

they must pay attention to a stimulus to initiate appropriate action because they may be at risk or in danger (Weick, 1995).

Time for an appropriate action is available because arousal develops slowly, 2 to 3 seconds after interruption (Weick, 1995). According to Weick (1995), if direct action fails and the autonomic system is activated then,

Once heightened arousal is perceived, it is appraised, and people try to construct some link between the present situation and "relevant" prior situations to make sense of the arousal. Arousal leads people to search for an answer to the question, "What's up?" Their answers differ depending on socialization (Averill, 1984; Hochschild, 1983; Thoits, 1984). (p. 46)

Once an interruption of an expectation occurs then emotion is happening until the interruption is removed (Weick, 1995). Heightened arousal persists until the interruption is removed, including an alternative response which allows the interrupted sequence to complete. Therefore, interruptions with more substituted responses to complete the sequence of activities and people with more substitute behaviors should experience lower arousal and emotions then projects or people with less substitutive options and behaviors. In addition, there should be more arousal when the interrupted sequence is more organized and when the plans are of a higher order and more pervasive than lower order plans. If we can answer such questions as (Weick, 1995),

1. What is the distribution of interruption in organizations?
2. Where are interruptions most likely to occur, and how organized are the actions and plans that are likely to be interrupted?

If we can describe this, then we can predict where sensemaking will be especially influenced by emotional experiences. (p. 46)

In other words, projects with less standard operating procedures (SOPs), less well-organized response sequences, and fewer developed plans should not be easily interruptible and should demonstrate less emotion (Weick, 1995).

There can be a negative emotion associated with an interruption (Weick, 1995). This occurs when the interruption is unexpected and harmful or detrimental. The negative emotion will become more intense if the interruption cannot be removed or circumvented and the longer it lasts. There can also be a positive emotion related to an interruption (Weick, 1995). This occurs when the interruption is unexpectedly removed or it suddenly accelerates completion of a plan.

According to Weick (1995), these emotions can be applied to individual relationships. For positive emotions one's partner must either unexpectedly "remove interrupting stimuli or accelerate the completion of plans" (p. 47). In addition, the partner must have plans that cannot be accomplished alone; hence, allowing the opportunity for the partner to make a difference. For these positive emotions to continue, "each person needs to keep adding new plans that cannot be accomplished alone, but they also have to be plans that the partner cannot predictably accomplish either" (Weick, 1995, p. 47). If the partner becomes more depended on them the chance of causing an interruption increases; therefore, "the occasions for positive emotion decline over time, but the occasions for negative emotion remain consistently high" (Weick, 1995, p. 48).

In organizational settings these positive and negative emotions may be more intense because these relationships may be for short durations which are often close, intense, and interdependent

(Weick, 1995). In addition, these organizational relationships are more prone to unexpected interruptions and unexpected facilitations because both partners are less familiar with one another (Weick, 1995). Moreover, due to the lack of opportunity for positive emotions in organizations, "organizational sensemaking should occur largely in conjunction with negative emotion" (Weick, 1995, p. 48).

People try to make sense of being interrupted when performing an organized action sequence (Weick, 1995). The longer it takes them to make sense, the higher the arousal and the stronger the emotion (Weick, 1995). Weick (1995, pp. 48-49) describes the following interruptions and emotions, which are presented in Table 4.

Table 4: Interruptions and Emotions

If Interruption	Emotion
slows accomplishment	Anger
accelerated accomplishment	Pleasure
can be circumvented	Relief
thwarted higher level plan	Rage
thwarted a minor behavioral sequence	Irritated

Weick (1995) refers to Snyder and White's (1982) understanding that sensemaking is affected by these emotions due to recall and retrospect tending to be mood congruent. In other words, the current feeling a person has recalls the same emotional event; hence, if the person is angry at interruption then they should recall events when they were previously angry. According to Weick (1995),

> Past events are reconstructed in the present as explanations, not because they look the same but because they feel the same. The resulting attempt to use a feeling-based memory to solve a current cognitive puzzle may make sensemaking more difficult

because it tries to mate two very different forms of evidence. It is precisely that

possibility that we watch for when we acknowledge that sensemaking is ongoing and

neither starts fresh nor stops cleanly. (p. 49)

III.II.vi Focused on and by extracted cues. Because sensemaking is fast we usually see

the product and miss the process (Weick, 1995). In order to see the process we must study how

people deal with complex problems over an extended duration. Weick (1995) describes these

complex problems as those that "defy sensemaking, puzzles such as paradoxes, dilemmas, and

inconceivable events. We also need to pay close attention to ways people notice, extract cues,

and embellish that which they extract" (p. 49).

According to Weick (1995),

Extracted cues are simple, familiar structures that are seeds from which people develop a

larger sense of what may be occurring. The importance of these cues in organizational

analysis was recognized by Smircich and Morgan (1982) when they said that "leadership

lies in large part in generating a point of reference, against which a feeling of

organization and direction can emerge" (p. 258). They argue that control over which cues

will serve as a point of reference is an important source of power. To establish a point of

reference—for example, to direct people's attention to the dye in a cloth rather than to the

density of its weave to infer value—is a consequential act. (p. 50)

Extracted cues for sensemaking provide an open-ended quality and provide a form-

producing process that provides insight to much of the vagueness and indeterminacy (Weick,

1995). As a specific observation is associated with a general idea, the specific observation is

clarified and the general idea is slightly altered, and this cycle continues (Weick, 1995). Weick

(1995) writes, "The abstract and the concrete inform and construct one another. Actions create the condition for further action (Shotter, 1993, p. 156), the course of which remains vague prospectively, but clearer in retrospect" (p. 51).

Because intention may be believed to be pointing to its object, Weick (1995) shares Shotter's (1983) more fully developed seed metaphor. The metaphor highlights though intention may manifest itself within a range of possible expressions, the one intention realized is due to its progressive interaction with its existing conditions.

Context determines what an extracted cue becomes and is described as "local contingencies" (Weick, 1995, p. 51), or fulfilling a condition. Weick (1995) describes context as have two roles with the first being that "context affects what is extracted as a cue in the first place" (p. 51). "Noticing" from organizational literature (Starbuck & Milliken, 1988) can be used to describe this process (Weick, 1995, p. 51). The second role for context is it "affects how the extracted cue is then interpreted" which lends itself to ""indexicals" (Leiter, 1980; Ring & Van de Ven, 1989, p. 181)" (Weick, 1995, p. 51).

Weick (1995) elaborates on the process of noticing by referencing Fiske and Taylor (1991). They state that we notice what are novel, unusual or unexpected behaviors, negative behavior, and stimuli that affect goals. Also, situationally or personally primed categories, especially if they are recent or frequent, which also causes them to significantly affect our encoding of stimuli (Fiske & Taylor, 1991, p. 265-266).

As Weick (1995) references Leiter (1980), indexicals provide an understanding of the "contextual nature of objects and events" (p. 52) so that they don't have ambiguity or multiple meanings. Hence, as people present their interpretations and they are in disagreement, political

struggles are created (Weick, 1995). These different interpretations are due to the fact that people are in different organizational locations with an understanding in different domains (Starbuck & Milliken, 1988; Weick, 1995).

Despite the actual cues and their context and embellishment, Weick (1995) emphasizes that the key points to remember is that "faith in the cues and their sustained use as a reference point are important for sensemaking" (p. 53). The importance for sensemaking is due to the fact that the cues connect elements cognitively and these connections become more meaningful when they are acted upon by people as being real (Weick, 1983, 1995). Weick (1995) explains,

> Once people begin to act (enactment), they generate tangible outcomes (cues) in some context (social), and this helps them discover (retrospect) what is occurring (ongoing), what needs to be explained (plausibility), and what should be done next (identity enhancement). Managers keep forgetting that it is what they do, not what they plan, that explains their success. (p. 55)

Moreover, Weick (1995) applies this to leaders,

> Followers are often lost and even the leader is not sure where to go. All the leaders know is that the plan or the map they have in front of them are not sufficient to get them out. What the leader has to do, when faced with this situation, is instill some confidence in people, get them moving in some general direction, and be sure they look closely at cues created by their actions so that they learn where they were and get some better idea of where they are and where they want to be. (p. 55)

In summary, once sensemaking has started it is likely to confirm the acts of faith by its effects on actions which produce materially what was merely envisioned (Weick, 1995).

III.II.vii Driven by plausibility rather than accuracy. Weick (1995) shares the importance of plausible reasoning based upon Isenberg's (1986) managerial thinking studies,

Plausible reasoning involves going beyond the directly observable or at least consensual information to form ideas or understandings that provide enough certainty…There are several ways in which this process departs from a logical-deductive process. First, the reasoning is not necessarily correct, but it fits the facts, albeit imperfectly at times. Second, the reasoning is based on incomplete information (pp. 242-243). (p. 56)

Plausibility supports the strength of sensemaking because it allows order and action to begin sooner than if one is waiting for an accurate environment (Weick, 1995). According to Weick (1995), "Instead, sensemaking is about plausibility, pragmatics, coherence, reasonableness, creation, invention, and instrumentality" (p. 57). In addition, accuracy is second to plausibility for sensemaking because, first, people need to use filters to separate signal from noise to avoid being overwhelmed with data (Miller, 1978). So, according to Weick (1995), it is more productive to "look at the filters people invoke, why they invoke them, and what those filters include and exclude (Gigerenzer, 1991; Smith & Kida, 1991)" (p. 57). Second, according to Weick (1995), "sensemaking is about the embellishment and elaboration of a single point of reference or extracted cue. Embellishment occurs when a cue is linked with a more general idea" (p. 57). In summary, Weick (1995) writes, "Thus accuracy is meaningless when used to describe a filtered sense of the present, linked with a reconstruction of the past, that has been edited in hindsight" (p. 57).

The third reason for accuracy being secondary is that organizational action is sensitive to time and speed is more important (Weick, 1995). Moreover, speed is preferred when people have to "adapt to complex cue patterns" (Weick, 1995, p. 58). And as discussed with interruptions,

continuation of ongoing projects is the issue and not accuracy. Reasons four and five for why accuracy is less important include, if accuracy is important it is for short periods of time which are focused on specific questions and accuracy is more appropriate for studying object perception versus focusing on interpersonal perceptions. Our sensemaking interests are in the "interpersonal, interactive, interdependent quality of organizational life" (Weick, 1995, p. 58).

The sixth reason is concerned with the ongoing effect of sensemaking and with enactment within projects where cues are extracted and interpreted and this determines where accuracy matters. In this area accuracy is not the issue because what people find sensible are those things they can do something about. It is this capability to do something that affects what people believe and reject. Hence, according to Weick (1995), "What is believed as a consequence of action is what makes sense" (p. 60). The seventh reason is that accuracy can cause an immobility condition, and as discussed, action is required for sensemaking. In fact, Weick (1995) goes beyond differentiating between action rationality and decision rationality and discusses bold action relative to a changing and adaptable environment. According to Weick (1995),

> Bold action is adaptive because its opposite, deliberation, is futile in a changing world where perceptions, by definition, can never be accurate. They can never be accurate because, by the time people notice and name something, it has become something else and no longer exists. (p. 60)

Moreover, Weick (1995) continues,

> Bold action is also adaptive because it shapes that which is emerging (Lanir, Fischoff, & Johnson, 1988). Events are shaped toward those capabilities the bold actor already has.

With this twist, accuracy becomes reflexive. The actor who knows what he or she can do, and who shapes the environment so that it needs precisely these capabilities, comes close to perfect accuracy. (p. 60)

Lastly, it is very difficult to tell if the perception, at time of perception, will be accurate (Weick, 1995). Therefore, Weick (1995) concludes by stating that since accuracy is not required in sensemaking a good story is necessary for sensemaking. Specifically, Weick (1995) explains,

A good story holds disparate elements together long enough to energize and guide action, plausibly enough to allow people to make retrospective sense of whatever happens, and engagingly enough that others will contribute their own inputs in the interest of sensemaking. (p. 61)

In summary, stories provide existing patterns to an actor or new patterns as a result of more order and sense (Weick, 1995). Furthermore, as templates, stories are results of sensemaking efforts that explain and energize, which are important sensemaking properties that we pay attention to when looking for plausibility versus accuracy. Table 5 summarizes the sensemaking properties.

Table 5: Sensemaking Properties

Sensemaking Property	Description
Identity	Who I am as indicted by discovery of how and what I think (Weick, 1995, p. 61).
Retrospect	To learn what I think, I look back over what I said earlier (Weick, 1995, p. 61).
Enactment	I create the object to be seen and inspected when I say or do something (Weick, 1995, p. 61).
Social	What I say and single out and conclude is determined by who socialized me and how I was socialized, as well as by the audience I anticipate will audit the conclusions I reach (Weick, 1995, p. 62).
Ongoing	My talking is spread across time, competes for attention with other ongoing projects, and is reflected on after it is finished, which means my interests may already have changed (Weick, 1995, p. 62).
Extracted cues	The "what" that I single out and embellish as the content of the thought is only a small portion of the utterance that becomes salient because of context and personal dispositions (Weick, 1995, p. 62).
Plausibility	I need to know enough about what I think to get on with my projects, but no more, which means sufficiency and plausibility take precedence over accuracy (Weick, 1995, p. 62).

III.III Applications of Sensemaking Theory

Sensemaking has been used in a number of studies where people were in complex, equivocal, unpredictable, and crisis situations (Griffith, 1999; Lewis, et al., 2011; Weick, 1988). In these situations sensemaking was used to enact environments, examine triggers, and address changing customer requirements.

According to Weick (1988), crisis situations that occur infrequently but with high detrimental impact pose threats to an organization's goals and demand a high level of

sensemaking. Moreover, Weick (1988) writes that inadequate sensemaking may increase the probability that the crisis will get out of control. In order to understand the crisis, decision makers need to engage in action that simultaneously creates new data that may be used for sensemaking (Weick, 1988).

According to Weick (1988), crisis perception is affected by capacity and response repertoire due to people seeing events they have capacity to be effective at, "as capacities change, so too do perceptions and actions. This relationship is one of the crucial leverage points to improve crisis management" (p. 311). Moreover, as people see more of the developing crisis they should see more opportunities to intervene and make a difference in the situation as it unfolds (Weick, 1988).

Weick (1988) writes that people can unknowingly escalate a crisis situation when working with complex, highly interactive and poorly understood technologies. Weick (1988) notes that, "The very action which enables people to gain some understanding of these complex technologies can also cause those technologies to escalate and kill" (p. 308). In order to understand how sensemaking can be distinguished from such escalation the focus is moved to triggered events which Weick (1988) defines as,

> …a specific event that is identifiable in time and place and traceable to specific man-made causes (Shrivastava, 1987). Triggered events are places where interventions can have an effect, these events involve judgment which can deteriorate when pressure increases (Staw, Sandelands, & Dutton, 1981), and these events can escalate into a crisis. (p. 308)

In summary, we see sensemaking and its construct of enactment with a focus on triggered events as readily applicable to complex and equivocal technology situations.

Griffith (1999) examined triggers for initial user sensemaking during complex and unpredictable technology implementations. Griffith seeks to develop an understanding of how users initially understand a technology's capabilities. Technology features, which are defined as "the building blocks or components of technology (Griffith & Northcraft, 1994; Nass & Mason, 1990)" (p. 473) are liked to sensemaking to develop a features-based theory of sensemaking triggers (FBST). The triggering process is used with theories and models of understanding and using technology, such as the adaptive structuration theory. Griffith (1999) draws upon Weick (1990) which "states that new technologies are simultaneously the source of stochastic, continuous, and abstract events. He also notes that technologies require ongoing structuring and sensemaking if they are to be managed" (p. 478).

Griffith (1999) advocates that FBST assists in understanding the complexities of how users initially understand the capabilities of a technology. In addition, because key components of the understanding process may be overlooked, it is difficult to predict and manage successful technology implementations. Yet the FBST, as a unit of analysis and a model of features, triggers, sensemaking, and understanding is an effort to mirror the cognitive simplification processes used by initial users of technology.

In an effort to understand how vendors of IT-enabled services meet equivocal and changing customer requirements while achieving profits and scalability, Lewis et al. (2011) used organizational sensemaking. According to Lewis et al. (2011), sensemaking as a lens is useful for four reasons. First, for IT-enable service vendors to achieve scalability they must balance the

need for standardization and customization, which is similar to using sensemaking to achieve a balance between mindfulness and routines. Second, in order to start understanding why organizational solutions fail to meet the vendor or client's desired outcomes, the socio-cognitive interaction must be studied. Third, sensemaking is a temporal phenomenon (Cunliffe, Luhman, & Boje, 2004; Weick, 1995) and it helps understand the limitations of cognition for making sense of past activities and events (Weick, 1995). And fourth, combinations of organizational and socio-cognitive factors leading to mindlessness explain how vendors can achieve scalable growth. Lewis et al. (2011) conclude that scalable growth is hindered as the variety of services increase due to ambiguity, coordination complexity and constant change. Organizational sensemaking provided an understanding that the high socio-cognitive demands required for modularization may prevent many companies from reaching heightened states of enterprise maturity (Lewis, et al., 2011; Ross, Weill, & Robertson, 2006).

In their efforts to understand the initiation of a strategic change effort, Gioia and Chittipeddi (1991) used the emergent concept of sensemaking for an ethnographic study of a large, public university. Sensemaking was used as the explanatory theoretical framework to create the second-order analysis and findings from the rich narrative of events. This analysis discerns possible patterns in the data, focuses on constructs that relate to structuring and sequencing of activities and the structure of the informants' experiences and interpretations, and provides a view possibly relevant for an organization beyond the public university being studied. According to Gioia and Chittipeddi (1991), "'sensemaking' has to do with meaning construction and reconstruction by the involved parties as they attempted to develop a meaningful framework for understanding the nature of the intended strategic change" (p. 442). For the President, his sensemaking activities included university visits to understand its history and culture, using his

university experiences to compare the current needs and future possibilities, and working with consultants and university stakeholders. In summary, it was evident that both the President and other stakeholders used sensemaking processes to understand a strategic image for the university (Gioia & Chittipeddi, 1991).

Drazin et al. (1999) used sensemaking to create their model of how creativity develops in large and complex organizational projects with long durations. Sensemaking focuses on creating meanings and understanding how meanings motivate engagement and action. Sensemaking supports this study's interest in understanding individual and organizational processes used to create "systems of meaning about creative action" (p. 292). Their model specifically investigates how occasional organizational crisis cause the belief structures about creativity to be viewed differently. Drazin et al. (1999) state, "A crisis occurs when the negotiated order of a collective system does not allow a problem to be resolved" (p. 296). They used Weick's (1995) intrasubjective, intersubjective, and collective levels of analysis (LOA) to construct their multilevel model of creativity. Since these focus on processes and interpretations, the reframing that occurs during a crisis help explains how the organization shifts between administrative and technical frames. Sensemaking contributed by identifying different ways of modeling an organization's multilevel influences.

In seeking to understand where do ethical issues come from, Sonenshein (2009) builds on research that is questioning the objectivist approach (Butterfield, Trevino, & Weaver, 2000; Sonenshein, 2007) with sensemaking research (Weick, 1995) to develop theory of how ethical issues created by employee sensemaking can be viewed by scholars. Sonenshein (2009) suggests that strategic issues start looking like ethical issues when emotions are part of the sensemaking process. According to Sonenshein (2009), although business ethics (Lurie, 2004) and

sensemaking (Maitlis, Vogus, & Lawrence, 2008) are criticized for excluding emotions, negative emotions can result from deceiving/misleading situations (Manz, Joshi, & Anand, 2005). Negative emotions may cause employees to reframe issues from strategic to ethical (Sonenshein, 2009). In addition to emotions, Sonenshein (2009) suggests ambiguity enables some employees to reach an employee welfare frame allowing them to sense issues beyond managerially guided interpretations. The employee creates an interpretive frame allowing *their* outcomes to be important. By focusing on ambiguity, trigger points and the employee welfare frame, Sonenshein (2009) offers a perspective on sensemaking processes that explains how strategic issues become ethical issues and how ordinary business issues may contain ethical implications.

In summary, sensemaking is well established in literature for addressing complex, ambiguous, and unpredictable situations, such as information technology implementation. For crisis situations, Weick (1995) focused on employing the enactment property to understand the tension between "dangerous action which produces understanding and safe inaction which produces confusion" (p. 305). Lewis et al. (2011) used seven properties of sensemaking as a lens for researching how socio-cognitive factors affect the efficiency of scalable growth strategies. Sensemaking and its properties are established as a valuable lens for studying how people make sense in complex, unequivocal, unpredictable, and temporal situations.

III.IV Sensemaking Theory and ERP Project Deescalation

Sensemaking people act within a context (Weick, 1988). Johns (2006) defines context "as situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables" (p. 386). The understanding of situational opportunities and constraints helps in understanding the person-situation interactions.

Johns (2006) suggests that person-situation interactions are not as well understood as other areas such as human capabilities and personality.

The purpose of this study is to understand how sensemaking by project team members is implicated in project deescalation. The roles and interactions by people during deescalation may highlight key activities such as enactment, re-examination of the prior course of action, draw attention to, help map out, and shaping (Mahring, et al., 2008). These activities or similar activities can be studied through the lens of the seven sensemaking properties at the individual level and within the contextual uniqueness of deescalating an ERP project. This context includes the complex nature of IT projects, new technologies, project organization and roles, ambiguity, unpredictability, and temporal evolution.

Project deescalation does not have a predetermined duration and, therefore, it may consume people's attention and efforts in making sense of an ambiguous and uncertain situation for a sustained period of time. Weick (1995) discusses that ambiguity and uncertainty are two common characteristics of situations in organizations that produce novelties that require people's sustained attention. Weick (1995) differentiates these situations as follows, "In the case of ambiguity, people engage in sensemaking because they are confused by too many interpretations, whereas in the case of uncertainty, they do so because they are ignorant of any interpretations" (p. 92).

Due to ambiguity, rational decisions cannot be made because the assumptions are not met and the problem is that misunderstandings may not be resolved with information (Weick, 1995). McCaskey (1982) provides 12 characteristics of ambiguous situations which are ways that ambiguity can arise in organizations and trigger sensemaking (see Table 6).

Table 6: Characteristics of Ambiguous and Changing Situations

Characteristic	Description and Comments (Abbreviated)
Nature of problem in question	Often, any one "problem" is intertwined with other messy problems.
Information (amount and reliability) problematic	Because the definition of the problem is in doubt, collecting and categorizing information becomes a problem.
Multiple, conflicting interpretations	For those data that do exist, players develop multiple, and sometimes conflicting, interpretations.
Different value orientations, political/emotional clashes	Without objective criteria, players rely more on personal and/or professional values to make sense of the situation. The clash of different values often politically and emotionally charges the situation.
Goals are unclear, or multiple and conflicting	Either the goals are vague, or they are clearly defined and contradictory.
Time, money, or attention are lacking	A difficult situation is made chaotic by severe shortages of one or more of these items.
Contradiction and paradoxes appear	Situation has seemingly inconsistent features, relationships, or demands
Roles are vague, responsibilities are unclear	Players do not have a clearly defined set of activities they are expected to perform. On important issues, the locus of decision making and responsibilities is vague or in dispute.
Success measures are lacking	People are unsure what success in resolving the situation would mean, and/or they have no way of assessing the degree to which they have been successful.
Poor understanding of cause-effect relationships	Players do not understand what causes what in the situation. Even if sure of the effects they desire, they are uncertain how to obtain them.
Symbols and metaphors used	In place of precise definitions or logical arguments, players use symbols or metaphors to express their point of view.
Participation in decision-making fluid	Who the key decision makers and influence holders are changes as players enter and leave the decision arena.

Typical ERP projects that are escalated exhibit many of the above characteristics. According to Weick (1995, p. 95), Burns and Stalker (1961) describe uncertainty as,

> the ignorance of the person who is confronted with a choice about how the future in general, and in particular about the outcomes which may follow any of his possible lines of action. Since he must choose, if he is to remain operative (as a businessman or any other agent), he acts in accordance with his belief about the future and the specific possibilities. These possibilities will always be differentiated in his mind according to the degrees of belief with which they are credited. (p. 112)

Uncertainty is reduced when a person or organization receives information that provides some direction for the actor based upon the future direction of the world (Stinchcombe, 1990). According to Weick (1995), the important aspect of uncertainty is the "inability to extrapolate current actions and to foresee their consequences produces an occasion for sensemaking" (pp. 98-99). In summary, to remove ambiguity related to confusion, a decision maker needs a different kind of data which, ideally, is best constructed with face-to-face interaction due to multiple cues being available. To remove uncertainty related to ignorance, a decision maker requires more information, and not a different kind of information (Weick, 1995).

In summary, project deescalation is characterized by complex, ambiguous and uncertain situations. As my survey of literature suggest, such situations are excellent candidates for study using sensemaking as a theoretical lens. Furthermore, results from the use of sensemaking in other domains suggest several possible scenarios in the context of deescalation. For example, a project manager who has a high proficiency with enactment may quickly identify a continued commitment to a failed course of action and redirect the project to a successful course of action.

The review of literature suggests that sensemaking is a suitable theoretical frame to study the deescalation of ERP implementation projects.

RESEARCH DESIGN

Qualitative research, which is used to understand what people say and do, is appropriate for understanding how people make sense when deescalating ERP projects. Qualitative methods have been widely used to explore the context in which critical decisions are made and to understand decisions and actions (Myers, 2009). Moreover, a key benefit of qualitative research is having access to the context that people make decisions and take actions in. Context helps explain why a person acted a certain way and the way to understand this context is by talking to people (Myers, 2009). Talking to people and reading their words provides the researcher access to what they are thinking and explaining their actions; hence, the ability to talk is a primary motivation for qualitative research (Myers, 2009).

IV.I Research Philosophy

Since this IS study is focused on understanding peoples' actions and thoughts in the context of organizational and social situations, it follows the interpretive research approach (Klein & Myers, 1999). The knowledge of reality this study will produce is through the social constructions of talking, consciousness, shared meanings, and documents. Following Klein and Myers (1999), this study "focuses on the complexity of human sense making as the situation emerges" (p. 69).

Klein and Myers (1999) propose quality standards for conducting interpretive field studies, including in-depth case studies. This study will use the case study methodology. In their efforts to provide evaluation criteria and design and reporting considerations for interpretive researchers, Klein and Myers (1999, p. 72) propose seven principles which are summarized in Table 7.

Table 7: Summary of Principles for Interpretive Field Research

Principle	Description for this Study
1. Principle of the Hermeneutic Circle Note: This principle of human understanding is fundamental to all the other principles listed.	Human understanding is achieved by iterating between considering the interdependent meaning of parts and the whole they form.
2. Principle of Contextualization	Critical reflection of the social and historical background of the research setting…to see how the current situation under investigation emerged.
3. Principle of Interaction Between the Researchers and the Subjects	Critical reflection on how the research materials (or "data") were socially constructed.
4. Principle of Abstraction and Generalization	Relating the idiographic details revealed by data interpretation to theory.
5. Principle of Dialogical Reasoning	Sensitivity to contradictions between the theoretical preconceptions and actual findings.
6. Principle of Multiple Interpretations	Sensitivity to possible differences of interpretations by participants.
7. Principle of Suspicion	Sensitivity to possible "biases" and systematic "distortions" in narratives from participants.

Klein and Myers (1999) emphasize that though not all principles may apply to all interpretive IS projects there is an interdependency among them. Moreover, these principles "cannot be applied mechanistically" (p. 88) and the researcher needs to use her judgment to use them appropriately.

According to Klein and Myers (1999),

Interpretive researchers are not so interested in "falsifying" theories as in using theory more as a "sensitizing device" to view the world in a certain way. Interpretive researchers in information systems tend not to generalize to philosophically abstract categories but to social theories such as structuration theory or actor network theory. (p. 75)

In this interpretive case study research, sensemaking and its seven properties are used as the sensitizing device.

IV.II Research Method

The case study method was used with an interpretive philosophical perspective (Myers, 2009) in this study. In this section I present the details of the single-case study design, including the research question, unit of analysis, and site selection details.

The research method also included the unique and positive feature of participant observation. The researcher was assigned to Project MELANGE (the focal project) as a project manager about twelve months after Project MELANGE had started and continued on Project MELANGE until its completion, for an assigned time of approximately twenty months. This is a positive feature for this research study because of the researcher's ability to experience Project MELANGE's lifecycle, work, and informal social interactions among the stakeholders and team members. This was very similar to Donald F. Roy's experience as an outside researcher who had direct participation and observation with factory workers allowing him to document and explore their job satisfaction and informal interactions while performing monotonous work activities (Roy, 1959). According to Coghlan (2001), the manager-researcher knows the critical events and their meanings, sees beyond insincere objectives, is capable of using internal jargon, and uses their experiences during interviews; therefore, obtaining richer data. The manager-researcher also applies his knowledge, insights, and experience to their organizations lived experiences and not just to theoretical understandings of his organization's dynamics (Coghlan, 2001). One more positive from a participant observer role was the ability to gain extensive access to participants in Project MELANGE.

Recognizing my participant observer position at the beginning of this research study allowed incorporating measures to control or mitigate for participant bias. These measures included having a second researcher, a disinterested third-party, participate in interviews, listen to recorded interviews, and read transcribed interviews. In addition, the second third-party researcher interviewed the participant observer researcher and had opportunities to challenge his viewpoints. These were done similar in spirit to Coghlan's (2001) observation that in order to counter his bias Nuttall (1998) "engaged a neutral research assistant to conduct some interviews and then to compare transcripts" (p. 53).

Patton (2002) suggests that many scientists' personal experiences and closeness to the data were essential to their insights and significant contributions for understanding our world, such as Piaget and his children and Freud and his patients. "In short, closeness does not make bias and loss of perspective inevitable; distance is no guarantee of objectivity" (Patton, 2002, p. 49).

Also, my primary interest in this research study is to understand scientifically how sensemaking is implicated in the phenomenon of ERP project deescalation. Therefore, I have a scholarly motivation and interests in controlling and mitigating participant bias. Careful attention has been paid to check whether the viewpoints of the participant observer are consistent with those of the other team members and that the data collected from the participant observer does not overly influence the analysis process.

IV.II.i Case study design. I use an exploratory case study to understand how sensemaking is implicated in deescalation of a run-away ERP project. This area of study is relatively new in the IS literature; hence, the use of a case study design (Yin, 2009). In addition, case study is appropriate for this study because it supports researching a contemporary

phenomenon with depth in its real-life context, relies on multiple sources of data for triangulation, and can benefit from developing theoretical propositions in advance of data collection and analysis (Yin, 2009).

IV.II.i.i Research question. As discussed in section I.III, the research question is *"How is sensemaking by project team members implicated in the deescalation of a run-away enterprise resource planning project?"*

IV.II.i.ii Unit of analysis. The unit of analysis is determined by the research question and for this study is defined as an individual (Yin, 2009). This study is interested in understanding how sensemaking impacts the individual's ability to successfully deescalate an ERP project and how deescalation impacts sensemaking. Therefore, data are collected from individual project team members. This study is interested in literal replication where an understanding of "how" sensemaking is implicated in deescalation occurred (Yin, 2009).

Sensemaking can be studied at an individual, organization, or social activity level (Weick, 1995). This study is focused on the individual activity level, or individual sensemaking.

IV.II.ii Site selection. For this research study, one case is equivalent to one project. Therefore, for this single-case study one project was studied. The organization selected did successfully deescalate a complex IT project, specifically an ERP system implementation. This study shows that this one project was escalated, committed to a failing course of action, and was deescalated, broke the commitment to the failing course of action. The new course of action resulted in a very successful implementation, at a minimum by successfully running the business operations. The name of the project studied for this research is Project MELANGE. Project MELANGE's original planned duration was twelve months. The actual duration was 27 months.

The objective and scope of Project MELANGE was to integrate two enterprise resource planning systems into one blended solution to support a merger and acquisition (M&A). Project MELANGE specifically supported the M&A of each company's maintenance operations. The ERP systems are the focus of this study on Project MELANGE.

The fundamental premise offered to justify the blended solution, versus choosing just one of the ERP systems, was that both ERP systems had their own unique strengths and a blended solution would be the ideal new end state design. As a result, each ERP system was responsible for supporting specific business processes through application functionality and data. For example, ERP1 would be the system of record for the material records, inventory management, maintenance operations, and finance. ERP2 would be the system of record for engineering change management records and other types of maintenance operations. In summary, Project MELANGE was to integrate two maintenance operations and multiple IT systems to create a new blended business and IT solution as the companies merged and became "one seamless integrated company", according to an ERP consultant.

Project MELANGE also was selected because it exemplifies a complex ERP project that went through periods of escalation and successful deescalation. Further, the researcher had the unique opportunity and experience of being a participant observer during Project MELANGE.

IV.III Data Collection

Three data collection principles were followed: (a) use multiple sources of evidence, (b) create a case study database, and (c) maintain a chain of evidence (Yin, 2009). These three principles help maximize the benefits of different sources of evidence and establish construct validity and reliability. Construct validity addresses the identification of the correct concept

operational measures and reliability references the ability to repeat the research operations and produce the same results. The research included multiple sources of evidence including semi-structured interviews, archival data, and participant observation.

      IV.III.i Interviews. Semi-structured interviews with project team members with various backgrounds and experiences associated with the project provided the primary data for the study. To assist with replication of our findings, and thereby strengthening generalizability (Eisenhardt, 1989; Miles & Huberman, 1994; Yin, 2009), we interviewed different stakeholders associated with the project. A total of 17 interviews were conducted (see Table 8).

Table 8: Interviews Conducted with Project MELANGE

Project Role	Organization
Director	Acquiring Company
Project Manager #1	Acquired Company (IT)
Project Manager #2	ERP Consulting Firm #2
Project Manager #3	ERP Consulting Firm #1
Project Manager #4	ERP Consulting Firm #2
Integration Manager #1	Acquiring Company
Integration Manager #2	ERP Consulting Firm #2
Business SME #1	Acquiring Company
Business SME #2	Acquiring Company
IT Business Analyst	Acquiring Company
IT SME #1	Acquiring Company
IT SME #2	Acquiring Company
IT SME #3	Acquired Company
IT SME #4	ERP Consulting Firm #2
IT SME #5	Acquired Company
IT SME #6	Acquired Company
Client Partner	ERP Consulting Firm #2

Data collection and data analysis was conducted in an iterative fashion. Snowball sampling was asked for in the invitee's letter; hence, I identified key interviewees in the organization, presented my research objectives, and then requested their assistance by them forwarding my research invitation letter to additional interviewee candidates.

Each interview lasted approximately one hour. All interviews were audio recorded, with permission, and transcribed. Notes were taken during the interviews. Follow up interviews were conducted to seek clarifications and gather additional data. Data collection and analysis

continued until "theoretical saturation" (Eisenhardt, 1989, p. 533) was reached and further data provided no new insights.

NVivo 9 was used to create the case study database by storing and coding the transcribed interviews and documents. This case study database supports the chain of evidence by allowing an outside observer the capability to trace the evidence from the research question to the study's findings and conclusions (Yin, 2009).

IV.III.ii Archival data. Archival data and documents were collected from interviewees. In addition, the researcher for this study had unlimited access to Project MELANGE's data due to his role as a participant observer. Archival data and documents assisted with triangulation of findings from semi-structured interviews and the participant observer role. Archival data included memos, emails, PowerPoint presentations, and project schedules.

IV.III.iii Participant observation. As described above in detail in section IV.II, the researcher for this study had direct access to the team as a participant observer due to his project manager role while assigned to Project MELANGE. The role of project manager allowed the researcher direct access to the team members' formal and informal discussions, actions, thoughts, and feelings.

IV.IV Data Analysis

Data analysis procedures followed for this study included data organization, data reduction by inductive and deductive coding, and conclusion drawing and verification (Miles & Huberman, 1994). These procedures happen interactively and concurrently when conducting data analysis.

The data (e.g., the transcripts and archival data) was uploaded into NVivo 9 which is a software package used for qualitative analysis. The data was organized into different internal source folders.

Inductive analysis was completed by reading and conducting bottom-up coding of the transcribed interviews (Eisenhardt, 1989). Further, audio recordings were consulted to ensure accuracy of transcription. To support data reduction, an initial coding scheme for inductive analysis was created based on the analysis of the escalation and deescalation literature and was modified based upon the analysis of data (Charmaz, 2009). As explanatory inductive themes were identified, new codes were added. In addition, as the researcher I was open to contrasting data or data that could invalidate collected data. This data reduction effort facilitated pattern recognition and identification of the evolving stories (Miles & Huberman, 1994).

For deductive coding, the interview data was coded initially to the following seed concepts from the seven sensemaking properties: identity, plausibility, retrospective, enactive, social, ongoing, and extracted cues. To facilitate deductive coding, a code book was created and updated. During the coding, additional sensemaking sub-concepts to the seven properties were identified. Text fragments from the interview transcripts were coded to one or more codes; though, an effort was made to code the text to support either inductive or deductive analysis. These analytical constructs assisted with understanding the meaning of the transcribed data and how sensemaking was implicated during project deescalation.

As the study progressed and patterns emerged early, I was cautious not to finalize conclusions early and maintained an open perspective (Miles & Huberman, 1994). As the researcher, I worked to verify my conclusions by staying close to the data and referring back to

the sensemaking literature and my code book. In addition, the study's conclusions can be verified many different ways including by a review from colleagues and their "intersubjective consensus" (Miles & Huberman, 1994, p. 11). The findings were synthesized and considered for both practical and theoretical implications.

RESULTS

In this chapter, I describe the project team members' sensemaking of the escalation and subsequent deescalation of the ERP project. First, I describe the consensus view among all the participants that the project was indeed in a phase of escalation. However, there was wide variation in views about when the escalation commenced. Similarly, the views of project team members differed about the commencement of the deescalation of the project. However, all the project participants did agree that the project was indeed deescalated and was successful in meeting the needs of the organization. I present detailed accounts of the sensemaking of various project participants by elaborating on the seven properties of sensemaking. This account helps us understand why and how there were differences among the team members in their views of the extent of escalation and deescalation and the events that led to deescalation.

V.I Project Escalation

The project team members interviewed described the project as escalated, or committed to a failing course of action. According to a director,

> Yeah, it was definitely on a course to fail and actually in some ways you can say it reached a failure point. And what we had to decision is either discontinue the integration or basically totally re-plot the course. So, absolutely, we were on a course that in my mind had already failed, just nobody would admit it.

IT SME #3 also stated that if the project continued with the same course of actions it "would be a disaster. We would have not gone live." Similarly, IT SME # 2 states, "Yeah. Had nothing happened, the project would not have led to success. It was simply an impossible

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situation." Integration manager #1 explains his reasons for suggesting that the project was

pursuing a failing course of action as follows,

> And then you had a group of IT people representing the [acquired company] that had
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> basically shut the door on the [acquiring company] that for pride and other reasons would
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> never admit that they made possibly had underestimated or maybe had made a mistake.
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> So, basically left to its own devices, I think the project would have failed, just completely
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> failed without some sort of an external infusion of resources.

The team members differed in their perception of how long the project was in a state of

escalation. However, according to all the respondents, the escalated period lasted several months,

not weeks. According to project manager #3, "Yeah, I would say months, maybe for a couple of

months, two, three months." Integration manager #1 shared, "I can't remember the exact time

period, but I want to say it was three to six months." IT SME #5 reports that in his view the

project was escalated for, "About ten, eleven months."

For some project team members, the project was escalated close to or over a year. For

example, a director's observations were,

> I'd have to say it was in trouble coming right out of the gate. And that was chiefly because
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> the IT leadership over the project really grossly underestimated the size and complexity of
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> the effort. And combined with the fact that between IT and the business, they had chosen a
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> blended core path that was going to tie processes of technology together that really did not
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> fit, because the individual pieces had grown up with a very different purpose and a very
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> different design, and trying to merge them together into a single process and a single set of
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> technology was really flawed from the beginning.

When asked if this period lasted weeks, months, or years, the director replied, "I'd have to say it lasted well over a year."

While IT SME #2 shares a similar view about when the project began to escalate, he emphasizes a spike in escalation at a later point in time,

> Yeah, as far as I'm concerned, it started the day that there were decisions made on who was going to be running the project and the direction of the project itself. I'm just opining but, you know, there were issues with that from the onset. But like I said, you know, it did kind of manifest itself much more once you got into the requirements and design rather than the initial phases of the project because then all of the sudden timelines are not being met.

As detailed above, the project was escalated for a duration lasting several months to over one year, depending upon the team member's perception.

The next sections review the following reasons for escalation that were observed in the focal project: (a) mixed priorities resulting in mixed technical and business solutions; (b) inadequate methodology; (c) inadequate project planning, executing, monitoring, and controlling; and (d) inadequate leadership. Project manager #4's assessment was, "and as they progressed [sic] the deliverables are not coming through, their timelines are being compromised, schedule is slipping, the budget is getting over the head." Also, the project team experienced a variety of issues such as confusion, lack of progress, frustration, and combativeness. The project also produced incomplete deliverables and experienced schedule slippages.

V.I.i Mixed priorities. During the escalation period, senior management pursued mixed priorities. Project participants had inadequate understanding of their roles in the acquired organization. A client partner explains the misunderstanding caused resulting from this situation,

> What the people at [the acquiring company] never realized is that they, for a number of reasons, weren't really acquiring [the acquired company]; they were merging with the [acquired company]. So, in that initial merge, it was fraught with huge political debates; a debate that would drive people's employment, drive where people would live, a number of those things.

The client partner explains that the acquiring company's chief information officer retired and the acquired company took responsibility for the IT group, and put in place a new agenda,

> So, with the IT person retiring and the IT person in [the acquired company] taking over the IT group, the whole landscape changed and there were—this is anecdotal—but there were conference calls that were overheard where the mission from the IT department at [the acquired company] was to maintain all of their systems, do everything they could to keep their systems in place so that their people would still have jobs.

The goal for the merger included operating as a single company. Instead of selecting either of the two systems that were used in the two organizations as the platform for the entire enterprise, the acquired company's IT department chose a blended, or mixed, technical solution such that the integration of both systems will be used. According to a client partner,

> [sic] but there was a big drive then to operate as a single company to merge all their systems [sic] but the politics were with the acquired company [sic]. So, their first initial desire was to keep all their systems and find a way to merge them [sic] you know, there

were a lot of people that thought their strategy going forward of trying to make all the

systems work, rather than pick one or the other, was flawed—but anyway—they went

down that path, and that was a path they were down for, I don't know, six months, a year,

and really struggling.

A director also explains that the acquired company had the political advantage and

wanted to stay with their technology. This resulted in the effort to merge technologies that

weren't designed to be integrated,

What we really end up doing was basically the merging company, the other merging

company, actually had a superior position if you think politically and in this case I think

they really wanted to go with what they knew, which actually was a smaller system; it

didn't do a lot of the things that the dominant system did. So basically, by deciding to do

a blended core, you increased complexity, you [inaudible] a lot of awkwardness because

the systems were never meant to combine and I think it actually created more of the

political or cultural issues than what we really needed.

So, I think right off the bat we got to the wrong decision. The reason that I think

drove that was political reasons to a certain extent, turf battle, because in all honesty, jobs

were tied to which path was chosen.

IT SME #2 shares his view that the political environment contributed to prolonging the

period of escalation despite the concerns expressed by team members,

Yes. It went on for a bit and there was a political atmosphere during that time where IT

management from [the acquired company] were very much wanting to be in control of

every aspect of the project because they saw that as their role. However, as I stated

before, there was within that organization, there was a lack or void of [ERP1] experience, and so, they simply did not have some of the skill sets that I deemed required to run an implementation such as this, and the combination of those things, it made it very difficult. It was a very kind of closed off, charged, political environment within IT that had to be cracked before we could make progress.

A memo from the division president to the merged organization, however, states that both systems have their own strengths and this is why a blended solution was chosen "rather than one system." He continues, "Early on, we communicated that [the acquiring company] would adopt a blended core technology solution taking the best of both [the acquiring company] and [the acquired company] systems."

A client partner shares a similar observation of not only the tough political context but also the lack of competency in the acquired company that was in charge of Project MELANGE,

So, from a political standpoint, it was extremely tough because the people that ran the [Project MELANGE] were from the [acquired company] and there were people on that project that had no knowledge whatsoever of [ERP1], they had no political savvy of how to work with a team from the [acquiring company], in fact, their strategy was to keep the people that knew the systems in the [acquired company] out of the project. So, this was fraught not only with politics but with bad decision makers and, I would say, not competent people.

Project manager #3 explains that political issues prevented the development of a blueprint (or specification for the integrated system) due to the lack of required resources,

Yeah, mainly the blueprint was a challenge. In fact, most of those issues are mainly

political, the typical merger issues [sic] ….and there were not enough participation on the

blueprint initiative where the team could not comprehensively document the

requirements.

V.I.ii Mixed technical and business solutions. Mixed priorities pursued by the acquired

company's IT senior management, which includes the strategy of keeping legacy IT systems

instead of selecting one system and isolating the project from the acquiring company's

businesses and ERP1 team, resulted in a mixed IT technical solution in the focal project. This

mixed IT technical solution was to integrate the two ERP systems, [ERP1] and [ERP2], which

were being used by the acquiring and acquired organizations, respectively. These systems are

based on very different types of information technologies and are managed differently when

implementing business requirements. Specifically, ERP1 is a business process driven system. For

successful implementation of this system, detailed knowledge about how a change in one part of

the business affects a change in another part of the business is essential. ERP2 is more object

oriented and its components are less dependent on each other.

Integration manager #1 explains the initial approach taken by the acquired company's IT

department may be characterized as focused on functionalities that need to be supported. In

contrast, the implementation of ERP1 required a business process perspective,

But yes, I think that that was the underlying, that was the key driver is that they decided

which functionality and that's why I say I want to clarify this – they didn't look at it I

think initially from a business process lens, but they were looking at which functionality

would be retained in [ERP2] and which functionality would be retained in [ERP1] and

then the integration was making the data and the systems tie together such that that functionality would continue to work.

[sic] The project had approached this from an inventory of functions, like an inventory of technical objects that they had identified in the early stages of the project charter, and they were working bottom-up without a top-down perspective.

And the perspective changed by bringing the business process lens in, we approached it more from a top-down and then looked to see where this inventory of functionality that needed to be tweaked, you know, fit into the business process, and then we were able to bring the larger business into the picture and it became less of a technical exercise and more of a business exercise which was critical to the success of the project.

A director describes the mixed IT and business solutions and the challenges in adopting them,

It was challenging from the beginning because there was really two sides of the table. Also, there were two visions; one was basically take the dominant technology, dominant not only from a superior technology, a newer technology, which in this case was [ERP1] but also the dominant set of business processes. Because you can take and try and blend two very different sets of processes or you can adopt which you consider the dominant or the better processes.

One side of the table, the idea was let's adopt the dominant set of processes and therefore the underlying technology so we had a stable base that we were moving everybody into as opposed to create something new that both groups have to move into. The other side of the table wanted to do the blended core, which to us, didn't make a lot

of sense because it greatly added complexity to the technology footprint, which basically translated into very highly increased complexity and disruption to the operations because now nobody understood what the new role was going to look like, you were going to have to train everybody.

Since the acquired company's IT strategy was to go with the blended solution, and since the acquired company's IT department did not understand the ERP1 system technology and its business process focus, they were simply trying to push their legacy functionality into ERP1, and were ignoring ERP1 functionality, as explained by IT SME #3's experience,

> [sic] an example of—I am going to give you—the quality management module—instead of following what standard [ERP1] was providing, which was more than enough, they were trying to go ahead and code a totally different process because the way [the acquired company's] business model was, instead of trying to integrate that model, make changes, and bring them to what the [acquiring company's] model is, and that model is what the company would run on it after the implementation.

IT SME #3 explains, however, that the acquired company wasn't interested in the acquiring company's ERP1 system functionality or solution,

> Basing the whole project—based on requirements and business model [the acquired company] had, instead of looking to see what they are going into and tried to guide the project into the processes that you are going into the ERP system you are going to use in the future.

> Because [the acquired company] was using a legacy system, [sic]. Which would become obsolete for that implementation so, they were moving all that process into the

[ERP1] system but they were trying to move it based on the processes of the legacy

system instead of looking into what [ERP1] already has and integrate those processes into

[ERP1].

When asked if the acquired company was trying to redevelop or ignore the current

[ERP1] business solution, IT SME #3 replied, "Correct. Correct. Try to see if [the acquiring

company] would change to match the [acquired company] and there was a lot of complication

and bickering about which process was better but, yes."

V.I.iii Methodology. In addition to the mixed technical and business solutions described

above, the methodology used was a major contributor to escalation, as this director expresses,

There were two key drivers that caused problems, or let's say two decisions that were

really the core issues that caused the project to get in trouble. One was basically the

approach and the methodology and the second one was the fact that we were trying to do

a blended core, which was the most complex and risk-ridden approach we could have

taken.

The predominate methodology issues, as described next, include: (a) the project

manager's lack of familiarity with ERP implementation methodology, including a lack of focus

on business process integration; (b) misunderstanding of the size and complexity of the project

by the acquired company's IT management; and (c) inadequate project planning.

Project manager #4 emphasizes that the internal project manager was not familiar with

the ERP1 methodology,

And from leadership, the project manager that they had obviously did not even

understand the core [ERP1] methodology and was using old [ERP2] based project IT

implementation methodology, [sic] is where old mindsets of how you implement a

project with the SDLC methodology, of how you develop the product.

As IT SME #3 explains, the ERP1 methodology requires an integrated end to end

process, but it was not in place,

Yes. That was—the biggest problem is that running a mainframe project is totally

different than running an ERP end to end process driven system.

With the mainframe they were going straight to the problem and they did not care

if the step before or the step after what would happen. While in ERP system, if you go to

a specific location you have to make sure that the whole process works because if you go

in and interfere in one point then the whole process can break. So, yeah, the mainframe

system was non-process oriented driven, while we all know that [ERP1] is, and I would

put that in capitals—process driven. If you don't have a process you are going to have a

failure.

In addition to not using a business process focused methodology, the project faced

another major issue: The size and complexity of the project weren't well understood. This

resulted in the use of a project methodology which focuses on implementing or fixing a specific

business requirement within a business process. However, this methodology did not support

implementing the entire business process from start to finish. In that sense, the methodology was

more aligned with a production support process. According to a director,

[Sic] the leadership at that time walked into the project not really appreciating the size and complexity and they really didn't have the subject knowledge. [Sic] Basically that spelled a lot of trouble. So, what you had to do was begin to break that down because if you make those kinds of assumptions and decisions, number one, your methodology probably doesn't fit the size and complexity of the effort. As opposed to with a very holistic and very solid methodology that addresses a project of that size, you may go with a streamline version of a methodology that is really more in line with production support as opposed to large-system implementation. So we had to fix that.

Moreover, when project management does not understand the size and complexity of the project, they may create incomplete or inadequate plans. IT SME #4 explains that the project lacked bottom-up planning, clear technical end state, and adequate levels of technical staff,

First of all, I think they were planning at a very high level. You know, they had the buzz words [sic] and time brackets [sic] but there was no detail underneath [sic]. There was very little detail planning done. Another reason why things were about to fail was that there was no clear vision of the final state. There were too many systems that were still— that was unclear whether they were going to be replaced, whether they would be part of the final solution, and so I remember when they started doing the end-to-end process walks. People walked out even more confused than they walked in because some people heard of new systems that they hadn't heard before, [sic] and so, there was a lot of confusion about the final state, about the final architecture.

And I think the third issue was obviously a lot of people realized that the project was grossly understaffed. [sic] There was not enough planning around staffing in order to pull it off.

Reinforcing that size and complexity of the project weren't fully understood by the acquired company's IT management, IT SME #5 discusses her concerns that the schedule was also unrealistic,

So then the duration of the eight months was given and I said right away, being that I am very, very outspoken, I said that this is an unrealistic goal. It cannot be done in eight months. [sic] That was one of the reasons I said that's not possible and I said that in general by looking at this, it should take somewhere around two years, which was almost – that's what we took.

The acquired company's IT management's misunderstanding of the size and complexity of the project and the selection of an inappropriate project methodology resulted in inadequate project planning. In addition, the project was plagued by ineffective project execution, monitoring, and control.

V.I.iv Executing, monitoring, and controlling. Business blueprinting is a process where the IT SMEs document the business requirements provided by the business SMEs. This process, which was defined in the project management plan, was not adequately completed. According to an IT business analyst, the project management team did not support how the IT business analysts and consultants designed and executed their business blueprinting workshops,

When we would—we set up some structure on how we would conduct our meetings, how we would do our requirements gathering sessions and it seemed as when we got into the

blueprinting phase, which is when we were trying to gather requirements, all of that structure got pushed to the side. Finally, it was like—no just do it my way after we, what it was coming down to, we were wasting the business's time [sic].

Contributing to the failing business blueprinting workshops was the project management team's inability to regulate progress by resolving issues, which consequently resulted in hostile and counterproductive meetings instead of collaborative meetings. The IT business analyst describes this experience,

And then we have our weekly meetings and they started to become very—I don't want—um, they became a battle. It was like some of the people were not listening to when the business heads would speak, and they were overriding what the business would say. After we had it and we bring up issues to them they would not solve those issues. They would push them aside and when you kept asking them "have you got me an answer for this issue" they would say "I am still working on it—I am still working on it." And we would have to tell them "until you solve this issue for me I can't move forward." So, they weren't putting their all into coming up with a solution for the issue so that we could move forward.

Since the project scope was poorly understood, the business blueprinting workshops could not be successfully completed. The IT business analyst explains,

In order to say, "can we add this to scope, is this going to be out of scope, should we go back to the business with something else, or what should we do?" How—what do we do in order to get this done? I can't just up and ignore their requirement because that is a requirement that they gave us. So, what we would do is, as they had instructed us, as part

of our structure, is to bring it to management, management would talk over it and then get back to us. [sic] So, we weren't getting response back from leadership in a timely manner in order to move forward.

And then because of that—because we couldn't get approval from the business, because we couldn't take everything back to them, therefore we couldn't create our final design document that we needed to present to them.

IT SME #1 further elaborates that the process used for resolving issues was ineffective,

Yeah, we continued to trudge down the path. Again, I think—you know—I don't know what—at my level we were just constantly turning—it was like whether "we are not going to make this date" or "I don't have a decision on this important point in order to move forward on my code" or "I need this" you know, whatever it was—issues weren't getting resolved, and yes issues might have been logged, we had like on the surface we have all the tools—like okay—this issue log or whatever—you know—people would add or make a log or—on their status report or whatever it is but there was no resolution to whatever issues were being brought up. There was no 'where do I go to get this issue resolved' so we're kind of spinning but getting nowhere so it was difficult to move forward. So on the surface it looked like we're working hard but it was never moving forward—for a period of time.

V.I.v Leadership. The project leadership's lack of subject knowledge significantly impacted consequential decisions made in the project, explained a director,

Well basically a lot of trouble you see with the project is based on decisions that were made basically on day one. So, I mean you either start off on the right path and if you

don't then pretty much everything you do from that point forward is going to be less than stellar. And, if you think that if we walked into a project, or the leadership at that time, walked into the project not really appreciating the size and complexity, and they really didn't have the subject knowledge.

A somewhat confusing leadership structure that had evolved was discussed by IT SME #1,

Sure, I mean we had again serving as a PM—a person that was there was serving as our project manager and then I guess our director worked for [our company], the PM was a consultant but she was new to [ERP1] technology or maybe done some just some minor [ERP1] implementation so didn't have the background I guess to understand all the nuances of an [ERP1] implementation so with that the business—there was an identified business leader—I guess it was difficult because you didn't really understand what our structure was. There was another guy who was—I guess we were supposed to be submitted to and he was from the [acquired company] and he was I guess the leader but he was understanding [acquired company] materials but not necessarily how [ERP1] did the ending systems so we were—he was part of that leadership team but I guess it was a misunderstanding as to what our leadership structure was.

The project leadership became combative and disengaged, according to an IT business analyst,

The management was starting to become combative—with the people on the team as well as business partners and [sic]—she did like flip a few times and said there was some changes coming and people were going to be held accountable for it and in my mind the

people that she was telling us were going to be held accountable were not the people who were called on the issue.

So, yeah and so, we needed leadership who was onboard because toward the last two months [sic] our project manager seemed to pull away from the project. It wasn't her first priority anymore. It seemed like she had another agenda going on so she became a little hostile when you would ask her questions about our project.

V.I.vi Negative information and team member actions. Information that indicated that the project was not progressing as planned or anticipated was provided to senior managers. Despite receiving negative information, the project managers continued the same course of action. Management actions from the acquired company included suppressing of negative information and denial. Meanwhile, team members were raising their concerns and even contemplating leaving the project. A director explains the negative information that was being provided,

I'd say yes, we stayed on a failing course for way too long, and actually, two things: one is the IT leadership decided to run the project almost in isolation and kind of keep other people out and to a certain extent that includes some of their key business stakeholders as well as some of the supporting areas that they really needed to depend on from a subject matter expertise. So, they were marching along with a group of contractors, it was an Indian firm, and I think the Indian firm recognized there was a problem, but you know, culturally and for other reasons that I may not be aware of, they didn't really say anything and the IT leadership simply pushed them to do the integration. The catch is you can't do an integration into an existing [ERP1] implementation unless you really understand that

implementation and the business processes it supports; that's reason number one. Reason number two is when they realized they had to broaden and include some of the other areas because they were beginning to run into brick walls if you will.

As a response to the negative information, management engaged in actions such as suppression, and denial,

There was a move to suppress or contain the information that was beginning to surface from other areas as well as the core project team that things were not going well that this probably wasn't really going to be a successful track.

But I think for a period of time we had denial and suppression of information and an attempt to brute force a bad idea and a bad way.

IT SME #3 explains how issues were being raised and ignored, and the increasing split between the two organizations,

So, a lot of people were [sic] the subject matter experts on the project for those modules were raising the flag and saying "hey we are going off course here." [Sic] but the project management did not listen, I would say, they didn't pay attention, [sic]. We kept going down the path and the path between those [acquired company's team], because we truly, [acquiring company] had two teams, in this project. You had the [acquired company's] team and you had the [acquiring company's] team. And most teams kept on going further and further and further away from each other every week that passed and when the people that were supporting the system in [acquiring company] were raising their flags nobody from the [acquired company] sides were listening to the warnings.

Project manager #4 explains that the team was uncertain about the very goals and project deliverables during this period,

> I think obviously, as any project, the project team starts understanding that we have definitely not tracking green. Unfortunately, [sic] as soon as we start sliding the team realizes, and there is a group of consulting members on the team, and then there are those full time employees and they do start realizing that we are not tracking favorably to the deliverables from a timeline perspective so they will also—there is a sense of not knowing if the overall integration was considered properly and some of them are starting to question all the way back to the scope, to what was to be delivered.

Since the project issues were not being addressed and the project managers continued to pursue the same course of action, some team members were feeling defeated, dragged back in time to previous ways of working with the business, and considering quitting,

> Like I said, because of the spinning and because of the hostility that was in our room because, we were all in one room and we could sense that people weren't happy, and that there was—the team effort didn't seem like it was happening anymore and everybody was feeling defeated. So, during that time, like I said, a number of us wanted to quit. We not only were thinking about trying to find another project to go to, some of us who had been [with our employer] for many years were ready to leave [our employer] because we didn't feel like we were doing our best to deliver to the business as we had struggled so hard to make sure we were doing, because in the past we used to ignore the business's concerns and just do what IT thought was best for them and would deliver things that they would never—they would not use or they would be upset with. So we, [my

employer] IT had got to a place where we were in a partnership with our business and we wanted to make sure that both of us succeeded by listening to each other. And this project was starting to get to the point where it was back to where it used to be and many of us did not want to go back there. We wanted to deliver them what it was we knew that they would be able to use without making their life harder and would be a great IT solution and make the company look better.

Despite the escalation conditions, some team members continued to support the project. One director observed,

Yeah, I'd say they were different. If you think of the frontline team members, the people that were actually trying to execute, you had a small core of people that were basically trying to make the best of a bad situation. They understood, you know, in a lot of ways they understood what really needed to happen and understood that they were not going to be able to necessarily effect the change, so how do you rally around and try to make a less than great design successful within, you know, basically a poor methodology path? So, you had this group that was growing increasingly, you know, they were doing everything they could, and they were growing increasingly frustrated and you begin to see that. Then from, let's say, from my perspective, from my leadership position, it was really trying to hold the team together and leverage the good subject-matter experts that we had, the best that we could to support what we thought even at that point, that we thought was – and had thought it from day one – was not a good approach. But, once a decision is made, you basically become the best team member that you can.

This director's actions included reaching out and working with project stakeholders to resolve their issues,

> Then, at my level, basically on the [acquiring] side, it was really beginning to reach out to partners, to influencers that did have some stake in [this] effort and into this integration effort and basically let them know that things were not going well and I needed assistance in basically bring it to a level where we could really take a look at it and recognize where we really were at and begin to talk about how we course correct. On the [one] side, basically what you had was a continued suppression of how bad it was; although, I was beginning to reach out to some of the superiors on that side and also [sic] made a few friends on the other side [sic]. So, I think there was beginning to be a recognition that there were problems but even at that time and for, you know, several months longer they still pushed in an effort to basically just brute force it through, gloss over the issues, and then shortly after that, the blame game began [sic] and it was not a very pretty period.

As discussed above, the director also highlights that the morale of the team was adversely affected,

> Yes, I think, you know, one other thing to note when you're in one of these situations is the core team's morale really begins to fade because if you have good people under this type of situation, they are fully aware of how bad things are going and even good people can be worn down if you're basically constantly headed in the wrong direction and you can't get a voice or you can't get attention of your superiors to basically say, "We've got to make an adjustment."

Thus, the sharing of negative information and the team's actions provide further evidence that the project was escalated, and according to a director, change needed to happen fast,

> So, absolutely, we were on a course that in my mind had already failed, just nobody would admit it.

> And the only way to get either the course corrected is to take action because what we were doing was not going to work no matter how long we stayed with it, no matter how much money we spent, and no matter how hard we pushed people. It simply was not going to work so change had to happen, it had to happen fast.

V.II Project Deescalation

According to an IT business analyst, "We had no option of not delivering this project. It had to be delivered because it was a mandate from the government, that as part of the merger that we had to complete this." The project was successfully deescalated, or redirected to completion, and considered successful. Several key events triggered the deescalation of the project.

All the respondents unanimously agreed that the project was redirected and completed successfully. For example, project manager #1 states,

> Yes, and in it not only successful but it turns out that a lot of folks turned to look at how we did the turnaround and started looking at that as a model to say, you know, what kind of governance we used and what the decision making – how did that change, and why did we all of the sudden turn around and nail all of the upcoming releases almost to the day for the next year and a half. So, yes, it was successful and it became a good sounding board for the rest of the company.

The project was able to break its commitment to a failing course of action and was redirected to completion. When asked to elaborate on his criteria for measuring project success, IT SME #3 reports,

> Number one, we went live with no major problems. That was a big success. The business was running, we did not disrupt the [operations], I mean, if you think about it, implementing a change when you have [operations] constantly—you have the maintenance of the [equipment] non-stop—that was a huge success. So, there was truly no disruption at all across the globe of [the company's] operations. So for me that was a big success. We also had—we met our date after the assessment team came and we made those changes and pretty much for me, once we made the changes the go live was successful, the people were trained correctly and the operations were not impacted at all.

So, according to the team members the project was redirected to completion and considered successful, especially relative to running the business operations. The team members were then asked to share key events that moved the project out of the escalated period and redirected it to completion.

Key events that moved the project out of escalation and in a new direction included: (a) an external assessment, (b) new leadership, (c) project reorganization, and (d) a new implementation methodology.

V.II.i External project assessment. An IT SME #1 shared that, according to her, the third key event that helped move the project out of the problematic period was the opportunity to voice the team's concerns during an external assessment,

Number three, we had opportunities—a team came in—[an ERP consulting team] came in—and did some analysis and people were able to be very candid about the issues and were we putting, not so much the issues of what do I do—how do I make a decision on how to convert this part, but just how do we operate as a team—just those type of team dynamic issues were resolved. We were able to at least acknowledge them and talk about them and put it on the table. So, there was an opportunity to just be free and candid as to people's concerns and so that was put on the table and compiled and I guess raised up to a senior leadership, being our VP and maybe even our CIO. Does he know this project is truly in trouble? And just throwing it on the table and just being honest that was probably number three.

The above story is important for understanding that certain team members felt the external assessment provided the opportunity to have their concerns recorded. This external assessment was part of a much broader strategy to deescalate the project and was very influential in deescalating the project. A client partner from an ERP consulting practice, whose consulting organization was not involved with Project MELANGE at the time, was asked by the acquiring company, "Can you come in and do something with the [sic] project?" Her consulting practice had recently successfully completed a different project for the acquiring company. According to this client partner, she made it clear to the senior management that she would not engage Project MELANGE until her consulting practice could complete an assessment of the state of the project,

So, this project was fraught not only with politics but just with bad decision makers and, I would say, not competent people. So, because we had the success with the [sic] project, we were able to – [acquiring company] came back and said, [sic], "Can you come in and

do something with the Project [MELANGE]?" And I said, "No, I will not do anything until we have a period of assessment and we need to come in and we need to understand where you're at, what's going on, et cetera." – thinking that at that point, thinking clearly that their system integrator was really screwing up.

So we did an assessment. I think the results were that their system integrator wasn't so much 'screwing up' but they just had no leadership capability but more than that, the organization that [the acquired company] put around this project was extremely flawed. There was no single person leading the project. There was no involvement with the people that knew the project. It was just a spaghetti diagram of leadership.

So, at that point, after the assessment [sic] I had a chance to talk to the [acquiring company] people and I had a chance to talk and kind of befriend some of the people at [the acquired company] who recognized that there was a big issue too. That culminated in a dinner where we really suggested some organizational changes, not only structurally but individually. How we made some of those changes and then we came in with a leadership team. We kept the system integrator in place. We came in with a leadership team and then from there we executed kind of the plan.

But the deescalation started when we came in for I think it was ten, eleven weeks and did an assessment of where they were and where they were going and we did a playback of what we found and when we talked to them about their organizational structure, how it was and how it should be, I really saw light bulbs flash in those people's eyes. So, you know, so we had the first project that was successful. We had the – whatever you want to call it – the discovery or the prelude to actually the deescalation,

which was in my opinion, the beginning of the deescalation. We had the strategic

meetings telling them what their issues are and how a lot of them were their issues and

then we had the actual bringing in the project team. So, most of the people that we had in

that quality review or discovery or analysis for the ten weeks stayed with the project and

then really, from there, we tactically managed the project.

Though the client partner stated that the deescalation started during this ten week

assessment, she also stated that perhaps the deescalation started before the assessment, when

Project MELANGE leadership began to compare Project MELANGE to the client partner's

successful project mentioned above,

Okay, so I have – I probably have a different perspective because I think I have a

broader, wider perspective than the detail but I think the deescalation started when we –

you know it started a little bit when they could see that their project was flawed by

comparing it to another project. That was the planting the seed.

As the client partner explained, as a result of the assessment actions were taken to

deescalate the project, or redirect it to completion.

V.II.ii Change of leadership. When a director was asked to explain the methodology

and restructuring of the team, he replied,

Yeah, I'd say well the project leadership changed. The IT leadership was totally changed

out and basically the person who was brought in was more receptive. [sic] Back to the

leadership again, we also put in place a much better PMO organization and we did true

planning [sic].

IT SME #2 explains the importance of changing project management leadership,

The project management was, in my estimation, was probably much more key then adding the additional functional consultants.

But the project management piece, in my estimation, is probably the most key thing because that's what drove everything to the truth, and that's what you want because you can't have a date without having the supporting information and without knowing your scope and without knowing the complexity of your scope and driving that out to a certain level of detail to support a realistic goal, you're simply throwing darts in the dark and it took a little bit of time because it's not something that you can do overnight, but over the course of a fairly short amount of time, we got a good project plan and that was the first time during this implementation, in my opinion, that we had a project plan because part of that, we really didn't. We had something that might have passed for a project plan for a much, much, much smaller, much more simple implementation but certainly not anything that was robust enough to be considered a true project plan for something with the size and scope of what we were dealing with. So, really, to me, that was probably the most key thing that we changed, was bringing in additional help there with people who understood what it took to get us to the finish line.

IT SME #3 explains what the second key event was for him,

Number two, we made two changes into the project structure of [our company]—the project manager was replaced—someone who did not know anything about [ERP] was replaced with a very experienced and seasoned [ERP] project manager that ran quite a few projects in the past and also the IT director was replaced by someone who was more

willing to listen and understand that [ERP] is a little bit different and we need to do
things a little bit different than the way the [acquired IT organization]—used to do it for
the last 20 years. So that was the biggest—the second biggest impact for me, that
changing the project manager or the IT director.

As the leadership changes were agreed to, project reorganization was also implemented.

V.II.iii Project reorganization. The project reorganization included augmenting the
team with new functional consultants to fill the role of team lead, assigning business partners
full-time to the project, and co-locating the first ERP consulting team with the business,
specifically, moving the ERP consulting team from the acquired business to the acquiring
business project site.

V.II.iii.i New functional team leads. In reference to the new functional leads, IT SME #2
explains, "We brought in additional consulting help from an experienced, reputable ERP firm.
And we put in place new functional leads within each sub-team to help drive out requirements in
the design and build [sic]."

Project manager #4 describes the roles of these new functional team leads, and also
considers bringing them on board was the second most important key event,

Two, the second very important thing was the team selection. The team that [ERP] PMO
put in place which was handpicked by [project manager #2]—we had some of the best
principle and platinum consultants who were not only functionally savvy but were also
technically very competent to deliver and they could lead very effectively in their line of
expertise and in their business areas. So, they could command. They had industry

experience for most part. Some of them had worked in previous [sic] industry projects to they brought that rigor along with them.

IT SME #5 explains the importance of the reorganization for each track within the project,

And in each track, now there were the people who, what needs to happen. [sic] At least you knew who was in charge, who was going to do the work, and how was this going to proceed. So there was a structure developed. With that structure, it leads to advance forward but without that structure, everybody running like a chicken with their head cut off. We couldn't go forward before that.

IT SME #5 articulates that after the assessment the team structures had three components,

I think also the project team was restructured, right?

So, I think now there was [the acquiring company] and every team had three players, at least three. There was a [the first consulting practice] part, there was a [acquiring company] component, and there was a [second consulting practice] component on almost every team.

V.II.iii.ii Business partners assigned full-time. As IT SME # 5 explained above, the acquiring company was now providing at least one-third of the team leadership by staffing full-time business partners. We examine why this was so important. The business partners were assigned full-time to the project, whereas before they were requested as needed. According to an IT business analyst,

As a matter of fact they restructured some of the business partners after we got back on

the right course. Some of the business partners that we had initially were removed off of

the project and no, they were not full time because, like I said, the business sometimes—

the people that we would bring in from the business have to be able to leave their

business role—their day to day operations and come spend time with us through the

whole implementation of the project.

And some of those couldn't do that so they would roll in and roll out which meant

they missed some of the quirks of what was going on in the solution.

When this IT business analyst was asked if the business partners were still part time or

were they full time, she replied,

They were instructed that they had to be full time.

Yes, the business partners were made full time and were instructed that they had

to be there with us in the room that we were working so that we could have discussions –

you know ad hoc discussions at any moment and so that you would be involved in getting

a decision made.

When asked to elaborate on the role of the business partner, an IT business analyst

replied,

It's them being there onboard with us, they got to see the solution as well as to

understand it and develop the training that needed to be done—for their people on the

floor.

When asked why the project was completed successfully, IT SME #6 shares his view, "There was, in the end, good teamwork and I think a lot – that more key business subject matter experts were brought onto the team as well. I think that was another thing that helped."

In addition to the new functional team leads and full-time business partners, the project team was no longer split between two distant project sites but was co-located at the acquiring company's project site.

V.II.iii.iii Co-Location of the team. As part of the project reorganization, the team was all located and working from one project site, rather than at two sites as before. The project located at the acquiring company. According to an IT business analyst,

Also, because of this putting us back on track, [the first ERP consulting firm] was sitting in [the acquired company's location] instead of [the acquiring company's location] so we were doing a lot of our conversations over the phone or WebEx's or web conferencing, and it wasn't because of the time difference as well as having to get on the phone and trying to show what it is that you are trying to do, it didn't help. Even though, in our kickoff meeting, the main thing that the business had said was that we all needed to be together in one state in order for this project to succeed. But project management decided no it will be okay if they did it in two different places. Well when the reorg came through, it came down from IT upper management that [the first ERP consulting firm] would have to move from [their location] to [the acquiring company's project site] and all sit in a room together. So we would all be together in order to get decisions made quicker, to get documents completed, and everything done. And once that was done we started rolling forward much faster and better.

IT SME #3 lists co-location as his third key event that shaped deescalation,

Number three, which was also a huge—I mean, the decision to move the team from [the acquired company's location] to [the acquiring company's location]. When you have a project you cannot have two sites running the project, you know, you have to be one team; you have to be in one location. Yes, you might need to take trips to [the acquired company's location] to find out, to make workshops and different things or you can have people from [the acquired company's location] coming down but the consulting team and the subject matter experts of the project team should be all in one location, so that was number three.

When asked for some examples of what the project management reorganization meant to the project team, an IT business analyst said,

Like I said, when we were told about it people were—we started feeling better about somebody was listening to us.

When it started it happening we were so grateful and everybody was ready now to dig in again, and give their 100 or more to this project so that it would succeed. People were willing to give more time, they were willing to—we came up with new processes in order to cover decisions that were made and timely things started happening. We started being a team again, instead of us and them and everybody for themselves. It wasn't combative anymore. Even the business leadership when we had meetings were more willing to listen to us instead of saying "this is what I want; I don't care what it is that you got to do it, but do it." And they were willing to listen more now, I think because they realized okay, we are moving forward and something is going to happen to say if

what it is they requested may not be the best fit for where we were going with the company and then it may be more of a waste of money and they would never be leaving so they were more open to that. So, I think the team started gelling again. And that we were all out to see a new product delivered.

Thus, the project reorganization was a key event which resulted in a team being led by a new functional team lead and a full-time business partner while still retaining the originally assigned functional consultant. This at a minimum provided a real-time feedback loop amongst the team. As the project reorganization settled in, an ERP implementation methodology, including project management governance practices, were adopted.

V.II.iv Change in implementation methodology. As a director explains, not only did the project bring in a lot of subject matter experts, the methodology was revamped. He further explains how these two events together impacted the project,

Also, the methodology basically allowed the team, which we revamped, in other words we brought in a lot of subject matter experts that were not on the team because, again, if you don't understand what you're really getting into, you're not going to staff properly, how can you? So, we began to take – and even though we didn't necessarily agree with the outcome – we understood what it was, and once you get the methodology running and get the right people in place, you can begin to break down because having a large ideal that says, "we want to from point A to point B", there's a lot of details and a lot of work in-between points A and B and the team has to know how to break those down and to get at them and resolve the conflicts and resolve the complexities to the point they can actually put together an executable design that you can then build.

Therefore, one of the key events identified was the change in implementation methodology. This key event triggered a shift to: (a) a business process focus, (b) bottom-up project estimating and scheduling, (c) establishment of project governance procedures, and (d) a weekly project manager (PM) and team lead (TL) meeting.

V.II.iv.i Business process focus. The project reorganization allowed project managers to focus on supporting end to end business processes, as described by integration manager #1,

> Well, the original implementer, of course, was moved to a secondary role and as part of the switch in the management, each of the teams received a team leader that was business-process focused as well. So, whereas before, the team leads were highly technical and very narrowly focused without a business process background, I think that the entire project structure was realigned in a way that's required for any ERP to be successful in a complex company.

Integration manager #1 explains that the project moved from just looking at pieces of functionality to working with a business process perspective,

> And simultaneously to that, [ERP consulting firm] brought in a methodology that used business processes as a top-down driver of project success and so we were able to introduce [ERP] methodology on the project and then retrofit some of the key deliverables that, that were business process related. That was really key to start to put a lens on what was important, what was missing, what did we need to do to get to the finish line.

The project had approached this from an inventory of functions, like an inventory of technical objects that they had identified in the early stages of the project charter, and they were working bottom-up without a top-down perspective.

And the perspective changed by bringing the business process lens in, we approached it more from a top-down and then looked to see where this inventory of functionality that needed to be tweaked, you know, fit into the business process, and then we were able to bring the larger business into the picture and it became less of a technical exercise and more of a business exercise which was critical to the success of the project.

And another key event would be that, you know, our constant drum beat of business process got stakeholder support all the way up the chain and that was a key event.

V.II.iv.ii Bottom-up project estimating and scheduling. The new PMO, established during the project reorganization, did bottom-up project estimating and scheduling by establishing a valid deliverables based work breakdown structure (WBS) and by establishing dependencies. It also estimated durations by working with the SMEs. This project schedule was then used to reconcile the top-down program milestone dates. According to project manager #4,

Okay, so the very first one is—I would say is one—as we took ownership we very clearly defined the scope of what has to be delivered. What is the bucket of the deliverables— because that by that time had not been defined? So, again, it goes back to a very strong PMO where we went back to the drawing board and said, okay, what is contained in this set of deliverables? There are all these things that keep—from a scope perspective. There are things that they would classify as wish list. Let's basically get them all at once and

then say how do we define it and that is some process that we did even before we got into

their SOW so, we had a very clear handle on what is to be delivered. That is one.

After taking ownership and defining scope, project manager #4 briefly describes his work

on creating a project schedule,

So, as I indicated initially, I came over to assist the PMO that the overall program

integrated schedule. The way I kind of helped the team was to get a very clear

understanding of the WBS elements broken down to the lowest common denominator

that we wanted to track going by the 80/20 rule of high project management where

anything that would take x number of hours we would break it down, classify it and then

put a location from it as whose perspective and break it down to the lowest common

denominator of approximate hour estimation.

As a result of setting scope and working on bottom-up estimating, a valid project

schedule, or time line, was developed and communicated. According to IT SME #2,

The key things that happened after that was actually taking stock of our scope of the

project and getting together a real and reasonable project time line and rebasing the entire

project, which did shift dates and was communicated to management but they were, for

the first time during this project, we felt like we had solid footing when we talked about

our dates because they were based on the realities, not based upon an arbitrary decision

that someone had made on an end-date.

IT SME #4 emphasizes the importance of valid schedules by sharing that project

management refused to provide estimated schedules until bottom-up scheduling had been done,

Yes, the other one I think was very good is that leadership, they were asking for dates. They were asking for estimates and project management, I think they refused to do that until they had the information that was required to make the estimates to come up with the estimates for the timeline. So that way you build these schedules bottom up, so not only does that give you a better estimate to begin with but it also enables you then to see if any of the underlying pieces start to shift, what the impact is on the overall project. I thought that was very significant. Until then it was basically you put your finger in the air and say okay we want to be done end of this quarter so that would put that date out there without any idea of what it would take to get there.

IT SME #3 shares the same level of importance for the new time line,

And finally, [sic] we finally got a project plan, we finally had a timetable and we were adhered to the timetable and to the—we had to deliver deliverables by a specific date and we kept that timetable almost to a T all the way to the end.

The importance of the project planning and the visibility on the deliverables and due dates is explained by a director,

Back to the leadership again, we also put in place a much better PMO organization and we did true planning so that you could truly track progress and report on progress not kind of what you thought or what you wanted to say, but it became very visible and very transparent and that's huge because if you see what's really happening and everybody else sees what's really happening, it can be reported accurately and is reported accurately and timely, then adjustments if they need to be made, can be made within the project

team within the better methodology as opposed to just continuing with bad behavior or things that aren't being successful and end up in the same place again.

V.II.iv.iii Established project governance procedures. As part of the new methodology, governance procedures such as scope, issues, and decision management were implemented. Integration manager #1 explains that the ERP consulting practice joining the project took the time to implement the needed project management processes and tools while simultaneously moving the project forward,

> Well, basically [the ERP consulting practice] retrofitted their methodology into a moving train, in effect. So typically we would have a project charter or a project start up, so a project charter had to be written because one really didn't exist. What was issue escalation? What were the issue logs? How do we track risk? All of that stuff had to be fit in pretty quickly and retrofitted into a moving project. The business blueprint that normally where we map business process and say, "what's in scope for the business processes that needs to be worked on?" and then "which business processes are changing?" – That had to be inserted on the fly without derailing technical objects we knew had to be done anyway and derailing the timeline even further. So, getting that scope and those documents in place and getting the project to stop moving forward long enough to make sure that we had the same goal in mind was hard, right? Because management wanted to stop the bleed and wanted to hurry the project along and finish and I think that what [the ERP consulting practice] brought to the table in saying, you know, "unless you have some of these key elements in place, we will never finish and you are going to need to give us some time to do this."

An IT business analyst discusses that focusing on and resolving issues helped the team move forward,

> Okay, I believe the new reorg came in and we started having meetings and talked about the issues that we were addressing because we had what, we had an issues log that was not being addressed by the former project management. So we would address those issues, make sure we got resolutions to most of our issues within those meetings that day and especially if they were higher priority, which made it easier for us to move forward in order to do what else to make the design and go onto the next stage.

The IT business analyst also describes how key decisions were documented,

> They also put in place some other documentation in order to capture some of the business's needs which what we called key decision documents so that if as maintenance is coming up with the designs to the solution the IT people discovered that this is what we are going to have to do in order to make this work. With those documents then we could present that to management from the business side—from the business partners that we had in the room with us, they could present that to their management and say this is what we are going to have to do in order to make the solution work when we implement. Are you okay with this? And we would get formal approval. So we didn't have that before. It was just he say/she say and somebody said—had a conversation in the hallway—which tended to—people would forget later that they had said yes.

V.II.iv.iv Established weekly project manager and team lead meeting. A weekly project manager and team lead meeting was established. This meeting was held on the same day every week, early in the week, for one to two hours. This meeting provided cross-team integration with

the purpose of cross-team communication and coordination. Moreover, the team members "were given a voice" and their PMO listened.

By providing insight into his thoughts and actions around the weekly project manager team lead (PMTL) meeting, a director provides a thorough review of how the bottom-up planning, governance procedures, and the PMTL meeting synergistically helped the project,

> Well, to me that was kind of an extension of revamping the PMO because you had to have the team leads and the business teams and the IT teams had to be very integrated because, you know, I'm a big believer in a master plan and with lots of tasks on it that people within the business teams and the IT teams are responsible for and accountable to and you have to basically pull that plan from the ground up. You have to pull that plan from them and so to put a good plan together, you've got to have those weekly meetings and to basically then track and make sure that plan is executed timely, you have to have those meetings. Also, any good PMO has a very good problem identification and problem escalation process.

> And a very good change control process, and you manage that through those teams because basically what you're doing is putting out processes and methods and policies and basically when you're meeting with the teams, you're gathering the information [inaudible _____ 0:53:16] and you're also pushing down a portion of those policies and methodologies. So, having the team together like that, integrated in one place as opposed to two or three locations, is critical on a large, complex project.

> So, absolutely, you've got to have them. To me, that's an extension of how you run your PMO and basically how your methodology guides you to gather all those things

because without the team meetings, without the processes for project identification and escalation the problems just sit there and fester.

When the director was asked to share what he thought the other project team members' thoughts, feelings, or actions were around the revamped methodology, team structure, or PM team lead meetings, he replied,

Well, I think basically, two things: number one, it gave them a voice.

The PMO leading those team lead meetings, it was very open, you know, get it off your chest type of situation, which is what it should be. It's a very open dialogue to make sure that we understand what issues are, where bottlenecks are so that they can get them resolved as opposed to maybe under the previous methodology and leadership that wasn't necessarily the case. So the team leads, because those and the teams are the front line of execution. They have got to be able to have a voice and the PMO has got to hear it and help them act on any issues they're having. So, I think that was huge. The big thing to me is that [project manager #2] gave them a voice because that's where the problems and that's where the executions at and the problems have to be resolved at.

The previous leadership didn't have a very open dialog for understanding and resolving issues. In contrast, the new PMO did have a very open dialog and was focused on resolving problems. Moreover, the weekly team lead meeting gave the team a voice and the PMO helped the team resolve the issues in these meetings.

Project manager #2 shares that, "the purpose of the project manager team lead meeting every Tuesday morning is for cross-team communication and collaboration."

Project manager #4 continues to describe how the team communication became integrated by describing their weekly team lead meeting and how talking and transparency was occurring,

From a third perspective, again, it goes back into the PMO, adhering to a very rigorous [implementation] methodology. I remember every week when [project manager #2] went and we had a one-hour session and several times the overall program questioned the value of having 40 people in that one room, but at the end of the day as the likes were basically thrown in there was a very clear picture of integration between several team members which otherwise would be dropped out in several ERP projects because no one gives an opportunity for 20, 30 or 10 cross team members to sit down and specifically focus on integration points and things that the ball is being dropped. Even in my project I have seen several other projects, you know, people dropped the ball and then it was never picked up by the other team but in [the client organization] a specific project that some of those coordination activities that were defined to talk openly and it could be a hard discussion but at the end of the day everyone realized that there was a value to it. It was done not for justifying an individual or a team or a group but rather to basically bring things out from left and just put them under the microscope and just say "okay guys, fine, you know we found this, no big deal. What is the next thing we have to do? How do we do it? How do we fix it?" That approach—that mentality is something that made things very different. The employees within [acquiring company] realized that even if they were behind they could transparently talk about it. Their fears were let down and they were able to discuss transparently things that they were not clear on, they might have missed. And that overall communication process—the relationship building—one-on-one

relationship building and the confidence that was built eventually was again another very major factor. The overall positivity and the sort of say if I could do the world or positive feng shui or karma, whatever you call it, you know you uplift the team's spirit where they start feeling more empowered, more heard. And it is not like I am just shouting; no one is listening to me. There is a question—it goes directly to the directors or VPs and they get an answer back in 48 hours. Then they start feeling that there is someone in the PMO who is listening to me. So it is a mixed bag and everything contributed its own fair share.

An IT business analyst shares a similar perspective as project manager #4 relative to the weekly project manager team lead meeting,

Well we had [sic] our weekly team lead meetings where all the team leads that were on the project would sit in a room and discuss their issue [sic] because some of the processes that we were implementing crossed over teams. With all of us in the room together we got to voice what it is that we had going on in our little silo process that may affect somebody else's process and may not have even occurred to any of us that it would affect their process. So, some of that got ironed out in those meetings, we got to talk through issues and to come up with some solutions and to talk about how are we doing moving forward and if anything was going to stop us. So, having us all in a room being able to talk that through was easier than trying to do some of your process—how you thought it was going to work, not even thinking about other teams that were also implementing it in the full solution.

We also had our issues meeting where we would go through that issue log and say "okay, what is holding up this issue, how will I get this resolved?" [sic] So, we talked

through that all the time, which we weren't getting addressed before. We also talked

about some of the objects that were being developed and whether or not they crossed

over into other teams and if it was going to affect them. So, we got to talk more freely

[sic] and make it more clear and it wouldn't stop our solution in the end [sic].

As described above, the project had weekly project manager and team lead meetings

where issues and development objects were discussed and how they may impact other teams.

Moreover, the team had a forum to talk freely and bounce ideas off of each other. The team had a

voice that was being heard by the PMO.

This IT business analyst shares her thoughts and feelings and what she thinks the other

team members' feelings, thoughts, and actions were around these meetings,

I think we were—I think for the most part we were grateful to be having these meetings

because they were constructive. Because in the past we were just having meetings to be

having meetings that would not come out with any resolution at all so we felt like it was

just a waste of our time to sit in a room when we could be doing stuff to make move the

project forward. So, these meetings were definitely constructive for all of us and it helped

us to move forward.

The IT business analyst explains what she means when describing the meetings as

"constructive",

It was constructive in the fact that we were getting resolution to some of our concerns; we

were allowed to voice our concerns without feeling like we shouldn't be speaking. So, we

were also being able to come up with ideas, like just throw an idea out there and talk

about things like "oh, this might have been—we didn't think about this, did anybody

think about this or how was that going to impact us?" So it was definitely—we were more at ease to talk.

She confirms that this obviously helped each other make sense of what was going on and moved the project to completion.

IT SME # 1 explains that there were sub-team meetings in addition to the weekly project manager team lead meeting,

> No, the sub-team meetings, meaning each functional team, [sic] Each of those teams had their own periodic meetings, [sic] But then there was a weekly [project manager team lead] meeting that was comprised of all the functional teams, the data conversion teams, the business unit, all the people that were participating—even supporting team members that were not part of the core team but other teams that supported us that we interfaced with—another legacy group. They were invited to that—or they knew that they could come to that meeting to get a status of what was going on.

IT SME #1 explains that the weekly PMTL meeting supported cross-team communication, collaboration and education, which included updates on many different deliverables,

> Let's see—well the weekly [project manager team lead] meeting it was I think held earlier in the week—like a [sic] or something—I guess the intent was to have a touch point with the team to again, show where we were in the process, what upcoming dates to make sure everyone was aware—"okay next week we are going to start testing" or you know, whatever, it also contained—emphasized ultimate cutover date that we were targeting so that everyone was on the same page, it also provided opportunity for each

team to provide their status, what they were able to accomplish that week—any

roadblocks—anything they were needing to be raised up—any issues, concerns, risks.

We also reviewed—if we were in a testing phase but also we discussed defects—just kind

of bring an awareness to everyone on issues. But also there were times when somebody

wanted—needed to—not necessarily training but just kind of education so there was

times that we would break off and someone would give an overview of a tool or just—

maybe a new decision that was made—so somebody might get up and discuss or

review—so everyone was aware of this new approach or new something—you know,

how we were going to do it.

IT SME #1 further describes the quarterly project manager meeting that took place before

the project reorganization and the establishment of the current weekly project manager team lead

meeting. When asked who was responsible from the leadership team for the quarterly meeting,

she replies,

Well, the quarterly meet—well we had a so called team meeting before, it was the PM at

the time and she facilitated the meeting but the context of the meeting wasn't the issues

of the project. It was more like a touch base and it was very light, you know, I mean,

people—we had issues but for whatever reason we didn't discuss the issues on the call—

IT SME #1 clarifies the term "light" and draws a comparison to the weekly project

manager team lead meeting,

Well, when I say light before it was so-and-so's birthday or it's—it was stuff that was

not—I mean it's cool—I like that kind of stuff but it's—it was irrelevant to the project

given that we had all these issues. So, that was not discussed, whereas on the weekly

meeting that we ultimately became involved with it was "okay, well what are the issues" and "let's put on the table" you know, it was defects, it was "this is the target date for this specific something in the project plan so we are coming up on this."

Concerns if you are not ready, you know, so it was definitely in depth, it was definitely, you know, unless something happened within a week's time, you know, it gave people an opportunity to know what was—you know, and then plus the meeting was on Tuesday so you know, usually you are getting a head start on the week. So, you are at the beginning of the week, so any concerns, let's raise them up now and just try to address them in the beginning of the week. But it was definitely more involved.

IT SME #1 explains that the weekly project manager and team lead meeting was focused on goals and working towards them,

Yes, it was definitely—these are—this is our goal, this is what we are striving for—and the following week this was outstanding from last week or that we meet—so definitely it was action oriented.

When asked if she would consider this weekly meeting a social event and how many participated, she explained,

I think—well, some of them were "this is a long meeting, I am ready for lunch", some of them were. But I think for the most part it was they knew that it was something that we needed to do. They knew it was—if they had an issue they knew that that's where we—I could go to get my question resolved. If I had a specific issue—I think really anyone that knew of our project or had to deal with our project knew that that was the avenue that they should go down in order to raise a question.

The number of participants was probably—I don't know, 60 people—60 at least. I mean in the room there is a lot of people on the phone as well that would call in so, 60, 75 people maybe.

Earlier during the interview, IT SME #1 described the lack of trust or lack of candor before deescalation. When asked if this weekly meeting facilitated those attributes of bringing trust and/or candor to the project team, she replied,

Yes, I think over time. It wasn't necessarily an immediate turnaround but over time, yes, because I think the culture of maybe some of my counterparts on the [acquired company] side that didn't raise issues or I think maybe that even our consulting team, they didn't raise issues because—I don't know if it was fear of—I don't know, it was just that was their culture so initially they were afraid but over time yes people were recognizing that if I want to get my question answered this is where—whether it is here or even in another meeting I need to be candid, so it did help facilitate ease of conversation and it did help with the trust issues for sure.

She further elaborated on her view of the impact of the reorganization on the work culture of the team,

I think it was a start. I think that it is certainly hard to change a way that you have worked.

But I think that they recognized that "okay, I won't get in trouble for having a defect" you know, defects are a good thing—I think for whatever reason that was people's perception or that was how they worked but they recognize okay well, I need to report a defect—I need to—whether just to be able to bring visibility, it might come up

again. I think [project manager #2] saw that—that it wasn't a negative thing, it wasn't a

bad thing that—to put things on the table was a good thing and that it did help with trust,

it did help with people's ability to work together and knowing that we were all striving

for the same goal. Yes.

So, from IT SME #1's perspective, there are significant contrasts between the first project

manager and their quarterly team meetings, where issues weren't discussed, and the second

project manager and the weekly team meetings, where the team had a place to discuss and

resolve issues. As stated above, the team realized it was okay to discuss defects without fear of

repercussions; hence, trust was established.

In summary, Project MELANGE was successfully deescalated by redirecting it along a

new course of action. It was successful because when they went live, they were able to

successfully run the business. An IT business analyst further states,

I just want to say thank God for the new direction that we went into because we definitely

wouldn't—we would still be doing this.

It would have still been going on and it may not have been implemented as much

stuff as we did get to implement. I am grateful that management woke up and made the

change and I am definitely grateful for the people who came in and decided to take on

this project from where it was and try to see it through to fruition. So, it was definitely—I

loved the project, I grew a lot in that project and I learned a lot of skills in that project.

This redirection was accomplished by a number of key events which established a project

culture of giving voice to issues and risks and establishing trust. According to IT SME # 1,

So those were key in my opinion in us turning things around and getting everyone on the same page and able to trust one another and not holding back—and moving towards the same goal. I think also that identifying the goal and looking at it in its totality. I think that there were times when people really didn't understand what it is that we were trying to accomplish and so just talking about this is what we are striving for and making everyone on the same page and so that was helpful and well.

In the next section we will read how sensemaking was implicated during Project MELANGE's deescalation period.

V.III Sensemaking Properties

As described above, the project was in an escalated period which included elements of uncertainty and ambiguity, as described by IT SME #1, "Okay, I didn't make sense of it. I couldn't understand—I didn't make sense of it and I was planning my exit to be honest. I didn't know how to function in that type of environment." Therefore, practitioners, like IT SME #1, tried to make sense of this uncertain situation.

We are interested in examining how sensemaking impacted the deescalation process and how the deescalation process impacted sensemaking. This includes team members in the project focusing on some elements of their situation and establishing their attention boundaries. They then impose their understanding by saying what is wrong and determining what the new directions are for moving out of the escalated situation.

Project MELANGE's team members did successfully convert their escalated situation to a problem. These efforts are partially explained by the key events discussed above (e.g., project reorganization, adopting a new methodology, etc.) which provided them an understanding of

which cues to focus on in the first place. These key events only partially explain moving out of the escalated period and successfully deescalating the project. In the next sections we discuss how the team members singled out particular cues from their ongoing flow of experiences and how the team members constructed and read their text.

In addition to focusing on project team members' actions, we also examine Project MELANGE's elements of change, such as conflict, affect, motivation, and instability, when focused on sensemaking. Lastly, cognitive dissonance, a concept associated with sensemaking, was observed in Project MELANGE, as we see in this director's experience with other colleagues,

> Yeah, absolutely. And I think having the initial discussions with them even without the evidence is, you know, I think some of them already knew there were problems, but again, they were so vested in the decisions that had been made, that they were hoping it would just kind of work out.

We review the seven sensemaking properties to understand how sensemaking was implicated in Project MELANGE's deescalation process. In other words, we examine how sensemaking impacted the deescalation process and how the deescalation process impacted sensemaking.

V.III.i Identity. The identity property's key concepts include the following: (a) identities are established by the interaction process, (b) as interactions shift the definition of self shifts, (c) the situation is defined by who I become while dealing with it or what and who I represent, (d) cues defining the situation are derived from the self that feels most appropriate to deal with it versus what is going on, and (e) self-concept which is created by the continuous outcome of self-

enhancement, self-efficacy, and self-consistency, which maintains our changing sense of self (Weick, 1995). Potentially most important is self-referential, where self may be the text required to be interpreted rather than the environment (Weick, 1995).

V.III.i.i Roles. Depending upon a team member's interactions, each team member may assume roles that extend beyond their assigned roles in the project. For example, a director states that he had multiple roles depending upon his interaction with different project elements,

> Basically, I definitely had a leadership seat at the table. It was a secondary leadership table. There chiefly for our expertise and the business subject matter as well as the underlying portion of the technology that represented the [ERP1] platform, and it was more of a guidance because the organization we were merging with, their IT organization, was taking the lead role, if you will, on the project and on the overall implementation and we were there simply because in all honesty, we support the [ERP1] in space but also we were the subject matter experts on the space and including the business areas where they potentially had a deficiency in that area.

Moreover, his definitions of himself changed from that of a leader to that of a counselor or advisor.

> Absolutely, because it forced me to play several fronts, if you will.

> Not only as a leader of the team that I brought as a subject matter expert leader –

> As well as one that was really trying to support the overall project leadership that really potentially had different plans or different ideals as to how it should work and that was chiefly because they had a limited understanding of what we were really walking

into, so—I had to play counselor and advisor as well and, you know, sometimes

successful, sometimes not as successful as I'd like to have been.

V.III.i.ii Self-Concept. We observe the team members' self-concept, the continuous

outcome of self-enhancement, self-efficacy, and self-consistency, maintained the team members'

changing sense of self. In addition, we see how the team members' individual character is

affected by the organization's image.

V.III.i.iii Self-enhancement. Self-enhancement was identified during the project

deescalation as it seems that seeking and maintaining a positive cognitive and emotional state is

important. According to an IT business analyst morale was dropping and many project

participants considered leaving because they couldn't deliver the expected results to the business.

> I have to tell you the team morale was dropping; I mean it was dropping very fast
>
> because of the spinning. I mean seriously most of us were ready to roll off of the project
>
> regardless, we were ready to leave [our company] because we did—we weren't used to
>
> working this way, not being able to deliver to the business.

In addition, this IT business analyst's efforts to maintain a positive cognitive and

affective state determined her next steps and her actions to deescalate,

> I guess I have been in [my company's] IT for many years and my gut is to—I work for
>
> the business—let me say it that way—and so my thing was always to make sure that the
>
> business was informed and happy with what was going on because their deliverables is
>
> what made me feel successful that I had did the right thing for my role. So, after not
>
> getting what it was that I needed in order to move forward, I just ignored the project
>
> management after a while.

Therefore, this team member's focus on keeping the business stakeholders informed and satisfied and her need to maintain her self-enhancement prompted her to take action. In other words, her self-enhancement drove her to pursue efforts towards deescalation at the team level. By the end of the project she felt, "So, it was definitely—I loved the project, I grew a lot in that project and I learned a lot of skills in that project." Hence, deescalation impacted her self-enhancement in a positive way.

Integration manager #1explains a similar effect that deescalation had on his self-enhancement,

> Right, and there were still disagreements among the project team but now we had an environment where we were all allowed to come and voice our opinions and then, you know, like I said, compromises have to be made on any project of a complex nature to be able to hit a timeline and we knew we were heard and we knew that everything was weighed and so that was fine. So, it's not to say that there wasn't still – disagreements, but they were positive. Everybody's voice was being heard and we knew that there was a mechanism in place to gather that information and make the best decision for the customer.

> IT SME #1 also expressed feeling good about her work by the end of the project, ,

> You felt good about what it is you implemented. I liked to think that what I do helps my business partner—I don't like to implement things just to say that I did it. I want it to be helpful so I think that at the end of it, it was helpful to the business so I took pride in that. So it was—I guess that was—you know—in general my definition of success.

V.III.i.iv Self-consistency. An IT business analyst's description of the actions by various team members during the escalated period lends itself to their need to sense and experience coherence and continuity,

> Like I said, because of the spinning and because of the hostility that was in our room, because we were all in one room and we could sense that people weren't happy, and that there was—the team effort didn't seem like it was happening anymore and everybody was feeling defeated. So, during that time, like I said, a number of us wanted to quit.

A director explains that the team's morale suffered due to lack of understanding of the actions that were taking the project in the wrong direction,

> Yes, I think, you know, one other thing to note, when you're in one of these situations is the core team's morale really begins to fade because if you have good people under this type of situation they are fully aware of how bad things are going and even good people can be worn down if you're basically constantly headed in the wrong direction and you can't get a voice or you can't get attention of your superiors to basically say, "We've got to make an adjustment."

IT SME #5 explains that she considered quitting because she was especially frustrated with the lack of coherence in the actions taken by the managers,

> Yeah, because the frustration – when you are frustrated, I was almost wondering whether to quit the company because I was beyond that level frustrated. I wanted to quit the company and wanted to really look for other jobs. It feels like you are not appreciated by the company and you are just wasting your time. So one, you knew that really – and maybe I was the type who didn't care about the middle-level people who didn't really

have vision, so once I knew who supports me, at least the top-level people that supported

me, I knew I could get my work done.

Yeah, and I still get frustrated with the people who have no – who have zero

vision.

IT SME #5 explains why developing a common vision for the project is so important,

"Because you need to understand where you want to go and without understanding where you

want to go, how do you know whether you achieve what you want to do?"

In summary, the escalated period negatively affected the team's self-consistency.

V.III.i.v Self-efficacy. Integration manager #1 explains that he was not willing to risk his

self-efficacy and would leave project before doing so,

Well, first of all, I have a long history with [the acquiring company] and I'm an [sic]. I

run my own company and my reputation is extremely important. So, looked at this and I

have 17 years of project implementation background. So, I looked at this and because I

was being asked from an external source, it was basically the [acquiring company], was

asking me to come in and give an honest assessment of "are we on the right track?" I

couldn't look at this project and say that we were on the right track. It was beyond a

difference of opinion on which system would be the best system and what technical

approach should be done for filling object A versus object B. I know in that case, you

know, in that case it would probably have aligned, but I didn't see in the project structure,

the elements of a project that I had seen through the years that basically equated to a

successful project. So, I didn't see a project charter that was executing. I didn't see a

blueprint that we were working to. All I saw was a list of technical objects and I saw a

bunch of resources that were working diligently on those technical objects but they had no earthly idea how they all came together. So, I felt to retain my reputation at [the acquiring company], I had to stake a position that would be countered to the IT project management even if it meant that I was to be asked to leave the project. I think that it was that important that I did not want to be part of that project or give a rubber stamp to a project because I did not believe that it would succeed at all with the way it was going.

Integration manager #1 shares that self-efficacy was preventing deescalation, in the sense of preventing cooperation,

And there were some people who had pride and ownership of the current direction. So, if you stopped to say, "You know there's a possibility that this is wrong," there were people that, well everybody takes pride in their work and those folks are going to truly perceive this as negative and constantly try to argue why the path that they were on already was the right path.

Similarly, Project manager #1 explains his self-efficacy drove him to keep pushing for change,

Yeah, personally I was not going to allow myself to be connected with that kind of decision making and failure. So I felt I have to keep trying, keep pushing for change because this isn't right. It's not working and I can't be associated with that kind of decision making. So, either I was going to get them to change or they're going to have to tell me to leave and that's basically what happened.

Business SME #2 expresses self-efficacy, "So, my role as in any consulting assignment that I take is you need to bring value to the client. So, I try to think to myself, what is the best way to bring value to the client."

IT SME #2 explains how the team's acceptance of the project reorganization and co-location demonstrated self-efficacy that supported deescalation,

> It was certainly a welcome change. The consultants that had already been on the ground who had to pick up and move from [the acquired company's location] to [the acquiring company's location], it was certainly a life disruption for them but professionally they were all very happy and positive. It was a positive thing. They wanted to be successful and we didn't have a lot of dead weight people just looking at [inaudible _____ 0:55:09] – you know, we had people that really cared about a successful implementation and they saw it as a very positive event.

IT SME #2 also cites an example of how some team members' self-efficacy was contributing to escalation,

> And, in some cases, maybe they did know how to fix them, but politically, for them to admit or to accept the course of actions that it would really take, I think, that they saw that as being negatively reflecting their abilities. There was a lot of fight there.

A director shares doubts about whether he could have revised his actions to be more efficient in reaching his goal; yet, in retrospect revising his actions may not have accelerated the deescalation process,

Yeah, I would have liked to have escalated it to the different parties sooner than I did. Because I tried to deal with the immediate management over the team. Probably a little longer, I probably should have moved off of that sooner. I think some of my initial conversations is there were some emotions in it when it should have been a little bit more measured. And just should have been plotting the course that I did adjust to and I should have been doing it sooner and faster.

You know in all honesty, I know that I should have – simply because it would have been the right thing for me to do, whether it would change things sooner or faster I really don't know because people – it's kind of back to that socialization, you had to socialize and speed the problem enough where people finally would look at each other and say, "We have to do something," and whether that could have gotten to that point sooner by maybe me starting down the path that actually worked sooner, I'm honestly not sure. Kind of hard to say.

V.III.i.vi Self-referential. In sensemaking, interpreting or understanding self may be more important than interpreting or understanding the environment. IT SME #1's efforts are explained by how she understood, or interpreted, her role as not only as a team member but also as an employee,

I perceived—well my actual role was to—I was serving as the team lead on the data conversion team, but my perceived role was larger than that being that I was familiar with the [ERP1] processes or at least how we did it at [my employer] and just kind of educating people on how to navigate the system, kind of being a voice part of the business if you will—and so even though I had a defined role I just kind of looked at it as

what I could do to try to help move us in the right direction especially being [an

employee]—one of the [sic] employees and going through an [ERP1] implementation—

several of them over the years. Just knew how it worked and just—that was the role that

I played.

When asked to clarify why she was emphasizing her role as an employee; in other words,

interpreting her role first and the environment second, she explained,

Candidly, it was more because of I felt that because of perhaps some of the consultants

that were there may not have the same agenda that I did because I was going to be there

because I was going to have to remain after whatever—you know—we were trying to

integrate systems and so I felt that some persons there that were involved didn't have that

same vested interest. I didn't know what their agenda was. I didn't know—so it was kind

of a weird time in that there was a lot of distrust, there was—yeah, there were two

organizations getting to know one another. Yes, on the [acquired] side it was—I think

they approached projects differently than we on the [acquiring] did—not necessarily

bad—it was just different, so it just—I don't know, I did feel somewhat of an ownership

to the process and just trying to make it right and I felt—I wanted to do whatever I could

to try to not be involved in the politics so to speak but the solution and at the end of the

day we were trying to do what was right for—what the business needed us to do—and I

didn't feel as though some individuals or entities—it didn't seem as though that was their

intent. I didn't know what their intent was, but it was just a very difficult time.

Therefore, self-reference impacted how this team member worked to deescalate the

project by working outside her team role and offering to help other team members based on how

she "knew" ERP implementations "worked" and she also had a trust issue with other project team member's agendas. Therefore, her understanding of her skills, experience, and expectations of an ERP project and her understanding that she didn't fully trust others' agendas impacted her identity during deescalation efforts.

Integration manager #1 shares how understanding himself and his role during both the escalated and deescalation phases helped him make sense,

> When I was first on the project, I did not – like I mentioned to [project manager #2] already – I did not believe it would ever be successful, so I was in a more confrontational role in that I was basically just having to stand in the face of management and say, "Your direction is a failed direction," and, you know, of course they didn't want to hear that and it was only because of my support outside of the project that I was not even fired. Once the shift occurred, we basically were able to leverage the skills of the resources that were there. So, my business process skills were rolled into the different teams as required, still in an integration manager role, but no longer in a confrontational perspective. I was being used by the teams at the level of business processes that they needed help with that were going outside of their team boundaries and we had much more collaborative way of working. So, yeah, it was like a breath of fresh air.

In addition, integration manager #1 explains that team members also focused on interpreting themselves and understanding the impacts to them during the deescalation phase,

> Yes, I think so, I mean [project manager #2] made the point earlier that we did inject new team members from the business onto the team that hadn't been there before. Yeah, everybody that was there – even the [original consulting] group that was basically

unseated from the seat of power, right? And moved to just a resource position – they were not bitter at all. In fact, I think they welcomed the change themselves. So, no I saw that the entire project had turned positive and unfortunately, like we said, we lost the [acquired company's] project manager that had been there from the beginning and then she was replaced with a different one that was more receptive to the change. So there were a few resources that had to leave just to be successful I believe.

V.III.i.vii Organization's image and individual character closeness. An IT business analyst explains how being perceived as someone who is unable to deliver results to the business impacted her personal identity and self-concepts. In addition, team members work to protect the organization's positive image or repair its negative image,

We not only were thinking about trying to find another project to go to, some of us who had been [an employee] for many years were ready to leave [sic] because we didn't feel like we were doing our best to deliver to the business as we had struggled so hard to make sure we were doing, because in the past we used to ignore the business's concerns and just do what IT thought was best for them and would deliver things that they would never—they would not use or they would be upset with. So we, [employer's] IT had got to a place where we were in a partnership with our business and we wanted to make sure that both of us succeeded by listening to each other. And this project was starting to get to the point where it was back to where it used to be and many of us did not want to go back there. We wanted to deliver them what it was we knew that they would be able to use without making their life harder and would be a great IT solution and make the company look better.

IT SME #1 provides insight on protecting her company's positive image by explaining actions that were taken to resolve issues,

I just think that overall, I think that people all wanted—you know at least at my [employer], we all tried to do the right thing—just hardworking people. I think that when you have good leadership and just even a structure as to how we are supposed to work and just being fair and honest about what it is that we are striving for and then give people an opportunity to figure out okay well what do I do under—somebody there to clear obstacles so to speak. I think that we had no doubt that we would accomplish what it was that we were set out to do and I still believe that. I mean those are the key things.

Integration manager #2 explains how protecting the acquired company's legacy system was preventing deescalation,

Yeah, this is once again my observational opinion, but there was a high degree of tunnel vision.

Within their world of where – especially from the [acquired company] side of the house – they saw where the [ERP2] system was going to be okay with the current list of objects and so with that in mind, the tunnel vision was that the project would be successful if [ERP2] was successful.

I think that part of this exercise was getting everybody to broaden, especially in the management – the project management side of the house – broaden their definition of success.

Integration manager #2 shares the view that the project team did have a strong individual closeness to the acquiring company,

> I think this is good. I'm glad it was successful. I think that, I guess, even in the bad period everybody was dedicated and wanted to do the very, very best job that they could do for [the acquiring company]. They just – the environment prior to the changeover wasn't conducive to it, and I don't think anybody was happy, even the folks who were in power about where we were. So I think every project that I've ever been on at [the acquiring company] included the resources really want to do a good job, it's just I think the [additional ERP consulting firm] change allowed us to do was to open up the potential that had always been there on the team.

Business SME #2 provides an example of how he was defending the results of protecting Project MELANGE after returning to the acquiring company sometime after Project MELANGE had finished,

> Yeah, so I had the experience where somebody tried to hire me to come back to [the acquiring company] again to work on [another project].
>
> He made the passing comment about, you know, [sic] failed, [Project MELANGE] wasn't that successful and I became immediately defensive but he didn't expect – I said, "Well, what do you mean? You're going to have to explain that comment just a little bit more. I don't understand what you mean." He said, "Well, you know, the whole a [sic] parts, and blah, blah, blah, you know, it was just a fiasco." And I said, "Well" – [sic], "You have to be careful going around saying the types of things you're

saying because one, is that project is a little bit more complex than these [sic] parts." [sic] But I said, "You can't be going around saying the project was not successful."

Business SME #2 explains his individual closeness to Project MELANGE further,

He didn't know that at the time, he just kind of made the passing comment. I thought it was interesting, [sic], that the immediate defensive feeling I had that he was like, you know, it wasn't very successful, I'm like "wait a minute, what do you mean?"

He didn't know I was involved with the [Project MELANGE] to start with.

And I kind of read him the riot act, very politely, but I told him look you can't go around saying something that you don't know about.

The consultant referred to above who made this passing comment of Project MELANGE's failure wasn't part of Project MELANGE and had started his sensemaking with a different identity, that of an outsider.

V.III.ii Retrospect. In this section, we examine how people can know what they are doing only after they have done it. This specifically applies to the acquired company's IT organization that was in charge of Project MELANGE and lacked any experience and expertise with ERP1 technology. Moreover, the context of situations influenced the sensemaker's choice of stimulus, which then influences what the action means.

Also during Project MELANGE, part of the team was certain that the project was failing and was operating in an environment filled with ambiguity and perhaps even deceptiveness. Therefore, instead of more information the team members needed to understand values, priorities, and clarity about project attributes (e.g., timelines, issue resolution processes, tools,

etc.) so they were clear on which projects are critical. Moreover, having sufficient clarity on the values of Project MELANGE helps identify what is important in one's past experiences, and it helps provide some sense of what is working and not working. And though there may be problems with hindsight bias, retrospection may provide more effective action. Lastly, retrospective processing stopped when the team felt Project MELANGE had order, clarity, and rationality.

The acquired company's IT department that was in charge of Project MELANGE perhaps was confronted with uncertainty rather than ambiguity, which is a contrast to believing that the sensemaker is only confronted with ambiguity and not uncertainty.

A director shares his experience of how, despite knowing in advance some decisions were not optimal, or in fact erroneous, the project was escalated. It took retrospection with evidence to change the course of action and start deescalation. Specifically, retrospection was required by the business partners and IT management in charge of the project,

> So, it was obvious from day one to me and a number of us, so it was continuing to have discussions directly with the people that were involved in making that final decision both the business and the [IT] leadership trying to rally them and get them to see, and in some cases, had the courage to raise their hand because there were definitely people that were probably, I'd say in leadership positions, that knew it wasn't necessarily a healthy path, but they were concerned politically as to whether they should raise their hand and a lot of cases they chose not to raise their hand, but eventually, the lack of progress becomes obvious and so it gave me more and more information to reach out to leadership and the IT leadership in my part of the business areas, as well as the [operations] centers, again,

just this ball of evidence or bucket of evidence became a little bit too large to ignore. And

then we began to have discussions with some of the leadership on the project left out

about what do we do. And I had a number of closed-door conversations with business and

IT leadership basically being very blunt and pointed out where we were really blowing it,

and the decision was made absolutely we're going to have to change course,

Moreover, retrospection provided clarity on what changes needed to be made, as the

director continues to explain,

[sic] we're going to remove a lot of the leadership, from the consulting group as well as

the IT leadership directly over the project, and we're going to bring in a very different set

of consulting resources and we're going to basically completely restructure the PMO and

the project teams themselves, and we're going to put in a methodology that is much more

successful in these type of projects.

The director concludes that his efforts of convincing senior leadership that change was

required was process and not a single event,

The journey was convincing them.

As the director explains why he considers this a journey, we see how the context of

situations (e.g., vested in decisions) influenced the sensemaker's choice of stimulus (e.g.,

evidence), which then influences what the action means (e.g., we need good methodology),

They did not want to be convinced because a lot of them were vested in the people that

were put over the IT leadership of the project and a number of them were vested in the

blended core solution and had actually signed their name to it and said, "Yeah, yeah

that's the one we should go with." So, trying to convince people that basically were heavily invested in the two decisions that I thought were both not our finest hour was the tough part; that was a journey.

Once the evidence was sufficient where they looked and said, "You're right." Then the changes began to happen very fast.

So, it was really just more of a conversation of, you know, good methodology and what leads to success and how we weren't on that path and then as time moved forward we had more and more evidence around dates slipping or things not being delivered, project members getting frustrated and leaving. I mean, you know, the evidence was coming. We were all on the wrong course. So, you may know that you're on the wrong course but you don't have all of the hard evidence but in a short period of time that evidence begins to reveal itself.

When asked if this evidence helped himself or other colleagues start to make sense of the problematic period, he replied,

And as the evidence began to surface, I don't doubt that were sitting there going, "Yep, maybe I should of addressed this a little sooner." Or, "Maybe I should've recognized that things weren't going well sooner."

Business SME #2 explains his experience with retrospective sensemaking, even after Project MELANGE,

Definitely, and also from a retrospective aspect, after the project was over, in other words, successfully concluded –

As part of my business, I went to another [company in the same industry] who was going through the exact same thing and said okay here are the things you need to think about and consider and just the process of talking with them –

Over weeks and months, seeing some of the same, some very different, some very good, some very bad –

And what they were doing.

That – added more to my understanding of what we did.

Business SME #2 confirms that his experience on Project MELANGE helped him understand his next assignment,

Yep, yep.

The same personalities, the same interpersonal dynamics but with totally different people. You know, and then they had done some very thoughtful neat things and they had some things that they just kind of [inaudible _____ 1:50:19] wait a minute. That is going to be a huge deal for you. You need to consider it in more depth and you can't just sweep it aside.

IT SME #4 shares his thoughts on the key events that moved them through the deescalation period,

Well, yeah, obviously it was a very helpful experience. How relatively simple change in personnel and leadership style and any methodology is better than just floating around – it's the difference between managing a project by a PowerPoint versus managing by spreadsheet. I think there's no one size fits all and obviously, if it's very complicated, a

lot of dependencies and a lot of people involved, you need to have a certain amount of detail in order to come up with a feasible plan.

Business SME #1 provides an example of when the team's action, in this case backlash, did not receive a feeling of order or clarity and how it moved forward with ambiguity,

Well, as far as the teams buy in on the overall direction, you know, which way the company should go with blended solutions, I think that everybody at a certain point everybody just accepts the solution whether they agree with it or not and everybody moves forward and tries to implement it as best we could. So, I think there was an initial backlash for lack of a better term that eventually waned, right? And we stopped focusing on the whys and started figuring out the how on how to implement what we needed to implement.

V.III.iii Enactment. Starting with enactment the team members stopped sensing and started making sense (Weick, 1995). In enactment we see how team members' sensemaking and deescalation was affected by action, bracketing, and faith.

V.III.iii.i Action. A precondition for sensemaking is action which creates meaning, versus simply responding to a stimulus and failing to understand how it creates meaning. In sensemaking, the action of saying makes it possible for people to see what they think (Weick, 1995). This was demonstrated by an IT business analyst when she could not get project management to make decisions around project scope. She demonstrates that she took action, was working to make meaning of this situation by creating her business blueprint documents, push for issue resolution, and, if necessary, escalate the issues to higher levels of the project organization,

So, after not getting what it was that I needed in order to move forward, I just ignored the

project management after a while. And just said, you know, I am going with my gut, and

we're going to just keep moving forward, me and the functional lead with [my

consultants] and we are going to get our deliverable met and we'll have our meetings and

start creating documents of, "Okay, this is what we need a decision on from

management." And checking with the business to say, "If I don't get a decision how

much of this is a showstopper for you?" And if it turns out to be a showstopper for them

to say, "Okay, I need to go over their head, project management, and take it higher."

Because I am not one of those people that wait, wait, wait. I am not a good patient

waiter, so I have no problem going over people's head after I have asked many times,

because I will document and say I need an answer, otherwise we are not going anywhere.

IT SME #1 described that the weekly meeting (for project managers and team leads) was

action oriented, and explains how it created meaning,

Let's see—well the weekly [project manager and team lead] meeting [sic] I guess the

intent was to have a touch point with the team [sic], show where we were in the process,

what upcoming dates to make sure everyone was aware [sic] it also contained—

emphasized ultimate cutover date that we were targeting so that everyone was on the

same page, it also provided opportunity for each team to provide their status, what they

were able to accomplish that week—any roadblocks—anything they were needing to be

raised up—any issues, concerns, risks. We also reviewed—if we were in a testing phase

but also we discussed defects—[sic]. But also there were times when somebody

wanted—needed to—not necessarily training but just kind of education so there was

times that we would break off and someone would give an overview of a tool or just—maybe a new decision that was made—so somebody might get up and discuss or review—so everyone was aware of this new approach or new something—you know, how we were going to do it. My role in the data conversion we [sic] was to provide status on the data conversion.

Yes, it was definitely—these are—this is our goal, this is what we are striving for—and the following week this was outstanding from last week or that we meet—so definitely it was action oriented.

Project manager #3 explains that the weekly meetings created action when assigning action items and it created meaning by creating and disseminating documentation,

Yeah, absolutely. Both in the meeting and also outside the meeting both happened. The action items were identified, the person responsible, persons were assigned, and it was documented. The output of the meeting was documented, and it has been circulated among the co-team as well as the leadership team.

And wherever there was a follow up meeting or a break of a meeting, whichever is required, that has been documented and those parallel sessions were also happening to resolve those issues.

Project manager #3 states how it affected the feelings and actions of other team members, including making sense,

Yeah, obviously everybody, particularly the team – our team, [original consulting firm] team were really happy because we could see things were moving and it made a lot of

positive energy within ourselves. Like we could see the blueprints getting signed off. We could start our core development work and testing, everything and it made a lot of sense to us.

Integration manager #1 explains the before and after conditions relative to deescalating the project and the influence of the weekly meetings,

Right, you know, with the shift in the project mechanism, we didn't talk about this much, [sic], at all – but prior to the change in project management leadership, the project plan was a joke; it was more of a milestone plan, but it wasn't a project plan. As part of the shift and the reevaluation based on business process and everything else, a more detailed project plan was put together not so much that it was constricting but enough to where we – the different teams could set goals and priorities around the plan and dates and so a lot of the meeting, what it turned into, was more of a "we set our own goals" and then project management would be validating, "Hey did you achieve your goal and if you didn't achieve your goal, what's the impact?'' So, it was very much action oriented, tied to a project plan and the project plan was tied to our success. It was a totally different environment.

Business SME #2 shares how his actions created meaning for himself and other team members by working to clarify the ambiguous situation. His actions included gaining a deep understanding of the situation by attending meetings and reading documents and then synthesizing the critical elements to understand what is important. His specific interest was ensuring the business processes would run the business versus ensuring the IT solution would support the business processes,

So I try to think to myself, what is the best way to bring value to the client. So, essentially, since they were ambiguous about what was going on, part of what I could do was help clarify it for them and that served dual purposes for me in that it clarified it for me as well and action-wise, what I did was really just immersed myself in what was going on probably more than what I needed to at that time but you have to kind of understand everything that's going on and then take the critical pieces of information and synthesize those into, you know, okay, I understand what's important, what's not important to me, and again, part of my charge was from a business process perspective not what makes sense from an IT perspective but is this going to work for the day-to-day operations at the division. So the design documents and all those things that were developed with stakeholders who may or who may not – you know, some didn't seem – hindsight shows that some of them were not really interested in the design document process at the time it was being done because later on they said, "Wait a minute, wait a minute, that's not what we wanted. That's not what we said." Right? I think [project manager #2] have experience with that.

So, for me, process-wise there was a lot of ambiguity. I needed to get as much intel as possible, basically, filter through that, and so, everyday it was just kind of documenting, it was just kind of a [inaudible _____ 0:19:36] of a day when they come in, go through as many meetings as possible, listen and participate as much as possible, then spend two to three hours after hours until six or seven at night documenting that day.

To help me internalize that day.

Then selecting the elements. This is again, a let's say, a six-week period where I was charged, I thought, with asking questions about design and what we're doing initially. So [for three months], coming in and then kind of reporting out to [the business manager] every day, like hey, there is something I understand we need to look at this and do you want me to handle it. So, a lot of it was, for me, there was no scope to the project. My personal motivation was I can't work on this twenty-four hours a day, seven days a week, but again, I want to bring value to the client so I'm trying to help him direct me to the things that are going to give him the most value.

I debriefed him and said, "Okay, this is what I learned yesterday, this is what I learned today," if it was late in the afternoon. If [project manager #2] remember, I was co-located with him, we sat in the same office for almost that entire period.

And so, that's what I was doing and through that, you know, there were some, maybe half a dozen, or fourteen or sixteen items we kind of said okay, he had the same suspicions; we need to go run that in the ground, you're the one that was running it into the ground. You discovered the problems. You figured out the problems, kind of thing, which was fine.

IT SME #4 states that the project manager and team lead meetings were focused on action,

Oh no, it was, you know, where we are, where we should be, and is there anything that anybody needs from anybody else in order to get that thing done? So, it's that kind of systematic, repetitive get into this mode of, okay, this is where I am, this what I want to do next and this is what I need from other teams or this is why I can't get certain things

done and if necessary, things can escalate. So it's the visibility, it's the accountability that was different.

IT SME #3's description of his action of talking when he first joined the project helped him make sense,

Well, it took me—I talked with many people—different people from both sides and the first thing I quickly realized is that it is very difficult to run a project when the subject matter experts are in [the acquiring company's location] while the project team and the consultants are sitting in [the acquired company's location]. That was one, the most problematic.

I noticed—I mean, it took a few weeks, but it was very obvious from the very beginning that we had a problem, but the more I was talking to people, the more I noticed the extent of the problem.

An IT business analyst describes the weekly project manager and team lead meetings as constructive,

I think we were—I think for the most part we were grateful to be having these meetings because they were constructive. Because in the past we were just having meetings to be having meetings that would not come out with any resolution at all so we felt like it was just a waste of our time to sit in a room when we could be doing stuff to make move the project forward. So, these meetings were definitely constructive for all of us and it helped us to move forward.

It was constructive in the fact that we were getting resolution to some of our concerns; we were allowed to voice our concerns without feeling like we shouldn't be speaking. So, we were also being able to come up with ideas, like just throw an idea out there and talk about things like, "Oh, this might have been—we didn't think about this, did anybody think about this or how was that going to impact us?" So it was definitely— we were more at ease to talk.

V.III.iii.ii Bracketing. A director's explanation of how he made sense of the escalated period and how he determined his next steps and actions suggests that he used bracketing. As the information was produced and decisions were made around him and by him, he created brackets and imposed categories. In his story below he describes bracketing driven by what is best for his employer. Moreover, we see that he was acting within his brackets (e.g., what is best for his employer) and his preconceptions were confirmed by action (e.g., choosing a bad methodology and providing evidence to change the course of action),

The thinking should have been done what's best for [my employer]? What is best for the long-term success of [my employer]? As opposed to bringing in some other considerations that were probably more politically motivated. I've been fortunate enough at [my employer] to always be in a position where I was put in a position to say what is best for [my employer] and how to plot a path that would put us in a position where we laid a really solid foundation that we could spring off of for the foreseeable future. So, to me, it was very obvious because I think the two approaches were so distinct that it was very obvious which one to select. Now, neither one of them were perfect or didn't have some challenges, there were certainly pros and cons but, to me, it was very weighted that

we took the wrong path and tried to do it and not only made the wrong choice but we
made the wrong implementation methodology choice as well.

Business SME #1 describes the differences in meetings during the escalated period and
the deescalated period. The meetings during the deescalation period resulted in more focus and
the discovery that there was a turnaround,

Well, there again, my perspective is this is the first time on a major project, so it may be
skewed, but it appeared as though in a lot of the meetings that we were having that there
didn't seem to be a lot of continuity between not only one meeting to the next, but you
know, even within the meetings, there didn't seem to be a whole lot of structure and
discipline and then after things got turned around, and I believe it was when [ERP
consulting firm] come on, we started having more accountability and more structure and
stricter methodology as to why we were even having meetings to begin with, discipline in
the meetings as far as calling people out if they were out of turn as far as topics. Does that
make sense?

I mean, that was my first indication that there was a turnaround –

Simply, just the meetings seemed to have more focus.

V.III.iii.iii Visible and private. IT SME #5 states that the weekly project manager team
lead meetings provided a visible construction to her and a private understanding of if-then
assertions, which sets expectations about future events. These if-then assertions correspond to
actions related to outcomes. IT SME #5 states,

I personally liked it just because I knew exactly where other teams are going and that is the only time where we were really had time to understand where there complete, big-level picture. So, I liked that portion of it and there were many times that we were talking about the issues and whatever was happening. So if it was something that I could put – if it was non-[ERP1] portion of it, I had a lot of both technical and business background to understand exactly what may be happening and provide the solution to other team members too. So, that I thought that that was a very good meeting. I didn't have any issues with that one.

Integration manager #2 explains that at the weekly project manager and team lead meeting issues and changes to project scope were displayed on a screen for all to see. This practice helped set expectations about the progress of resolving issues,

I think bringing all the leads, the key people together on a weekly basis and I am a very visual person too, so [inaudible -- 0:52:40.8] issue—that is not as important—or is not as effective to me as seeing it on a screen, written out and if you see that same issue over and over and over again—or you are seeing the status is just not changing—that is easier for me to remember and carry back with me so I think that the way that the meetings were set up, bringing the right people together on the right frequency—I mean, if we did it every day it would have been too much. Then, like I said, documenting and making it visible to everybody, nobody liked seeing that their issue is the one that is up there over and over and over again. So it is just motivation—human nature to work to get that closed out.

Those are probably—oh, and making sure that we have tight control on change management. Those changes also were put up on the screen and we would see the process, you know, like [project manager #2] said, you couldn't just say, "Oh, we want to add this." You had to go out and do your justification for it from a business point of view and then cost-wise and then it would go through the proper channels for approval on that and so we would see when things got approved and if they didn't why they didn't. So, I think that slowed down a lot of extra work creeping into the project which would push out dates and make us miss things.

Three things—the meetings, issues and the change control, I think, were the, probably the key pieces.

V.III.iii.iv Faith. Faith relates directly and significantly to sensemaking and faith, or a lack of faith, puts self-fulfilling action in motion (Weick, 1995).

During the escalated period, IT SME #1 shares that she had no faith that the project could be turned around because there wasn't an acknowledgement that there was a problem,

Oh, when we were in the trenches or whatever, I had no faith that we could turn it around and I was very frustrated. I didn't know—every—it just seemed like it kept getting worse and worse and worse and there didn't seem to be even an acknowledgement that there was a problem and that was I think most frustrating of all when we would discuss it like everyone seemed to know that there was a problem but they just kept compounding the issue without acknowledging that there was an issue. [sic] I don't know. So, no, I wouldn't—I am a hopeful person but I didn't have any confidence that the track that we

were going down would lead to anything. I didn't think--how could it? And if something

didn't change I knew that we were not going to be successful with what—

As discussed in section V.III IT SME #1 could not make sense of the project during the

escalated period. Moreover, her faith that in order to be successful something needed to change

was self-fulfilling by her self-referential description shared in section V.III.i.

Project manager #1 explains how the business had little faith and that their assessment

was correct,

> So, the decision making then was stifled because I think that there was this feeling that
>
> one is trying to win over the other on how the organization should be structured at the
>
> end of the day and because of that I think there was an impact on how the governance
>
> was handled with the business and what kind of a partnership. So when you got top-down
>
> planning and the resourcing problems that we had, we weren't making the progress so the
>
> business had little faith that we were actually working in the right direction and they were
>
> right. We weren't. Yet there was not agreement between the two development sides of
>
> the company – between the [ERP1] development and the IT shop – legacy [acquired
>
> company], there was not agreement on how to move forward. So, the three were certainly
>
> not partnered up to win –

Project manager #1 also provides an example of his faith which encouraged him to stay

on the project after the vice president decided to listen to him and take action,

> Yes. Absolutely. When action was taken and they were allowed us to restructure to be
>
> successful and allowed us to do the planning from within the team instead of top-down, at

that point, that made sense that that's the right way to do a project and that we were going to be given the opportunity to succeed.

V.III.iv Social. In this section, we describe how the project team started comprehending and relating to shared meanings that are sustained through the development and use of a common language, including processes and tools, and everyday social interactions—literally sitting together.

V.III.iv.i A social process that includes others. A director explains how, during the problematic period, his conduct was contingent on others' conduct throughout the project organization. Moreover, his story shares the symbolic interactionism elements of self, action, interaction, interpretation, meaning, and joint action,

> Absolutely. Number one you've got to hold the team together. Right? If you've got a team that has been demoralized, they're looking around saying, "We're getting nowhere and it's getting worse." And what you've got to do is you've got to stay close to them, you've got to support them, you've got to let them know that their voice is heard and that, you know, actions are, at least discussions are being taken in an attempt to improve the situation so hang with me, don't give up.
>
> That's what you do with your core project team – the team members, the ones that are actually trying to execute.

IT SME #3 explains that the weekly project manager and team lead meeting was interactive, included many different project roles, where team members had conversations, and had a significant impact on deescalating the project,

It was—all the team—the IT directors were involved, the IT managers were involved, the consultants were involved. The subject matter experts were involved. It was a room where everybody was in and the project manager was going through all the project management topics first and then we are going across the room and we are going team by team and basically we were asking about if there was an issue for the team, if they have any problems meeting the next milestone—is there—and each team—so by sitting in we had a very good conversation going around because everybody knew where everybody else stands and also we also understood if someone had an issue that might impact us as and how to solve it and work around it and come together. Again, all of us as a team to solve issues. That, I think, was the biggest impact of that change from being two independent teams were finally able to come together as one team looking at one goal instead of, you're the [the acquiring company] and I am the [acquired company], and we having nothing to do with each other.

That I think was the biggest impact.

Integration manager #1 explains his experiences with the project management meetings before and during the deescalation period and how the team member's conduct was contingent on others', especially the project manager,

Alright, so when I first joined the project, they did have a team lead meeting, before the [sic] shift over, and the way it worked was we came into the room and the project manager spoke for an hour, did not ask for any kind of input from the team but just gave direction for an hour about what was happening and what we should be doing and what was wrong, but there was no input from the rest of the team. [sic] The team lead meetings

became a meeting that the project manager did very little of the speaking and the team lead leads actually were bringing to the table their status and it became more of a, "Hey, this is where we are. We're going to achieve our goals or we're not going to achieve our goals because we've got resource constraints." Or whatever, but they were bringing to the table the status, what was working, what wasn't working and then the project management organization was supporting the team and their goal for success and saying, "Well, if you need resources, let me see what we can do [sic]."

So, it was a 180-degree shift, and the early meetings I felt horrible. I just, I was angry and frustrated because I knew what I was hearing wasn't going to help or wasn't helping because it was just sort of the party line, and basically people were being called on the tables saying, "Hey, it's your fault we're missing this." And, it was just horrible. I did not look forward to going to the meetings.

When the meeting shifted to the new style, of course, it was great, I mean, I knew that I was going there and I was going to be supported by management.

Business SME #2 explanations of his thoughts and actions suggest that Project MELANGE was not only a technical product but also a social product and that the social process was very important for getting real-time feedback,

[sic] because the project itself, the end product was a social product, you could say. Meaning it's not one person, it's a community that's going to use it and a very diverse community.

And at the end of the day it is a technical product but its accomplishing a social objective.

The other thing I was going to add really quick was that I think that social aspect was incredibly important for the success of the project because, again, it's a huge community using it.

And even when you have ninety people sequestered in a room and ninety sounds like a ton of people, you're still not going to get all of the perspectives you're going to need. It may or may not give you an idea about the project that you need to change or consider whatever it may be. That social aspect is discussing it using analogies, etc. to me and that's critical in taking it to success because at the end of the day it's a huge platform used by a very large community that needs to understand what's going on.

And make it part of that socialization is just that informal – it serves two purposes: you're getting them started down the path of understanding what's going on and you're also able to kind of internalize a little bit about what you think about the project.

It allows you to socialize it with them, right? And you're introducing a concept to them. You're getting their reaction and also in the process of discussing it [sic] I mean, whatever you thought of, sounded great but then when you start to talk with somebody you see their reaction and you see something you thought was going to be a big deal isn't or something you thought wasn't going to be a big deal is and you get all that information back and you're like, "Okay, we need to go back and work on this piece." And, we can stop worrying about that other one because it's not important. So, you're seeing them, you know, you're internalizing their reactions, etc. and it helps you think about the

project and the goal and you're also, you're beginning the process of change management

with them by socializing that project with them.

IT SME #4 shares his experience with establishing a foundation to move forward by

working with other project stakeholders,

> Yeah. Obviously, this was not something that could be done alone. I think because I had
>
> worked with the [acquiring company] organization a lot longer, that's where I was much
>
> more comfortable working with them. On top of that, they had very good documentations
>
> of the business processes that either we have implement in the [acquiring company] or
>
> that would be affected by changes that would be resultant of the merger. So, once we had
>
> that foundation either as something that could be rolled out or something that had to be
>
> changed as well as the help from people, in particular, the [acquiring company], I think
>
> that we were able to make some progress.

V.III.iv.ii Workable relations. As we will read, workable relationships were formed in

Project MELANGE. In other words, joint actions were performed due to compromise needed to

achieve each party's interests, or ends, and it was sensible, or necessary. But, workable

relationships were not necessarily developed when project members shared common values. As

the director's story continues, it highlights workable relationships as important to deescalating

the project,

> You also have to basically go with the IT leadership that is over the project, the ones that
>
> you don't agree with and you have to try to council them because they're still your
>
> partners and you want them to be successful. So, you've got to basically continue to

develop your relationship with them, show successes in certain areas so you gain

creditability so that you can gain influence. [sic]

But yeah, establishing relationship – because some of these people even on the

business leadership side and the senior IT leadership side, I didn't know them because,

you know, our merger was so new, so was basically having to reach out to people and

engage them in a conversation and I really didn't have any background with them. And I

had to do that in the face of the fact that we were two merging companies and there was,

you know, some turf considerations.

Yeah, it was very much a social – it was basically number one, you had to accept

that it might cost you your job –

Two is you had to basically reach out to people and have a conversation that

nobody wanted to have and develop at least enough of a relationship with them so you

could have that conversation multiple times and also try to socialize with them not only

the problem but yourself enough to where they begin to listen better and they begin to

lend some credibility to what you were saying. [sic]

We won on the – or we got agreement if you will – on the change of methodology

approach and totally restructured the team. We did not win on moving away from the

blended core.

IT SME #1 explains how the project team's beliefs changed during the project

deescalation period,

But I think that they recognized that "okay, I won't get in trouble for having a defect" you know, defects are a good thing—I think for whatever reason that was people's perception or that was how they worked but they recognize okay well, I need to report a defect—I need to—whether just to be able to bring visibility, it might come up again. I think [project manager #2] saw that—that it wasn't a negative thing, it wasn't a bad thing that—to put things on the table was a good thing and that it did help with trust, it did help with people's ability to work together and knowing that we were all striving for the same goal. Yes.

Project manager #3 shares how the client and the additional ERP consulting firm partnered with his consulting firm,

Yeah. The other thing is the partnering with the [sic] helped us a lot. We have got some like, in a sense, lessons learned. We have some good lessons learned in this overall process. We have documented that as well and we have got good knowledge and experience working with a big company. So that was there. We have partnered well and we have the teamwork was there and that made the overall project a grand success.

IT SME #5 experienced workable relationships from two different approaches. The first was supported by a top down support structure,

The new director knew my capabilities, which was very good because that's why he put me in charge again with the technical as well as the business team and I think [acquiring company] business people complained about me saying that I told them the way it is going work and they didn't like it and he just said, "Yeah, she conceptualizes it and this

is the way that it's going to work so. . .." He gave me complete support and that made a difference.

It helped me with that I didn't have to worry about who thinks about me in whichever way because I just – I knew exactly what needs to happen, I knew that I have a supporting [inaudible 0:48:44] system, somebody that doesn't like the automation, I the support from the upper management.

The second was based upon mutual competence,

Before that we had different type of opinions who were getting pressurized by the previous director who wanted to just put the timeline and money was the most important and so they were just running after whatever she wanted to do and even though it was unrealistic, once those people were removed, I started working with the people who were completely capable and I liked working with [IT SME #4] or someone who really understood. When I was doing something, the person understood it right away.

So, not me explaining it one thousand times.

So, at the same wavelength and just one person tells it, the other person understands and you can move forward in the project.

Integration manager #1 explains that the use of business process-centric team leads broke the pattern of discussion around systems and instead focused the discussion on business needs,

Well, we put business process-centric team leads in each of the team's silos, so you know, we had silos around master data maintenance, we had silos around procurement, we had silos around inventory control. So, we had these different team silos that were

pretty traditional on projects that roll up to the business units that they're supporting. By putting somebody who was a business process-centric person in there, it sort of allowed the teams to instead of saying, "Which system is better?" We were just saying, "Do we agree on this business process independent of the system?"

"Do we agree on this business process?" And it allowed the folks of different backgrounds – the [ERP2] folks, the [non-ERP] folks, the [ERP1] folks to come together and say, "yeah that's a business process we want to achieve," and now it got everybody focused to the same goal whereas before, everybody was sort of stuck in their areas of comfort. You know, this is how [ERP1] works, this is how [ERP2] works, and there wasn't that medium that allowed us to blend these systems together.

Business SME #2 explains how project manager #2 facilitated workable relations with impromptu meetings,

And then I would say that were times, and I'm going to give [project manager #2] another feather in your cap, where [project manager #2] exercised some very skillful intervention to bring the right people together, and these were not regularly scheduled meetings, they were more like impromptu, let's get everybody together, I will facilitate and let's get it out in the open what it is and what we need to do or what's going to happen. Those events were, I think had [project manager #2] not done that, there were a lot of things that could have – it wouldn't have totally disrupted the project, but it would have less than optimal solution, let's put it that way.

IT SME #4 explains how the re-location event helped the deescalation process by establishing workable relations,

I think it made everybody work together as a team and also a lot of the decision makers were in [the acquiring company project site]. So, a lot of the work was being done in [the acquiring company site] and for some reason in [acquired company site] the environment was not very conducive to focused discussions or focused work, getting things resolved. There were too many distractions there. A lot of it was very simple things like even conference rooms or telephones that were outdated. For some reason, when part of the team was in [the acquiring company location], we never got to the level of attention and drive that was required to get this project going.

IT SME #3 explains how the new project manager helped move the team through the deescalation period by creating workable relations,

Well, number one the PM brought the team together. I mean, and I am not saying in the same from [the acquired company's location], but also once the team was all located into one location the project manager was able to basically bring the team together, you know, if it is one team, it is one goal, no matter what, so that was one. Number two, he put a very structured schedule and we had meetings, we had updates, so people knew what the other person next to him was doing and also in the meetings the project manager was also always keeping us in the loop of how the overall project is. So, if the warehouse was doing great, but purchasing was doing bad, again, in an ERP system you have to all be at the same level or you will have issues, so he kept the communication in and pretty much—he basically—there was no—I don't know how to explain it but he pretty much put some organizational skill and gave some very good communication and kept the team gelled together and going for the one goal of all of us making the date which I think was [this or that month]—I don't remember.

IT SME #3 further explains that the new project management was listening and working to help the team move forward,

Yes. The meeting was very important, so I had to make some—you know—and I wanted my team always to be part of that meeting, but if I had some issues that was among the big changes, is that even at the team level, if someone had an issue the project management was listening, while prior to the assessment that [the acquiring company] did and the changes the management was not listening they were dictating. While the new changes the management were listening and they were trying to make—sometimes of course they couldn't but wherever they could they were making the appropriate changes to make sure the team has what they need to go forward.

IT SME #3 shares that he considers a coherent team and a good project manager to be the most important factor for a successful project,

For me the most important thing on the project is a coherent team with project management that understands the system and the difficulties of implementing that system.

The coherent team and a good project manager from the business and from the consulting firms because if you don't have a coherent team you are going to have problems, if you don't have good project management you will not have a good—and we had both, and after that assessment we made a change and that change was pretty much what saved the project.

IT SME #3 explains why it is important to have a project manager representing the business,

Well, the project manager for the business—I will give you an example—the project

manager from the consulting firm knows the system. You have to have a project manager

for the business because he or she knows the business and has to compliment the project

manager for the software. So it's no different than on the specific modular—if you go to

the module team, the warehouse management—I can go in, I can be the best consultant

ever, if I don't have a good partner from the business for me to better understand the

business I will not be successful. So, the business project manager has to have a

counterpart to be able to work with him—he might not understand [ERP] but this is

where the project manager comes in and helps him and guides him on how to go forward

and what are the requirements that he has to go back to business with the help of the

project manager for [ERP] to get the requirements and to push those requirements down

the ladder so everybody can get the same page.

Project manager #2 explains that having full-time business partners on the team is

important because they "[sic] would go back into the business and talk to their managers or their

directors about, 'hey, this is what's happening on the [sic] project'." This is an example of

creating workable relations with business partners that were not on the project full-time but were

key stakeholders for approving the new blended solution.

IT SME #2 shares that some team members did not engage in developing workable

relations, in other words, they were anti-social,

If I was giving someone advice that was in a similar situation – you know, the red flags

are there. The issues are not hidden you just have to open your eyes to them and if

everyone knew that everyone did, those same people did not want to admit, whether it's

ego or people trying to preserve their professional career or whatever it might be the driving and motivating factors for people.

But they knew that there were issues.

It just takes an objective look at where you are and where you're headed to see what you need to correct. It really is that simple.

The red flags were there. The issues were there. You need people at every level of their organization knew there were issues.

No one could deny it.

However, there were people that were trying to deny it.

And it was just a simple matter of the right people taking an objective look.

V.III.iv.iii Alignment. Project manager #4 shares his efforts to be aligned with the goals of the project management office (PMO) as he joined the project,

So, as I walk through that phase I definitely realized that I was not basically sitting on hotcakes, I was basically on a slippery slope and on a hill. If I put anything wrong, you know, you are going to go downhill very quickly. So, my actions were to make sure I am aligned with my PMO which happened to be [project manager #2], make sure I understand what I deliver based on his previous understanding and understanding of the client. That way I am in alignment and I was not shy to basically ask a couple times a day to just clarify that I was hitting the right notes as I was basically meeting people, talking to them and you should not be shy regardless of what your seniority is to clarify from someone who is aligned to you in your organization that way you do not step out of

bounds, you do not sign up for things, so these are the things that you have to watch out

especially in escalated situation because the word escalated—we went through a lot of

theory here but in reality sometimes the word escalation could be very painful especially

when we go to a financial—and obligation, commitments and legal aspects of it. So, you

have to be exceptionally careful as you walk through that water so that you don't open up

any liability to your company or career or yourself.

Project manager #3 explains how co-location and working face-to-face helped the team,

I would say the co-location; that has made a huge impact. With that co-location, the

overall momentum, that started happening. We were totally away from business seeing

the faces of business people. The moment we start the co-locate to [the acquiring

company's site] and started working with them in close environment that made a lot of

difference.

Business SME #2 explains how the weekly project manager and team lead meeting

facilitated alignment once the project was getting closer to impacting his deliverables,

So initially, my goal was to get out of there as rapidly as possible to go do what I needed

to do.

But as we got closer to actual testing and integration dates, for me, the level of

interest was really peaked and also, on occasion not weekly, I had relevant information to

share with the team, in other words, for me, part of it, [project manager #2], there was a

leadership vacuum a little bit from the [acquiring and acquired companies] side and

because I was former [acquiring company], I was trying to fill this a little bit in that there

was not good news co-offered to the team. It was always bad news and/or admonition or

something negative, so when there were mini successes or "a" things mattered but we got "x" done, we don't have any problems.

He continues to share that this weekly meeting was also a forum to develop alignment by positive reinforcement,

To me, that's a good message to take to people as opposed to always being, you know, that's just part of doing business is that I don't even talk about what's good, I just only focus on what's next.

[A director] was coming a lot and give the team some praise and reinforcement, that type of thing, but he was one of the few voices crying in the wilderness.

Business SME #2 shares how the weekly project manager and team lead meeting provided alignment on problem solving strategies,

I'm always thinking about that and then the meeting provided a context to kind of communicate with folks about that in a broad sense and then provide a springboard to kind of go to and say, "Okay, look this is a problem but if it doesn't work out, here's our [inaudible _____ 1:19:13] chart on what we're going to do if it doesn't come out properly."

"And does that impact your technical work that you're doing?" That was how I tried to use that meeting.

V.III.v Ongoing. Sensemaking is a continuous process. The team members cut moments from this continuous flow and then extracted cues from those moments. As we will discuss in the next section, these extracted cues are simple and familiar structures with which the team

members developed a larger sense of their situation. Also, the team members experienced different types of continuous flows. For example, some experienced this continuous flow of information or events in the middle of the project and others experienced it by being thrown into the project during the escalated or deescalating periods.

Integration manager #1 explains that it took several months for some changes to occur and adopt a business process methodology,

> Oh, no. It took a little while to turn this. I want to say it was months before we finally got on an even keel and part of the issue was to shift to a business process-centric approach, [acquiring company], which had a background in [ERP1], which [ERP1] methodology always focuses on that, had documentation, had already that element in their culture of understanding what was being asked for. The [acquired company] side of the house did not. They, for thirty years, had basically a subject matter expert in each of the major areas of business process. There were no business process flows. There were no documents up there. There was certain key resources that understood that business processes kept it running for [acquired company], but they didn't have a business culture that thought in terms of business process.

> So, it took a while to get everything documented and get everybody thinking in this way.

IT SME #4's story about the weekly project manager and team lead meeting suggests that this event acted as a slice from the flow of day to day project activity and that cues from the meeting helped redirect the project,

Well, it did flip the project, like I said, my dates—but it did—the meeting had quite an impact on the project because suddenly everybody was sitting in a room and listening to what the other teams had to say, that project management had to say, so from a project that was run totally in silos now overnight—basically—not overnight but it changed and we had all those silos merged and we have one big room and people were a lot more understanding of where we are and where we are going while before the silos we were talking to each other but we were very far apart.

V.III.v.i Projects, interruptions, arousal, and emotions. The team members that were in the middle of the project paid attention to specific project aspects and flows, especially any interruptions to flows around them (e.g., trying to complete their documentation deliverables). During Project MELANGE, the project team experienced multiple interruptions to ongoing activities, both positive and negative. These interruptions aroused the team members which caused emotions which in turn influenced sensemaking.

An IT business analyst's description of the actions by various team members during the escalated period suggests that the interruption in the project work caused their feeling of defeat and readiness to take flight,

Like I said, because of the spinning and because of the hostility that was in our room, because we were all in one room and we could sense that people weren't happy, and that there was—the team effort didn't seem like it was happening anymore and everybody was feeling defeated. So, during that time, like I said, a number of us wanted to quit.

IT SME #1 experienced interruptions in her work because issues weren't being resolved and decisions weren't being made due to problems with issue resolution, which culminated in a high degree of frustration. According to her,

> Like even bringing the fact that there was a problem to the forefront may present additional problems. [sic] So, it was very difficult. You didn't know how to escalate the issue because it seemed like by doing so people wouldn't accept that. It was almost like we were just going through the motions and charging forward but clearly we were not having any productive output. There was nothing that we were generating, the code was not getting done—decisions were not being made but no one would—we would not talk about the issue, it would kind of just move forward—I don't know—pretending? I don't know. So, no, I wouldn't—I am a hopeful person but I didn't have any confidence that the track we were going down would lead to anything. I didn't think—how could it? And if something didn't change, I knew that we were not going to be successful with what—to my frustration [sic] so that was very frustrating.

In addition, IT SME #1 describes that the business partners were frustrated due to interruptions in the work because their questions weren't being answered,

> I guess, let's see—we didn't have a voice—or didn't have a place to voice our concerns. I think we might have so called "team meetings" like once like every quarter or something so it wasn't like there was a –maybe leadership didn't want to hear—or I don't know what was being told to maybe the business—I just didn't know. I know the business partners that I worked with—they were frustrated because they didn't feel as though their questions were being addressed and so then when they would pose them to us [sic] But I

know the business unit was frustrated because they didn't feel as though their concerns were being addressed—as to how to work—it was just a weird dynamic—with a lot of different things that contribute to them. [sic] So, when you needed an issue or something that you are trying to resolve, half the team was up in [another town] [sic], so that contributed to challenges as well. So the face-to-face, the physicality of the team was contributing to the negative [sic] it was a lot of distrust.

From integration manager #1's experience, it appears that the project management team would have experienced an interruption during the escalated period which resulted in confrontation,

When I first joined the project, it was very confrontational because their matrix of measuring a project were purely at the object level by the time I joined the project. You know, we have this interface, we have this screen change, we have this field definition that needs to be made, and I was coming in saying, "No, we need to spend some time and look at the overall flow of this to make sure it still works." And this was countered to how they measured success, countered to what they measured—there was no deliverables linked to what I was trying to do in this space. There was no measures. So, every time I spoke, it was confrontational.

V.III.v.ii Throwness. Project manager #4 and business SME #2 explain that they joined the project during the escalated phase as part of the effort to move the project into deescalation; hence, they were thrown into the project. And their stories share the properties of situations of throwness, such as could not avoid acting, had to deal with whatever developed, and could not accurately predict the effects of their actions. In addition, as the project work around them

unfolded, project manager #4 used arbitrary fragments to develop patterns, or possibly no patterns, and he had to interpret every representation for understanding his deliverables and the political situation of the project. Lastly, project manager #4 was careful in his actions. Hence, as part of throwness, language is action and speaking is creating a situation which can either move the project into deescalation or not.

According to project manager #4,

Going back into the problematic phase again, so as I walked in we were going through this phase where we were in a little bit of a limbo, who was going to be the prime implementation partner, who was going to be on whose papers from a deliverable perspective and what the eventual shape of the team is going to be. So as we walk into a problematic phase the very first thing you realize is the water underneath you is running at 100 miles an hour, so you have got to basically slow down and take it every day at a time, make sure you understand—and this is where the soft skills of being a consultant comes in. You have to understand from a deliverable perspective, from a—and then unfortunately a little bit of that I would have to say in a consulting situation, there is a political angle to it. You have to understand where do you align, how does it politically fit into the picture, because unfortunately from a legal ramification point of view, we at the end of the day incline to spend several million dollars and there have been incidences where there could be damages that could be levied upon. So you have to be careful as you walk through that tough phase of what do you say, what your actions are, what are you signing up for, and what you agree or disagree to. Things could be turned around, unfortunately, in a bad way very quickly.

For business SME #2, his focus was assessing the present situation and moving forward, which was an ongoing process,

Yeah, and so the other thing is, for me, [sic], is that even though I'm a history buff, I didn't spend a lot of time trying to figure out what had transpired. It was just where we are at right now, in other words, you get your boots on the ground, what situation am I in? It doesn't matter how we got to where we are.

Because we are here. Right? That was my context. Because you could try to dissect the past of what, you know, you understand the history and that's important but at that time, it was important to understand more of the present and what is my present situation. What is the present situation of the project, what is the landscape, and what do we need to do?

And when asked if this was an ongoing process, business SME #3 replied,

Yeah. Definitely. Initially, yeah, an ongoing process. I would say, the element of this project is a long time; eighteen months I think all told, but anyway, more than a year.

So, when – fourteen months, actually. So when, let's say, fast forward to month ten, month twelve it was very easy to me to kind of get a good context of what I needed from of the information for actions or inactions. But initially, it kind of defaulted to, I don't want to say things were falling apart, but we're in a critical situation and we need to make sure that, the term you're drinking from a fire hose, I mean, you're trying to take as much as you can in and really get the critical items that you need to take care of and take some notes of some other stuff that I'm going to come back and look at that, but needs to be addressed but it's not tomorrow, it's not this week, it's next week.

V.III.vi Extracted cues. In this section we discuss how team members cut cues out of moments from the familiar structures so that they could develop a larger sense of what perhaps was occurring. Moreover, we will see how leadership created points of reference that provided a feeling of organization and direction, in this case redirection or deescalation. These extracted cues and points of reference provided a form-producing process that addressed ambiguity.

V.III.vi.i Context and indexicals. During the escalated period when an IT business analyst was working to move forward, her cues were focused on business needs,

> Like I said, I worked for the business, yes resource manager was my manager on the IT side, but the business is why I have a paycheck. Without the business I don't have a paycheck.

> The business is my number one person that I had to make sure was happy.

So, in the context of the escalated period, the IT business analyst focused on the business needs.

This IT business analyst also explains how the project reorganization facilitated timely decisions or team building,

> We implemented more structure that made it easier for everybody to work. I know from my perspective it made it much easier for me to liaison between IT and the business in order to capture all of that information.

Therefore, the project management reorganization provided a form-producing process that made the work easier for the team.

Integration manager #1 explains that the new methodology introduced during the deescalation process helped him establish a context he was familiar with,

I think for me – I mean I have over seventeen years of [ERP] methodology under my belt – so for me, the methodology is second nature; it's how with [sic], with [sic], it's with every company I've ever been – if I come onto a project and the methodology is there, I understand it and I know my place in the world in that methodology. I was fine with that. I do think it was a little bit of a challenge for the [ERP2] team because they had a whole population of people that had never been exposed to the methodology. So, there were other folks that probably struggled with it as much as anything else because they were having to learn this new methodology and a new set of deliverables that were linked to it. I was good with it.

Integration manager #1 continues to explain how the business partners familiar with the ERP methodology were also able to be productive,

You know, the [acquiring company] business representatives that we brought in –

Many of them had been on [ERP1] projects before and when the [ERP1] folks started saying, "hey this is the deliverable we're looking for,' they understood exactly what was being asked for.

Their equivalent of resources on the [the acquired company] had never been exposed to anything like this, I believe.

Integration manager #1 confirms that the methodology was one of the key structures that helped him, "Yes, it could. Without a methodology, a project's doomed."

V.III.vi.ii Leaders and cues. IT SME #6 explains how the project leadership's mantra of managing scope during the deescalation period helped him focus,

> One of the mantras that came from the project leadership as we got closer to the end was if it's not assigned as being in scope, it's out of scope and we need to focus on the things that we signed up to do and don't get distracted by less critical issues or nice-to-have tasks.

> So, I think it really helped focus on getting the things that absolutely needed to be done, done and I think there was a good process for tabling things that could be deferred.

IT SME #6 discusses the importance of the project leadership,

> I think there were some problems and issues that came up that we probably would of worked on and would have tried to resolve ourselves if there wasn't a good process for identifying scope issues and a very formal process for approving any changes in scope and any addition to the scope.

> And so I think it helped us define, document the issue and hand it off to project leadership and not get involved ourselves in handling the issue unless a decision was made to add it to scope. I think there was a lot of assistance from both the business and IT and project leadership to relieve us from having to deal with issues that could be deferred and really focus on the things that we needed to get done.

IT SME #1 shares what the points of reference were at the weekly project manager and team lead meetings during the project deescalation period,

[sic] whereas on the weekly meeting that we ultimately became involved with it was "okay, well what are the issues" and "let's put on the table" you know, it was defects, it was "this is the target date for this specific something in the project plan so we are coming up on this."

Business SME #2 explains that the weekly project manager and team lead meeting provided a good context and points of reference for the team to get redirected,

I think a big part of it, well, I'm going to stroke [project manager #2] back a little bit, the weekly meetings that [project manager #2] had that I would really give [project manager #2] a hard time about, I mean, those set a good context for the team like: "Do you need anything? Are you on track? What can we do to help you? Who do you need to talk to?" Those provided a cadence or a drum beat, literally, for the project to say, you know, [project manager #2] would always open with, "Okay, we are 'x' weeks away from dress rehearsal. We are so many days away from cutover," getting that urgency to people that they're not just [inaudible] around. Now, we had a couple areas, right, within the [project] where folks kind of fell down. Meaning even to the extent of reporting that things were being done that weren't being done and I have personal experience with this, so you know, trusting in the person saying that "yeah, I converted this many at the end" and they had not.

Business SME #2 continues to explain his context and the cues he focused on and their significance,

And so, part of my context too was to make sure that none of any of the business tasks, like doing the inventory or cleaning up the warehouse or whatever it was, would impact

any of the technical resources or testing or the cutover date in any way. Meaning get it

done on time and/or if you can't get it done on time, on how you're going to mitigate it.

IT SME #4 explains how the change of leadership affected the team,

Well, as I said, the old way of the project, it was basically very high level. You put a date

out there and then you marched towards that date without any breakdown on how to get

to there. Right? So, I think the biggest change was an exhaustive list, a comprehensive

list of, you know, these are all the configuration objects, these are all the development

objects, these are the phases that all of these objects have to go through and there's a

deadline for each of those objects. There's a deadline for each phase of each object, and

so, we can see quantitatively very quickly, very easily where we are in terms of where we

should be. Instead of being more of an art form, the whole project management was done

in a more scientific, more systematic way.

In addition to the above detailed list of deliverables, or points of reference, IT SME #4

explains that the initial project management meetings were very informal and lacked focus. In

contrast, the new project management meetings were very formal and scrutinized the team's

progress,

So I think before there was a very informal weekly meeting that was, you know, very

pleasant, but not very informative and it was replaced by a very painful and gruesome

and very long, at least once a week, two-hour meeting where the progress of every team

was scrutinized and shown on the big screen or via web conference to all of the people as

well, which then obviously, also, which brought up integration issues that may be

important and required resolution.

As a result of this new scientific or rigid approach, IT SME #4 discusses how their focus changed from blaming others to accepting accountability,

Well, you wanted to make sure that, again, there was certain amount of accountability, right? If you break down your deliverables into small enough slices then it's very easy to see whether you're on time or not and it's very difficult to explain your way out of not delivering something without putting the blame on somebody else, and so, if somebody else was relying on you to provide input then, again, there's the accountability, the visibility, you know, you don't want to be the one holding the progress of other teams.

IT SME #4 comments on the team's feelings about accountability and visibility,

Well, obviously you need a weekly touch point, a kind of platform to put all the issues out there but if left unresolved may cause delays or problems down the line and it's always good to have that accountability to know that the list of deliverables of your team is going to be put on display there and its either going to be red, green, or yellow and if it's not green, you have some explaining to do.

IT SME #3 shares the importance of the weekly project manager and team lead meeting, in other words, the leader's point of reference,

Pretty much, I was—after the assessment, I was pretty much responsible for the warehouse. So, I was able to understand—for me the biggest impact for this meeting— the biggest plus of that meeting to me is that I could understand overall where we stand and where we are going and then when it comes to my responsibility for the warehouse I understood where I stand with the other modules that impact the warehouse. Somehow, someway.

So that was for me the biggest plus of this meeting—and have a clear understanding of where management is going regarding this project.

When asked how this weekly project manager and team lead meeting affected his goals and actions, IT SME #3 replied,

Well, I mean, based on the next steps based on the schedule we had, I pretty much served my team to follow that plan and meet those deliverables and make sure that by meeting those deliverables for the next steps I was in sync with the other modules.

I didn't want to be falling behind or I didn't want to go too far ahead.

So, basically that gives me a better understanding on a weekly basis where we stand. I knew where the warehouse was standing but I did not know where the rest of the module was standing. So, it was a very clear understanding for me going forward of how to proceed and where I am compared to the others and if I need to step up or if I need to raise my flag and say, "Hey guys, I have issues because of xyz."

IT SME #3 explains that team members were interested in the new weekly project manager meeting because it provided access to information, which was a new experience for them,

They were all—they—how to word—they were all very interested in the meeting because of the information that was flowing through the meeting—something they were not used to prior to that. In some cases we had, depending on the milestone, some team members were not involved in a weekly meeting or tactic or, but I would state 99% of the time you had a very good crowd in it and people were coming in bringing in their questions and

the resolutions and concerns into the meeting, and there was always feedback. And even if the management or another team could not answer the questions right there then there was always a follow-up and the answers were always coming back at some point in time very quickly after the meeting.

As a result of this weekly project manager and team lead meeting, the team members were bringing issues to the meeting and if they weren't resolved there was follow-up or a feedback loop. IT SME #3 concurs and emphasizes the positive impact on deescalation,

Yes. Yes. That was a huge, I mean, yes, I come to a meeting and you are telling me how we are going and where are we going and where we are, and that was already a big change for the project, but it you add the response time and the resolution response time of the management toward the team that made it even more interesting—not interesting—impressive for the team. Not impressive but you know, it made the team see that oh now if I have a problem the resolution will come quickly.

It made the team even more willing to work harder and knowing that if you have an issue, the feedback will come back.

Business SME #1 describes how the new project manager provided him a sense of importance and urgency by attending the weekly project manager and team lead meetings,

So, it was still a lot of meetings in my opinion that were really bad but the one constant that seemed to result in the project management change was that at least we had our Monday – I think it was the Monday meeting that we had? Or was it, uh – we had a meeting that I believe [project manager #2] were in charge of, [project manager #2].

Interviewer: Oh, the Tuesday morning PM team lead meeting? [0:54:44]

Yeah, so even in the middle of all that other chaos, at least once a week we had one meeting where everything would be drawn back into focus. So that everybody knew, had a better understanding of, at least where everybody else was and what their issues were. If that makes sense.

When Business SME #1 is asked how this weekly meeting affected his thoughts and feelings and work, he replied,

Well, like I said, on my part, whereas before these meetings, I'm kind of like wondering in the middle of all this team room chatter, people complaining and discussing about this thing or these other issues, instead of worrying about all that, thinking, wondering whether what I'm doing, my particular deliverable, instead of wondering whether it's fitting into something that's actually be used at some point during the project. If you have this weekly meeting then you can see exactly where it fits in and not only do you get a sense of how important and where it fits in, but weekly meetings also provided me with a sense of urgency and timeline. So, if somebody did happen to ask for my time to do something else, I might decline or accept doing some other task if I knew my deadline wasn't so immediate. Does that make sense?

Integration manager #2 explains how she used the weekly project manager and team lead meetings,

Like I said, initially it was—I was getting a lot out of it to get me up to speed on the project so I could understand the terminology, what it was that I was doing, the importance of it and who certain people were. You know you get an email from like five

different name on there and you have no idea who the person is and what their role is, so

it helped me get up to speed and onboard quicker. Then is also—I used it as a

communication tool to educate people on the—like the cutover that we were getting

ready to do, give quick little presentations on what it is our terminology, what our

methodology was going to be, the timing of it and who I was going to need to help and

then would give status on that later. I got things out of it and hopefully people got

important information out of things I shared so it was a two-way type communication.

Integration manager #2 further explains how the team members had a better

understanding of next steps after this weekly meeting,

Yeah, because there was an agenda and we would—like we would go over the issues and

check on the status on that, you know, who is working on that, is there something that

you need from somebody else on the other people's teams here to get—it was basically

trying to eliminate road blocks so that we could make progress on things. And it stayed

focused that way.

V.III.vii Plausibility. In this property we see that team members engaged in varying

degrees of accuracy, mostly due to the type of extracted cues or deliverables they were focused

on. Some team members relied upon plausibility allowing them to understand with enough

certainty, based upon consensual information. This is important for sensemaking because order

and action must begin even though there is ambiguity (e.g., their reasoning may not be correct or

is based on incomplete information). In addition to understanding the impact of varying degrees

of accuracy, we also note bold action and the need for action in the absence of accurate and

complete information.

V.III.vii.i Accuracy. An IT business analyst moved forward by taking action with less than one hundred percent accurate information in order to create her design documents,

Um, I would say I had less than 100% only because I couldn't get that decision made.

But I would have to put in there caveats saying this—my response is from the business of—this solution may not work properly without a decision made on this and I had requested an answer and that is being escalated to upper management in order to get a decision made in order for this process to work properly. So, those were the caveats I needed to put in the design document that the business would have to sign off on if I couldn't get those decisions made.

In addition, she used a backup plan to filter out the noise created by decisions eventually being made or not made,

I had a backup plan just in case they didn't and then I had another one just in case they did make a decision and then we could get the correct approval that I needed for the solution.

A director shares that he did not need one hundred percent accuracy to take action because he is knowledgeable about what works in the context of the project,

Well, I think you never have one hundred percent of the information and usually you're not one hundred percent accurate, you're just very much in the ballpark. So, yeah, I started these conversations with less solid evidence and more evidence from just a knowledge base of, you know, what works and what doesn't work and what we're doing versus what we're not doing.

So, you have to start the conversation more, I would say, to search that philosophical from a methodology standpoint, from a what can contribute to a successful effort versus what we're doing today and then you basically shore that discussion up as the evidence begins to produce itself. Because even if you're on the wrong track, you've set dates and you've made commitments and when those things don't happen and they don't happen by a large margin, then that's when you begin to get your hard evidence but the conversation has to start before then.

Project manager #3 explains that he needed one hundred percent accuracy because he was responsible for blueprinting documentation which required sign off by the customer,

Yeah, one hundred percent accurate information.

Mainly, I would say like the issue was on the documentation at the level of fact or the level of [inaudible], how we have documented the requirements, was it [inaudible _____ 0:1:00] or something like that. So that was a concern raised by the [acquired] IT team. So that is something like we have gone through the document, we have provided the blueprint document.

Similar to project manager #3, IT SME #4 required a high level of accuracy in order to take action for his deliverables,

Well, I think the first two months it was very difficult to accomplish anything because there were still too many uncertainties so, you know, as long as the architecture was not finalized it was very difficult to start designing interfaces or even business processes.

Building blocks that we're using. So, I would say, yeah, it was very little exact

information at that time.

Integration manager #1 explains that the level of accurate information varied based on

trust of the project's new direction and better communication,

It shifted. When we first started, when we were first coming out of the dark period –

whatever you want to call that – and shifting to the more successful period of the project,

during the early times because there was no trust in the change of direction, much more

research had to go into, much more – you had to prove without a doubt that what you

were saying was correct in that data to get anybody to agree to even hear you but as we

started to shift and people started to look from a business process perspective, they

started to get the idea of where we were headed, then it became more of a traditional type

project where you did a sampling. You could do a sampling. You didn't have to have a

hundred percent accurate data, you started to trust the resources that were at the table of

the different voices. The early part of the project, there was a whole segment of voices

that were shut out of the process towards the end, you could bring to the table business

process folks that would say it's gotta be this way and since everybody's voice was being

heard and gathered, we didn't always have to get one hundred percent validation on the

data to represent – to back up what they were saying.

Business SME #2 shares a similar "sliding scale" of required accuracy of information in

order to take action,

Sure, sure, okay. So, I kind of have a sliding scale on that, [sic]. It depends, criticality,

and this may sound bad, but if it's critical I got to be around eighty percent. If it's

something that needs action but the risk of an improper action is not that great, I think in the interest of time, you can be at forty, fifty, sixty percent type of confidence level.

With the information you have, you know, or okay I've got some gaps but I've got enough to say, "Yes, we need to do 'X', or no, we don't." I guess we're kind of talking in generalities, but making a decision or is there no decision needed.

Action is needed.

So, it's going to depend upon the criticality of the end process, so if we're talking about counting inventory, for example, and how does that need to be done, we can be in the forty to sixty percent range on that. If we're talking about how a record is going to be maintained, which goes straight to safety and compliance, then we're more in the upper eighty to maybe even higher.

V.III.vii.ii Bold action. Project manager #1 describes how he, during the escalated period and after he was told to look for another job, took bold action, versus deliberation, which surely shaped what was to emerge next,

Yeah. The answer is yes. Um, I provided numerous indications of where we're missing the milestones, where we're not getting the deliverables generated and was offering how to correct that and to how to improve our decision making so that we had a chance in success and it came – I became increasingly vocal about it to the point that about seven months into the problematic area I said that I was getting very, very vocal about it to the point that they didn't want to hear me anymore and said that I can go and find another project.

Yeah, I knew that the decision making was poor. It wasn't allowing for a partnership between IT and business. We were not allowing ourselves the chance to listen to the bottoms-up approach, that what it would really take to get this done, and there was slimmer and slimmer and slimmer chances of being successful, and when I was voicing – being louder about those concerns and was told just to basically go pound sand, to go look for a different work, because I wasn't aligning my decision making with the senior IT folks. At that point I felt that it was important that [the acquired company] understands that they're not making the progress that they need to, that they're floundering, that they're making poor decisions, they're not getting it done and that there's other dependencies. So, at that point I actually went to one of the vice presidents of the IT department who has an open door policy, walked in, and did explain the five or six examples of the decision making that wasn't productive and where we did not have a good governance model and that's when actions started to take place.

Project manager #1 explains that after he had described the project issues and the lack of issue resolution by IT to a vice president, an external assessment was completed. This resulted in changes in IT and project management leadership in charge of the project. With new leadership, the project was properly staffed, planned, and govern,

[sic] the discussion I had with the vice president was that we did not have good decision making, we didn't have good planning, it was top-down planning, that we were forcing an organization to bring players to the table through this fixed bid that we're not going to be able to deliver, and we had all the warning signs that we should have been reacting to the project management – or I'm sorry – the IT managers did not react to it. So, at that point there was an external assessment ordered by the vice president which confirmed

that this was happening, and at that point, the vice president did make a decision to

remove a director, an IT director, and one of the PMs who were on the project. [sic] and

had a new IT director step in and myself to come back in with that director to sit down

and then do a proper planning exercise. [sic]

So the senior level took the initiative, they actually took their due diligence,

understood that there was a problem, reacted to it, we did a proper planning exercise and

then with the solid [ERP] methodology used by [project manager #2] and his

organization and my side to make sure the budget and that the [acquired company's]

deliverables were being met together, we were able to successfully manage the project

and deploy all of the releases on time from that point out.

There was a governance that became – was set up – with a smaller group of

decision makers from the business and from the IT along with the project management

from the [sic] project, got together on a weekly basis and very tightly managed the scope

and through a changed management process, handled all the issues and risks that were

coming up for the week, and we were able to gain trust from the business that we were

moving down the right path, that we were making the right progress, and we were

releasing the expected business features and functionality on time and continued to do

that through the course of the remainder of the project.

Project manager #1 shares his feeling about this meeting with the vice president, "To be

honest, [project manager #2], it was a life-changing experience."

V.III.vii.iii Stories. A client partner from an ERP firm explains how the acquiring

company could not convince the acquired company's IT group that Project MELANGE was

moving down a path of failure. Therefore, the acquiring company <u>created</u> a story which facilitated sensemaking. It facilitated sensemaking by allowing the acquired company's IT group to make retrospective sense and providing a new pattern of order and sense by witnessing project EXAMPLE. The client partner explains,

> At that time, politically, the [acquiring company] people really could not convince the [acquired company's] people, the IT group in [sic], that their choice of an implementation partner wasn't working and the project was going south but what they could do was say, "Look we have this other small project that we need to get done anyway, let's not burden our big system integrator with that, let's bring in [an ERP vendor] because we've had a lot of experience." And [project manager #2], that's how [project EXAMPLE] came to be and once we got in [an ERP vendor] to help them with [project EXAMPLE] and were extremely successful with that, I think the IT group by that time, the IT group in [the acquired company] realized that "oh yes, you could have success with an [ERP] project" and it really did a great comparison and contrast with their system integrator for the large [MELANGE] project. So then, our [acquiring company] friends said, "You know what, let's bring in [an ERP vendor] to help us with [Project MELANGE]. You know maybe we can just get some leadership." And I think that's the beginning of where [ERP vendor] became involved with the [Project MELANGE].

The client partner further explains how creating this story through project EXAMPLE provided retrospective sensemaking,

> Right. If [project manager #2] and [IT SME #4] had not succeeded the way [project manager #2] did at [project EXAMPLE], I mean, if [project manager #2] remember [sic]

whatever his name was, I mean he could barely speak at how successful it had been. See, it wasn't that it was just successful, it was that, again, [the acquired company] had zero experience with [ERP]. They just thought that [ERP] was a – you know – just a nightmare to implement and they did not realize that the nightmare was how they organized the project and how they were running the project.

To recap, according to the client partner,

Those meetings lead to them being able to convince the [acquired company's] IT to let [ERP vendor] just run a small project, which was what we called [project EXAMPLE]. The fact that we were able to run that on time, on budget, and successfully was a key event in convincing the IT group at [the acquired company] that [ERP] projects could be on time, on budget, and successful; that gave them the compare and the contrast to their [MELANGE] project system integrator and then that culminated in them asking us to come in and help them with the [MELANGE] Project.

IT SME #3's description of the weekly project manager and team lead meeting suggests that these meetings included storytelling by pulling together disparate project elements together which eventually energized and guided actions. Moreover, this meeting was engaging enough that team members contributed their own inputs in the interest of sensemaking. Also, the weekly storytelling provided new patterns due to more order and sense coming out of this weekly meeting. IT SME #3 describes,

Number two, he put a very structured schedule and we had meetings, we had updates, so people knew what the other person next to him was doing. And also in the meetings the project manager was also always keeping us in the loop of how the overall project is. So,

if the warehouse was doing great, but purchasing was doing bad, again, in an ERP system

you have to all be at the same level or you will have issues, so he kept the communication

in and pretty much—he basically—there was no—I don't know how to explain it but he

pretty much put some organizational skill and gave some very good communication and

kept the team gelled together and going for the one goal of all of us making the date

which I think was [this month or that month]—I don't remember.

IT SME # 3 shares that it was interactive and that the leadership was doing very little

talking in the meetings,

Definitely interactive and for—it was not—the majority of the meeting was like [project

manager #2] said, not leadership talking, but communication going back and forth and

trying to either solve an issue as we spoke or decide at a time that I need xyz to go—

break up and come back with a solution regarding the topic, and then coming back and

discussing again with the whole team so everybody always was alert and understood

where we are.

Business SME #2 tells a story to explain how much accuracy he required during the first

four weeks on the project before he could start doing what he wanted to do,

Yeah. Well, I don't know if this will interest [project manager #2] or not, but in that phase,

for me, we were very rapidly trying to get a sense of what was going on, and so, if there

was one – I'm going to use an example from your former life to actually kind of give

[project manager #2] an idea. Let's say you're charged for going out and scouting a

position and are there enemy forces there. You're going to gather enough information to

say either yes or no. Right?

Now, you might detect the presence of enemy forces and you're going to go ahead and make that radio call and say I have something. I don't know what it is yet, but I've got something, and I don't know how big it is, I don't know how many there are, I don't know what they've got, but I see this and there could be more. So, in that initial phase of the project, that's the kind of mode I was in, is that there's enough here that it warrants enough concern to sit and talk about it with [the business manager]. There's a lot of stuff that, you know, there's eight, ten hours in a day that we condense into maybe a twenty or thirty minute discussion sometimes after I've done a synthesis, you know, for myself that doesn't even warrant his time. I didn't think at that time. It coalesce over a number of days into, "Oh yeah, I did need to tell him about this now because this is going to be something that concerns him or concerns some of the other business units."

V.IV Sensemaking in Project Deescalation

Sensemaking by the *identity* property impacted the deescalation process by driving the roles the team members played and what behavior was taken based upon self-concept elements. These roles and behaviors impacted the deescalation process by taking action to either engage in problem solving actions or preparing to leave the project and/or employer. For example, self-efficacy drove behavior to either fix the project issues or leave; but, it wasn't an option to just go along the escalation path. The deescalation process impacted the team member's sensemaking identity by reinforcing their self-concept allowing them to regain morale and a spirit to be successful.

Sensemaking by the *retrospect* property during the escalated period impacted the deescalation process by providing evidence that the project was on the wrong path and needed a new course of action. The evidence impacted the deescalation process by providing clarity and

identifying effective actions and next steps to move out of the escalated period (e.g. change in leadership, new PMO structure, etc.). The deescalation process impacted the team members' retrospective sensemaking by removing uncertainty of being on the wrong path. In addition, ambiguity was reduced at the senior management level, for example the director's journey to convince senior management.

Sensemaking by the *enactment* property during the escalated period impacted the deescalation process by team members taking action and bracketing to create meaning. For example, team members working around a lack of issue resolution processes and creating business requirements documentation and the director focused on what's best for his employer to drive his bracketing. The deescalation process impacted the team members' enactment sensemaking when the weekly project manager and team lead meetings provided visible structures and cues to focus on (e.g., issues, scope change control request, etc.)

Sensemaking by the *social* property during the problematic period impacted the deescalation process by realizing the negative affect on team member's morale. In addition, this social process with others allowed team members to identify when they weren't aligned with the project management agenda and style. This also applied to the realization that though management is in disagreement over certain aspects you still are partners and must try to work together. Hence, the deescalation process impacted social sensemaking by eventually creating workable relations and joint actions. One way workable relations were created by the deescalation process was by the project reorganization and new leadership. Moreover, a team member came to the realization that Project MELANGE produced a "social product" and not just technical and business solutions. Also, the deescalation processes of co-location and the weekly project manager and team lead meetings facilitated alignment of clear lines of actions.

Sensemaking by the *ongoing* property during the problematic period impacted the deescalation process by understanding that team members were experiencing different types of ongoing flows. Some team members had been involved from the beginning and were in the middle of the project escalation period and other team members were being thrown into an ongoing flow of escalation behavior. Therefore, team members in the middle of the project were experiencing interruptions to their flow of work which caused arousal and emotions. These emotions included feeling defeated, asking how to do their jobs such as issue escalation, and realizing they didn't have a voice. The deescalation process impacted the team members' ongoing sensemaking by providing the team positive interruptions, such as the project reorganization and weekly project manager team lead meetings, which allowed the team to produce the deliverables as per their expectations. Also, new project governance facilitated ongoing sensemaking by providing the team opportunities to cut moments out of their continuous flow of work which they then developed into extracted cues.

Sensemaking by the *extracted cues* property during the problematic period impacted the deescalation process by understanding the way team members extracted and embellished their cues was based upon their priorities. For example, team members focused on cues that allowed them to ensure the business was successful as a result of Project MELANGE. The deescalation process impacted the team members' extracted cues sensemaking by introducing new leadership that provided points of reference for the team to extract cues from (e.g., the issues log and the scope management process). These governance procedures, acting as points of reference, provided the team a sense of organization and direction.

Sensemaking by the *plausibility* property impacted the deescalation process by team members taking action with less than one hundred percent information or accuracy whereas other

team members required a high degree of accuracy to take action. This difference is due to the goal of the action being taken. Therefore, some team members took action with less than accurate information whereas others could not even do so even if they wanted to. The deescalation process impacted the team members' plausibility sensemaking by stories being told through a proof of concept (e.g., Project EXAMPLE) or through the weekly project manager team lead meetings. The stories created by the deescalation process provided patterns that provided order and sense to the team. In addition, these stories provided retrospective sensemaking and were engaging enough for team members to provide their inputs for sensemaking.

DISCUSSION

As discussed in the literature review, ERP projects are known to have a high frequency of failure and challenges. Moreover, there is limited research on deescalation, breaking the commitment to a failing course of action, and redirecting ERP projects to success. Although past research has investigated these issues and identified factors that could mitigate them (Wickramasinghe & Gunawardena, 2010), few, if any, studies help us to understand people's thoughts and actions when involved in deescalation. My research was motivated by the need to address this gap in the literature to develop a deeper understanding of (a) how to deescalate a run-away ERP project and (b) how the individual team member's sensemaking is implicated in deescalation. This section describes this study's theoretical reflections, lessons for practice, limitations, and suggestions for future research.

VI.I Theoretical Reflections

As discussed in section IV.I, this study uses sensemaking as a sensitizing device or lens to understand the phenomenon of ERP project deescalation. Applying the sensemaking properties to the study of project deescalation extends the deescalation literature by providing a new theoretical view to study this phenomenon. Specifically, this study extends Keil and Robey's (1999) argument that research on deescalation is potentially more important than research on escalation because it is likely to provide solutions for a very common and expensive problem. In fact, this study of Project MELANGE's deescalation and successful implementation provides descriptive solutions (e.g., key events that impacted deescalation) and inferential and deductive solutions from applying the sensemaking lens.

This study answers Lui and Chan's (2008) observation that recent research has focused on lessons learned from either abandoned or successful IT projects rather than on turning around and completing troubled IT projects. This research describes in detail Project MELANGE's escalation period, deescalation key events, and how sensemaking was implicated in this ERP project deescalation.

Keil and Robey (1999) note that laboratory experiments rather than field studies have been used in most published research on deescalation, raising concerns about the generalizability of the results to organizational settings. In addition, many studies use treatments that have little in common to complex organizational contexts such as ERP implementation and therefore, the results don't readily apply to IS project management (Keil & Robey, 1999). In contrast, my study uses a qualitative single-case study of a real-life ERP project deescalation and offers insights that are likely to have wide applicability to IS projects.

The study offers interesting insights on several aspects of deescalation that enhance our current understanding of this important phenomenon. There are five overarching implications that are suggested by our understanding of how sensemaking is implicated during ERP project deescalation:

1. Framing the Run-Away Project as a Problem

2. Behaviors Driven by the Identity of Project Team Members

3. Role of Leadership

4. Role of ERP Project Methodology

5. Creating Workable Relations

We discuss how the acts of framing the run-away project situation as a problem, pursuing behaviors driven by the identity of project team members, role of leadership in deescalation, ERP project methodology implicated in deescalation, and creating workable relations.

VI.I.i Framing the run-away project as a problem. This study's findings suggest that significant effort is required to convert a run-away project to a problem. For sensemaking, this is accomplished by interactively naming the elements project participants attend to and the framing of context in which to attend to them. In other words, the problem setting process includes the following activities: selecting the elements of the situation, setting our attention boundaries, and imposing our coherence and saying what is wrong and what are the new directions for the situation (Weick, 1995).

The key events that supported this activity include the following: development of a proof of concept, team feedback, and an external assessment. This conversion was achieved both at the strategic and tactical levels of the project. At the strategic level, the management team from the acquiring company selected an ERP project that was unrelated to Project MELANGE (Project EXAMPLE) to demonstrate to the acquired company's IT department that ERP1 projects could be completed on time and on budget. A project manager and a consultant from Project EXAMPLE were brought onto Project MELANGE. Project EXAMPLE facilitated sensemaking by allowing the acquired company's IT department to examine it as a story, thereby allowing people to make retrospective sense of whatever was happening on Project MELANGE. In addition, this action provided new patterns as a result of more order and sense from Project EXAMPLE while explaining and energizing Project MELANGE management, and enabled sensemaking by looking for plausibility versus accuracy.

Team feedback from the director to management focused on a few cues such as project goals, time and budget to set their attention boundaries. These elements and boundaries allowed him to impose his coherence and convert the situation to a problem by stating what is wrong and recommend a new direction.

The director's story exemplifies how escalation can be addressed with unambiguous negative feedback. This finding is supported by Keil et al. (2007) that managers can process information and detect a problem when negative information is unambiguous.

Another strategic initiative of the senior management was the commissioning of an external assessment. This was another key event that converted the current course of action to a problem. The assessment addressed many tactical concerns as well. IT SME #1 explained that when the external assessment was conducted it allowed her to be candid about issues facing the project team. For example, she had the opportunity to express her concerns and ask if senior leadership knows the project is in trouble. This event supports the finding by Keil and Robey (1999) that top management most frequently triggered deescalation.

This strategic approach is aligned with the findings of Montealegre and Keil (2000) that strategies and tactics achieve deescalation. In summary, these events addressed ambiguous information and problem recognition which are necessary managerial actions to redirect an escalated project.

VI.I.ii Behaviors driven by the identity of project team members. Our findings on individual identities offer novel insights into the social-cognitive effort involved in ERP project deescalation. Though, prior research does suggests that psychological and sociological factors contribute to the complex, difficult, and ambiguous conditions of ERP projects (Aloini, et al.,

2007; Poston & Grabski, 2001). Specifically, our findings suggest that team members' identities were established by their interactions and as their interactions shifted their definition of self shifted. In addition, self-concept and its elements of self-enhancement, self-efficacy, and self-consistency were found to drive either a fight or flight stance for team members. In addition, team members experienced multiple roles beyond their assigned project position. For example, a director reported that he had multiple roles depending upon his interactions with the project. Though he was surely in a leadership role, he also shifted to being an advisor and counselor. It is worth noting that this director was instrumental in partnering with new management and deescalating the project.

Additional key events that impacted deescalation were the team members' actions and negative feedback. These actions and negative feedback manifested in team members working around issues, preparing to quit the project, and enduring hostility. A common theme for identity was protecting the business.

Multiple team members refused to sacrifice their self-enhancement which simultaneously contributed to deescalation. These team members kept focused on successfully delivering to the business by working on their deliverables and ignoring the project management issues. In addition, multiple team members were feeling defeated and were preparing to quit the project, and perhaps even their employer.

Deescalation impacted self-enhancement because even though there still were disagreements during the deescalation period, project team members had an environment where they were being heard and compromises and decisions were being made in the best interest of the

company. In addition, by the end of the project, multiple team members felt very good about the project and their work.

Similarly, team members preferred taking the risk of being asked to leave the project versus jeopardizing their self-efficacy and reputation. This impacted deescalation by team members continuing to push for what they thought was right versus following incompetency. In contrast, due to politics there were project team members who were not willing to sacrifice their self-efficacy because it may reflect negatively on their abilities if they acknowledged the project issues. Moreover, protecting their self-efficacy prevented deescalation by preventing cooperation.

Another important understanding about identity is when a team member's behavior is being driven by their understanding of themselves versus the project conditions. For example, a self-referential perspective allows you to understand which role you are operating in, such as a confrontational role, which is recognized by the team member versus being labeled as such. Moreover, this self-understanding allows the team member to realize their impact on the deescalation process.

Lastly, the acquired company was interested in protecting their IT systems and the jobs of their IT staff. Simultaneously, we saw the acquiring company protecting the business operations and their legacy IT service reputation of making value-added contributions to the business. In summary, some team members were not willing to sacrifice their personal well-being and reputations and do harm to the business. These behaviors can promote deescalation as a form of negative team feedback for problem recognition.

VI.I.iii Role of leadership. The results of this study identify that strong leadership was central to impacting the deescalation process and individual's sensemaking. Ke and Wei (2008) report that leadership can increase the ERP implementation success by creating a new culture to counter cultural resistance and mitigate conflict with IT, as we saw in Project MELANGE. In general, leadership was foundational for establishing the truth, confirming the state of the project and creating a plan forward, and giving a voice to team members to facilitate sensemaking and deescalation. Key events that drove deescalation were changing leadership, establishing truth, creating points of reference, and giving voice to team members.

After the project was successfully converted to a problem, one of the first acts by senior management from IT was to replace the IT director and IT project manager. The personnel, who were replaced after being in charge of the project for over a year, did not have the leadership skills nor the strategic and tactical knowledge and experience needed to successfully manage Project MELANGE. This was especially highlighted by the negative information provided by the team members at multiple levels of the project.

In addition to the IT leadership being replaced, both project managers from the two ERP consulting organizations were retained and new team leads for each of the functional teams were added. These actions are aligned with recommendations of Keil and Robey (1999) who suggest that additional resources and investment may be required to deescalate projects; yet, these resources are carefully managed and critical to completing redefined projects.

With the new project management team, a director observed that "true planning" took place. In addition, an IT SME expressed that the most important event that the new project management did was "drove everything to the truth." And that is what the team wants and needs.

The project management took a complex ERP project and deescalated it by creating detailed plans and setting realistic project milestone and go live dates.

Another key event initiated by the leadership was the creation of points of reference as cues for the team to make sense of the deescalation process. These points of reference were a result of the new project methodology. These include enforcing scope management, assisting with issues resolution and risk management, and providing accurate assessments of the project schedule. The key point here is that the project managers implemented, drove, and made very visible these tools and metrics to help the team deescalate the project, and this deescalation process helped them make sense of the project.

Finally, team members report that the new leadership provided a voice to the team. The team felt as though they were being heard. This is a significant event relative to the team's ability to make sense. The reason is because the team was talking, and talking is a key to sensemaking. Moreover, the team was talking in a constructive environment. One team member explained the difference between the old project management meetings and the new ones, and she said the new meetings were constructive—the team was talking, voicing their concerns, and concerns were being resolved.

VI.I.iv Role of ERP project methodology. A key event for deescalating Project MELANGE and impacting individual sensemaking was the implementation of an ERP centric project implementation methodology. As discussed earlier, project leadership put points of reference, or cues, in place to impact deescalation and sensemaking. This section will provide more understanding of those cues and, for the individual team members, it is important to understand how this text was read and how it impacted the deescalation process and

sensemaking. The key events that supported deescalation and sensemaking were project

reorganization that was business focused, versus IT system centric, and improved project

planning and governance.

As a result of the project assessment, project reorganization was implemented. This

reorganization supported the implementation methodology which was business process focused

and not IT systems focused. As the integration manager described, the team stopped trying to

develop ERP2 specific objects. Instead, functional teams from both ERP systems focused

together on developing the business processes end to end to run the business. In fact, project

manager #4 describes how the teams, after a year of trying to blueprint under the former project

organization, had to go back into workshops after the project reorganization and continue

blueprinting. Moreover, under the former project organization, the team members were leaving

blueprinting sessions more confused than when they came in because the scope of the project

was not clearly understood. To support this business process centric ERP methodology, the

teams were reorganized.

The functional teams, which are focused on business processes such as procurement and

inventory management were now staffed with a full-time business partner. In addition, each team

has a new functional team lead from the second ERP consulting firm. Each of these new

functional team leads are senior consultants. Lastly, and most importantly, the ERP consultants

from the first consulting firm, who have been on the project for the past year, were moved to the

acquiring company's project site; hence, the entire team is now co-located and literally sitting

together. As team members expressed, this was a significant event in deescalating the project. To

be clear, the ERP consultants from the first ERP firm now had full access to business

stakeholders. The leadership that had kept these consultants in a silo and away from the business

and ERP1's center of excellence were gone. This co-location was a fundamental mandate to ensure successful deescalation of Project MELANGE. Lastly, this business process focus and ownership aligns with Davenport (1998) who states that ERP projects are best managed by a general manager, the most capable of managing the IT and business imperatives, versus the IT department. Though, to be clear, the IT department from the acquired company was still in charge of Project MELANGE, a contradiction to Davenport (1998).

Along with the team reorganization, the project management implemented a new ERP project implementation methodology. This methodology is from the new ERP consulting firm but is well known in the ERP industry. In addition, this methodology is aligned with the PMBOK Guide.

As the project team members experienced, the project management established bottom-up estimating as input into a detailed project schedule. This bottom-up project scheduling was then reconciled against the new top down program schedule, which was based upon external milestone dates. This project schedule was updated and published once a week.

In addition to the detailed project schedule, new project governance plans and tools were implemented. These plans and tools included issues, risks, and scope management, decision escalation, and key decision documentation. These governance plans and tools, as well as the project schedule updates via a GANTT chart were presented weekly at the project manager and team lead (PMTL) meeting. Though these are cues and points of reference by leadership, they drove the deescalation process by answering this is *what* and *how* we are managing our work and deliverables. As a result of this understanding, the team members were able to make sense of the deescalation process. In fact, business SME #1 stated that by attending this weekly PMTL

meeting, he first came to realize that a turnaround had occurred. Moreover, the weekly PMTL meeting gave voice to the team. This meeting's objective was to provide a forum for cross-team communication and collaboration. According to integration manager #1, the project managers did very little talking in this meeting. He is correct, the project managers and their cues (governance procedures) provided a constructive environment for project deescalation work and sensemaking.

VI.I.v Creating workable relations. The results of this research indicate that Project MELANGE was a very social process and that joint actions and workable relations were formed during duress and because the team had to deliver a solution to obtain certification after the M&A. This is supported by Blumer (1969) where joint actions may not develop due to sharing common values but due to compromise, duress, need to achieve each one's ends, it is sensible, or necessary. In other words, society forms *workable* relations (Blumer, 1969, p. 76).

We see from the director's experience that he still worked to partner with those that were in disagreement because he still wanted them and the company to be successful. He shared how he continued to develop his relationships with them through demonstrating successes and thereby gaining creditability and influence. This is supported by Mahring et al. (2008) that role interaction is closely associated with interpersonal influence, and interpersonal power effects deescalation (Drummond, 1995).

IT SME #1 shared how the team's beliefs changed from fear of discussing defects to understanding visibility to defects was a good thing. This culminated in trust, working relationships and awareness that we are all "striving for the same goal."

In summary, this research addresses an important issue that has not been adequately studied. Executives, managers and team members will benefit from understanding how sensemaking impacts ERP project deescalation and how deescalation impacts sensemaking. In addition, the conclusions of this study can be generalized back to the sensemaking theory for future studies of complex IT project deescalation.

VI.II Practical Implications

Following Keil and Robey (1999) we offer prescriptions to several informing actors (e.g., managers, team members, stakeholders, etc.) on how to deescalate projects by understanding how sensemaking impacts ERP project deescalation and how ERP project deescalation impacts sensemaking.

Since a single-case study design is used, the findings are not generalizable to all ERP project deescalations; yet, there are practical suggestions that can be inferred which may be useful for senior management, project management, IT and business team members, and ERP consultants. These practical suggestions may assist with the detection and taking action during sensemaking and ERP project deescalation, the selection of team members to deescalate an ERP project, and help train team members in the set of skills that lead to better sensemaking capabilities.

VI.II.i Framing the run-away project as a problem. Therefore, all team members including senior management must be able to convert a run-away project or an element of the project, such as blueprint design documents or a project implementation strategy, into a recognizable problem. This is accomplished by being able to successfully present unambiguous

negative information and presenting a new course of action, and stories are a good tool to use to help others make sense.

VI.II.ii Behaviors driven by the identity of project team members. Managers should ensure that their team is well staffed with people who will protect their esteem, positive image, seek coherence, and has closeness to the organization that is focused on running the business. In addition, starting with senior management you need to have team members that can adapt different roles depending upon their interaction with the situation. For example, a project manager who can be a leader, coach, trusted advisor, and follower will be much better able to effectively manage the multitude of different interactions among stakeholders and contexts during deescalation.

VI.II.iii Role of leadership. Our study suggests that it is important for senior management to ensure they have project managers and team leads that are able to accurately model reality and provide a picture of the true status of the project versus adhering to a silo and disconnected management style. Keil and Robey (1999) share that the following project management actions cause deescalation: (a) redefine the project, (b) improve project management, (c) change in leadership, (d) subdivide the project, and (e) resolve specific problems. Moreover, leadership needs to establish clear points of reference and get the team talking in a constructive manner.

VI.II.iv Role of ERP project methodology. It is the role of project management to lead the team through the project with the proper ERP methodology for ERP system implementations, to make sure the staffing model is correct (e.g., includes full-time business participation), and governance procedures are used effectively. The project managers are responsible for proper

project planning, executing, monitoring, controlling, and closing of phases and the project. Governance plans and tools are a key to supporting these project management processes, which were used effectively after the project reorganization.

VI.II.v Creating workable relations. It is critical for senior management to lead the process of creating workable relations during an ERP deescalation. If senior management cannot create workable relations and provide a coherent social environment, the team won't be able to make sense as to the values and priorities required to make sense don't exist. Project MELANGE provides us a clear before and after view of this at the senior management level; hence, the required strategic deescalation by way of Project EXAMPLE, the external assessment, and twelve months of negative information from the team. Finally, once the senior management established workable relations they then initiated the project reorganization. Afterwards, the project managers and the team were able to do their jobs—successfully.

VI.III Limitations and Future Research

VI.III.i Limitations. Limitations of this study need to be understood when working with its conclusions. The limitations include the possibility that the data collected from the interviews may be subject to recall bias because the events occurred in the past. Efforts were made to mitigate this bias by triangulating and verifying the data from multiple data sources. In addition, because the researcher was a project manager during Project MELANGE there is a possibility of authority bias. Larson's (1982) study examined how people's implicit theories of the structure of leader behavior and relationships between leader behavior and the performance of work groups may have a confounding effect on responses to questions on leader behavior. In other words, there is a concern that the rater's responses will provide more insight to their own implicit theories instead of the relationships between the variables being investigated. Larson's (1982)

results indicate that the "raters' implicit theories of leader behavior influence leader behavior ratings" when the rating activity is occurring (the rating-time mechanism) . However, the implicit theories don't influence the rating due to timing of performance manipulation (the observation-time mechanism). The rater could be told about the work group's success or failure either before or after watching the group interact and it had about the same effect on leader behavior ratings. This bias is mitigated in my dissertation because my research used a semi-structure interviewee in which the respondents were asked to explain in detail their rationale for their responses and the data analysis did not discover any such biases. Moreover, my research wasn't focused specifically on leadership behavior but on key events, actions, and thoughts during project deescalation.

Hindsight bias relative to faith in supervision is concerned with participants contributing a higher quality of work due to an increase in supervisor involvement (Pfeffer, Cialdini, Hanna, & Knopoff, 1998). This concern stems from the fact that I as the researcher was also a project manager assigned to Project MELANGE; hence, the success expressed by the interviewees may have been influenced by my supervisory involvement. This bias was mitigated by interviewing a wide variety of team members (e.g., different roles and organizations). Moreover, Project MELANGE was team-based and the team members were empowered, and expected, to manage their team and deliverables. Pfeffer (1998) describes empowerment as delegating more responsibility to the workers, or those who perform the work. In addition, empowered workers have increased "productivity, morale, and organizational commitment" (Pfeffer, et al., 1998, p. 313). Project MELANGE's team members displayed these same behaviors after the project reorganization, which included new team leaders who were empowered and who reported up to the project managers.

Though single-person coding may be considered a reliability issue, it is a common practice in qualitative studies (Cousins & Robey, 2005; Schultze, 2000). Since this was a single-case study, the findings are not generalizable to all ERP project deescalations; yet, there are practical suggestions that can be inferred which may be useful for senior management, project management, IT and business team members, and ERP consultants. Despite these limitations, the study's conclusions may have significant contributions for understanding how sensemaking impacts the deescalation process of ERP projects and how the deescalation process impacts sensemaking.

VI.III.ii Future research. This study contributed to gaps in literature by studying how a real-life run-away ERP project was redirected to success; yet, replicating this study in other types of ERP projects would strengthen its generalizability.

Additional research for addressing gaps in the literature on how to deescalate an ERP project and how individual team member's thinking is implicated in ERP project deescalation may include the use of theoretical lenses such as naturalistic decision making (NDM), recognition-primed decision (RPD) making, and situation awareness (SA). Naturalistic decision making studies people in real-life settings that include unstructured problems within complex and dynamic systems (Zsambok & Klein, 1997). In these realistic conditions, experts make rapid decisions using situation recognition and pattern matching. Therefore, it is believed that a person's situation awareness drives the decision making process. Situation awareness is formally defined as "the perception of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future" (Endsley, 1988, p. 97). SA focuses on how the wrong perception was the error in decision

making and not the choice of action; therefore, leading to different remediation strategies (Zsambok & Klein, 1997).

The recognition-primed decision model is used in naturalistic decision making and describes what people do in real-life situations which includes ambiguous information and time pressure, problem solving, and situation awareness (Zsambok & Klein, 1997). One of the key attributes of naturalistic decision making is people making good decisions without comparing courses of action. The RPD model describes how people can use their experience to make good decisions by assessing a situation, "providing them with the sense of typicality shown in Fig. 27.1 (i.e., recognition of goals, cues, expectancies, and courses of action)" (Zsambok & Klein, 1997, p. 287).

In summary, this study identified team members with both SA and RPD making. Further exploration of these potentially very relevant theoretical frames is a subject for future research in the area of ERP deescalation.

Appendix: Additional Interview Quotes Table

Section	Interviewee	Quote
5.1 Project Escalation	IT SME #2	Yeah, it went on for several months. I would say, you know, the worst part was probably a 4-month period where we actually, as I stated before, we're actually getting into trying to peg requirements and trying to begin on the design. It was very evident at that point, that things were not working well and that we were not going to meet timelines if we didn't make substantial changes.
5.2 Project Deescalation	Director	When a director was asked if the project was turned around or redirected to completion, he responded, It was, and you know, we'd said that there were two, as we spoke earlier, there were two key drivers that caused problems, or let's say, two decisions that were really the core issues that caused the project to get in trouble. One was basically the approach and the methodology and the second one was the fact that we were trying to do a blended core, which was the most complex and risk-ridden approach we could have taken. Basically once we got people to begin to understand how tough it was, our recommendation was totally revamp the project, the methodology, and the team structure and move away from the blended core and go back to much more of a dominant system perspective. We won on the – or we got agreement if you will – on the change of methodology approach and totally restructured the team. We did not win on moving away from the blended core.
5.2 Project Deescalation	IT SME #1	"Yes. It was." She further confirmed that the project did finally meet its goal, "Yes, we ultimately were able to restructure and I guess address some of the issues that I had mentioned before. We were able to get it together and move it in the positive direction."
5.2 Project Deescalation	IT Business Analyst	When asked if the project met the business requirements and did in fact run the business when they went live, an IT business analyst said, "Yes. The business was very happy and the business people were more involved in it so they understood what they were getting before we banged it out there to them."
5.2 Project Deescalation	IT SME #1	When IT SME #1 was asked to define success in terms of what was accomplished, she replied,

Section	Interviewee	Quote
		Well, when—I think our date was like [sic] or something—we met that date. [sic] At the end of it—it was—from a materials perspective we had minimal defects, there were maybe a couple issues but it was a very surprisingly smooth implementation and I have gone through several [ERP1] implementations, and given where we had started from I mean, we felt—we were expecting it to be kind of bumpy, like, I don't know you always have issues but for given what we had gone through it was surprisingly a smooth implementation. It was shocking, actually. But this was a testament that—you know, to the team. What else? We—you know the team stayed intact, we—it was a very positive thing.
5.2 Project Deescalation	IT SME #4	IT SME #4 offers this criteria for simply saying the project was successful at the end of the day, "Yes, and the business had systems and processes that they could run their business on, I think is the number one thing. Much more important than any timeline or budgetary concerns."
5.2 Project Deescalation	Business SME #2	Business SME #2 states that his criteria for success was, "I'm going to steal from [project manager #2] and say can you run the business, you know, the day-to-day business. That's the criteria." And when asked if as far as the data conversion and the functionality delivered equated to running the business successfully, he answered "Yes."
5.2 Project Deescalation	IT SME #4	When asked if he could share criteria used to in fact say it was completed successful, IT SME #4 replied, Yes. So, we were able to migrate from legacy systems into the systems that were part of the final solution and that in itself was a major achievement given the huge amount of data that was involved. We were able to sun set the legacy systems. We were able to implement these same business processes across the entire organization and I think we were able to do that without any disruption to the logistics processes of the organization. I don't have the final numbers, but I'm sure we did it within time and definitely within the budget that was provided for that project.
5.2.2 Change of Leadership	IT SME #4	IT SME #4 states, "I think the second thing that happened was change of leadership. So, the project

Section	Interviewee	Quote
		manager was replaced, right? And there was a more rigid, a more systematic approach to project management."
5.2.2 Change of Leadership	IT SME #5	According to IT SME #5, Main event, according to me, was the – [sic], but the director who was in charge was changed. And the minute the director was changed, the pressure on the date was taken out. That is the time at least we could say that the new director who came in charge understood the importance of the structure or understood the importance [inaudible] like, you cannot rush the time without understanding why – like, without the requirement you can't develop a program.
5.2.2 Change of Leadership	Director	Moreover, a director highlighted the importance of ensuring leadership thinks about the primary and secondary considerations carefully and to have courage and foresight, And let's see, other thoughts are it's just so critical for leadership to really sit down and think through an effort and make sure that the choices they're making to set the project on its initial course for the right reasons and will end up in a place where you really want to be that are sustainable for a long period of time. All the other considerations, which there are other considerations, really are secondary and that's tough because we're all heavily motivated by some of our secondary considerations especially when it has organizational change to a large extent tied to it or it's going to make big impacts on people and processes and their jobs. It's easy to make a decision that is more motivated by the secondary consideration as there is the primary considerations and the leadership just has to have the courage and the foresight to – well they have to have the foresight and then the courage to – raise their hand.
5.2.2 Change of Leadership	Integration manager #1	Integration manager #1 states, Another key event was unfortunately, the IT project managers that [acquired company] had put in were unbending in their view of the project in that they would not adopt a new methodology and they were replaced by [ERP] project management. I think that was key because at that point, we stopped, what the result of that was,

Section	Interviewee	Quote
		with the confrontational piece moved from just battles of trench warfare to, "What's the best way to achieve success given this goal of business process?" And I think that was a key turning point.
5.2.2 Change of Leadership	IT SME #2	According to IT SME #2 and his perspective of key events, "Yeah, [sic] the replacement of the highest management involved in the project certainly was something that caused the entire project team to be relieved." He continued his explanation, So, replacement of the higher-level management team was certainly a welcomed event for the entire implementation team or everyone that was involved. There had been a lot of stress, and frankly, some of the stressors and some of the issues that we were having to deal with were put into play by this individual, you know, this person had come in, and in my opinion, didn't really have the experience to run such a large implementation and certainly not an ERP implementation and, that was the individual who made a lot of promises that drove to unrealistic dates and then turned around to the team to execute on something that everyone knew was unrealistic. So replacement at that level was certainly something that was very welcome and was seen as a very positive thing by the implementation team themselves.
5.2.2 Change of Leadership	IT SME #1	When asked to share four or five key events that helped move the project out of the problematic period, IT SME #1 replied, Number two, I guess they removed and replaced the leadership, the PM and the director, and perhaps they were well-meaning, but just too kind of get us a fresh start and moving in the right direction. And I guess to help with that distrust issue. Number four, I guess actually putting in place—they put in a team of—that it was called [working committee] team that were compiled of key business people—not just business people but the team leadership that if you had an issue or something that couldn't be resolved—particularly a business question on how we are going to

Section	Interviewee	Quote
		convert this part or what is the decision on how to set up this plan or whatever the—something that was holding up maybe a design or something, it needed to be raised up to that level then they had this team established to help get a quick turnaround. So, that was helpful.
5.2.3.3 Co-location of the team	IT SME #4	IT SME #4 also expresses how important co-locating the functional consultants with the business and co-locating the entire team was and why, Those things, as well as physically relocating all of the functional consultants to [the acquiring company's location] to be closer to the business. And putting the entire implementation team together, co-locating, in one location. I think the functional consultant front the co-locating. The co-locating probably was just as important, if not more important, than bringing in additional heads to help out. By the end of the project, we had a pretty healthy respect for the functional people that had been brought in who were struggling initially because they were, in fact, strong, functional people that was put into a somewhat impossible situation and being isolated from the business, they simply couldn't perform . The key was getting the people on the project team aligned with their business resources. So, there was just simply a complete disconnect between the two. And there was not any feedback-loop. That is so precious to any functional person from the business. They didn't exist because there were no business leads located within [the acquired company's location].
5.2.3.3 Co-location of the team	IT SME #4	From IT SME #4's perspective, the consultants that relocated to the project site considered it a positive event, It was certainly a welcome change. The consultants that had already been on the ground who had to pick up and move from [the acquired company's location] to [the acquiring company's location], it was certainly a life disruption for them but professionally they were all very happy and positive. It was a positive thing. They wanted to be successful and we didn't have a lot of dead

Section	Interviewee	Quote
		weight people just looking at [inaudible _____ 0:55:09] – you know, we had people that really cared about a successful implementation and they saw it as a very positive event.
5.2.3.3 Co-location of the team	IT SME #1	IT SME # 1 expresses the significant importance of co-location, Okay, well, number one, they did address the physicality issue and the team on the [acquired] side due to the fact that the business unit was who we were mostly getting our answers from as well as the consultant team that was working up there, they required them to move to or commute to [the acquiring company's location] and so we were all working in one place and one room together to provide face-to-face interaction, so that was a huge move in the right direction.
5.3.3.3 Visible and Private (enactment)	Integration manager #2	Well I think—I think making people keep the issue log up to date and then sharing that weekly with everybody and pushing those issues to closure helped. Because if that way, if some group was—either they are not meeting often enough to come to meeting or they keep saying, "Well no, let's not do it that way—how about this other way." That way now everybody is seeing who is delaying decisions and maybe that was one of the reasons why they quit it is because it was more public and they were being show that, "Hey it is always our team that we can't get our issues closed. Why is that?" So, I do think—because I have seen that in other projects too—getting issue logs where everybody sees it—if you just have an issue log somewhere in SharePoint and you put something out there and it doesn't get brought up every week where people see it over and over it again—those things—they just drag on and on. In fact, I am going to suggest we do that—you have given me some good ideas I can use on my project right now.
5.3.6.1 Context and Indexicals	IT SME #1	IT SME #1 was eventually able to make sense of the project by focusing on extracted cues such as goals, dates, and tasks, When we—certainly when you have a goal—or what it is that we are trying to—whether it is a date or a task or something. See, I work well like that—this is a checklist and just rallying the team and the people that I was trying to help motivate—it was, "This is our goal, this is what we are striving for—let's get organized and move

Section	Interviewee	Quote
		forward to it." So, yes.
5.3.6.1 Context and Indexicals	Project manager #3	Project manager #3 explains his focus on issues versus the project politics during the escalated period, The main focus would be to – during the problematic phase, I would say, to close down, to close out the issues mainly. The core issue has to be resolved and the thing which was less important or things of the political thing which was going between these two companies was of less importance to us but our focus would be on closing down the issues and also to meet the dates, our milestone dates or whatever.
5.3.6.1 Context and Indexicals	IT SME #5	For IT SME #5 explains how did she determine what was important, I just knew what needs to be done and conceptually, I knew what needs to happen in the end or what is the end result. I was just trying to understand what needs to happen in between or how I'm going to get the data and how am I going to understand the data. Once those pieces started falling in place, I wrote the program to come up with the right solution and I was also in a technical team at the same time for the interfaces from our director saying that I have to manage the technical sides too and make sure that the interface from [ERP2] to [ERP1] worked right.
5.3.6.1 Context and Indexicals	IT SME #6	IT SME #6 explains that detailed planning helped him with his deliverables and tasks, Well, I think the discipline of creating detailed conversion scripts and dress rehearsal spreadsheets helped me identify some missing pieces. And I think it also helped our team identify pieces where we thought you had it, they thought we had it, nobody had it, but finally getting a clear assignment on tasks that could have been assigned to multiple teams. I think there were a couple of things that came out of that detailed planning. IT SME #6 states that specific tasks he was assigned helped him make sense during the project deescalation, I think I had fairly specific tasks and so I was able to – it made sense to me, it was logical. What I had difficulty with was integrating additional tasks and requirements while trying to do the

Section	Interviewee	Quote
		original tasks that were assigned to me but they – I think the team did a good job of determining what made sense and what could be done manually and what needed to be done in the automated fashion. It was logical and what we were trying to do from an overall perspective and logical in terms of specific tasks I needed to do to help us get there.
5.3.6.1 Context and Indexicals	Business SME #2	For business SME #2, his education and work experience provide his context for what he noticed to be important for the business to run successfully, So, my context is basically industrial and systems engineering and looking at what we're doing right now is not productive, so at the end of the day, the goal was to make the job simple enough so that mechanically they could accomplish it but achieve all of the objectives such as tracking serialized parts, being able to pull up records, being able to say you accomplished the maintenance properly and all of the things that go along with that. So then, my background, my work experience comes into play in that I worked in materials for a long time and had some leadership responsibility for that department, parts of that department and a planning background and an engineering background and I have background in the sales process at [the acquiring company] and not only the sales process but also the contract administrations, customer support processes, you know, this is how they operate and one of the big disconnects was in the fundamental differences about the two [companies] that really and truly, on almost every level, you could not get two more disparate [companies]. At least they both spoke English. More specifically, business SME #2 shares that his focus was the business, I would characterize that a lot of the – and I'll use the term business people – the business people of the project, meaning the people who at the end of the day would be a stakeholder, you know, all IT resources would vacate, all of the [ERP vendor] or anybody else who was working on the project would vacate. The people left holding the bag at

Section	Interviewee	Quote

		the end of the day were more concerned about being right and their system being the one they use, their methods being the ones they used, rather than being the most effective way to do the job.
		
		Business SME #2 explains his context during the escalated period and how he determined his next steps,
		    Just kind of sum it up, I mean, my context, my thought process it always began what is the impact on the day-to-day business process. And can, again I'm going to steal from [project manager #2] – your phrase, can you run the business right? And you can but how onerous is it going to be to run the business? That would kind of give me the – can we accept what was even proposed or do we need to elevate it more and discuss it more or perhaps change what had been proposed?
		
		    But that's how I would – I mean that was my context, was again having the broad [operational] experience, having – I don't want to say unique – but having a somewhat unique experience to say yeah this will work and it won't be that bad and frankly, [a business manager] would a lot of times would kind of look at me and say, "What do you think about this?" Because a lot of people like to spin things up and get them up to speed pretty quick that maybe didn't even need to be discussed.

5.3.6.1 Context and Indexicals	Business SME #2	Business SME #2 also states that talking and understanding other's context was important to him, You know why people make an incredibly complex business, I think more complex than it needs to be, so it helps to sit down with folks and just kind of talk through, some of them was yes, some of it was very serious, some of it was what do you think about this to be able to, and I think this probably fits in the context for sensemaking, is where just the act of speaking what you're thinking kind of, you can even evaluate yourself whether this sounds good or not. You know, you can't just look at something and say, "Oh yeah, that's fine." Sometimes you kind of have to work

Section	Interviewee	Quote
		through it and then again, someone else may have some context that you don't but they can often say, "Wait a minute, it's fine because or it's not fine because." So, I don't know how that fits into what you're studying but there was a lot of unofficial communication, put it that way, like I said, lunches, dinners, after hours with people who were either directly involved with the project or indirectly, that helped me in picking through what was going on.
5.3.6.1 Context and Indexicals	IT SME #4	IT SME #4 explains that following the methodology helped them move forward, I think what we eventually ended up doing, and what we were told to do, was focus on the business processes, so I guess that's where the methodology kicked in. We started the BPML, you know, the list of business processes, walking through those end to end both for the [acquiring] organization as well as for the [acquired] organization and then started to connect the dots and started to identify decisions that had to be made in terms of systems, in terms of configuration of systems, in terms of data requirements, in terms of interfaces; so it's only when we started doing that, that the whole thing kind of started going together. IT SME #4 further explains how he decided what was important and what to defer until later, Um, I don't know – it's kind of the Steve Covey approach, right? Think with the end in mind, so any information that I thought would be helpful in bringing closure, that's the information that I would try to retain or take into account. There was a lot of high-level planning, you know, information going back and forth that was obviously too uncertain to act upon and, you know, not enough detail to be of any use so I didn't really depend too much on that. I knew that – I think that there were certain things that I knew that had to be done, like the some technical works in terms of interfacing with systems that we knew were going to be kept, so I started to focus on that and let the storm pass.
5.3.6.1 Context and	Director	A director explains how he identified what was important

Section	Interviewee	Quote
Indexicals		and what to let go from the continuous flow,
		Yeah, well, if you think of the people I was having to reach out to, you know we all are, we all are politically driven to a certain extent, is who – but at the end of the day, they had to worry about being successful and they had to be worried about doing the right thing for the company, for the organization.
		And, you know, if you think of people at the next couple of levels is: they're driven by meeting the goals on time and within a reasonable budget. So basically if you just focus on those things and say number one, we're not going to get to the end of the game, we're not going to reach the goal on the path that we're on. Two, it's going to cost you a lot more money and three it's going to take you a lot more time and if you just kind of stick with those things, because again, the bottom line is to do the right thing or get the goal accomplished within a reasonable amount of time and with reasonable dollars. And if you miss on any of those, the people above you aren't real happy. Especially what you focus on for them because that's how they operate.
		You know I could have gone after one hundred details and sit down with a twenty-page deck and try to convince them but I lost them because they're focused on three or four things. So, the evidence kind of leads you to the three or four things that everybody above you is really worried about aren't going to happen the way they want them to happen.
		Therefore, at the director level and above he kept the focus on three or four cues, such as project goals, time and budget.

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