A Qualitative Study of the Experience of Individuals within Information Technology Teams during Transition Using the Kübler-Ross Grief Construct and the Bridges Transition Model

by Letitia Larry

B.S. in Applied Mathematics, May 1993, San Francisco State University
M.S. in Information Systems, December 1997, Strayer University

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Susan S. Swayze
Associate Professor of Educational Research

The Graduate School of Education and Human Development of The George Washington University certifies that Letitia R. Larry has passed the Final Examination for the degree of Doctor of Education as of July 12, 2017. This is the final and approved form of the dissertation.

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Letitia Larry

Dissertation Research Committee:

Susan S. Swayze, Associate Professor of Educational Research, Dissertation Director

Ellen Scully-Russ, Associate Professor of Human and Organizational Learning, Committee Member

Kerri S. Kearney, Associate Professor of Higher Education and Student Affairs, Oklahoma State University, Committee Member

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Abstract

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This study explored the experience of transition for eight information technology staff in response to enterprise change using the grief construct (Bridges, 2004, 2010, 2013; Goodman & Loh, 2011; Kearney, 2003; Kearney & Hyle, 2003, 2004; Kübler-Ross, 1969; McDonagh & Coghlan, 2006), most notably associated in its original context with Elisabeth Kübler-Ross (1969) and her work with people facing death. Across the span of human existence – whether talking about human mortality or shifting business models and technological systems, change is an ongoing, never-ending process (McDonough & Coghlan, 2006). Along with change comes transition, which can be understood as the psychological component of change that occurs with, during, and after the change event (Bridges, 2010). As the field of information technology has evolved as a discipline and tool, there have been corresponding changes to business, processes, practice, policy, and the roles and responsibilities of those who implement and support the actual change (Goodman & Loh, 2011). While change theory has traditionally concentrated on the impact that a change event exerts on an enterprise and the success or failure of the change event itself, it has not focused on the people who are responsible for the change. This misplaced, one-dimensional, focus has impacted stakeholders' acceptance of change as well as the success or failure of the intended change. On this point, and according to Bridges (2010), the psychological transition process is the most important factor in achieving successful change for the organization and its workforce.

In this study, the researcher examined the human component of change, emphasizing the dynamics of the transition process on eight selected subjects working within an information technology environment. This qualitative study was used to provide insights and understandings to the following research question: How are the phases of transition experienced by individuals within information technology teams during a major change effort? The researcher used the Kübler-Ross grief construct (denial and isolation, anger, bargaining, depression, and acceptance) as the theoretical lens through which to investigate the transition process in action.

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Chapter 1: Introduction

Overview

"Ninety-three percent of U.S.-based multinational companies are in some phase of changing their business models," (KPMG, 2014, p. 2, paragraph 1). This percentage is particularly significant in light of the technologies upon which 21st century businesses depend for developing, redeveloping, updating, and revamping their structural frameworks, designs, communications networks, marketing and sales plans, policies, implementation practices, etc. Because organizations are continuously evolving in this way, adjustments must regularly be made to the infrastructure, systems, and roles and responsibilities of those organizations. In turn, with new systems come new modes of doing business and changes to operations (Goodman & Loh, 2011) that impact both internal and external stakeholders. Moreover, it is expected that certain Information Technology disciplines (such as solutions development, verification/testing, and technical and customer support) within an enterprise will continuously go through, promote, and support change (McDonagh & Coghlan, 2006), especially in the area of information technology. On this point, it is imperative to recognize that while numerous studies have focused on the ways in which change moves systems forward and assists consumers of change efforts, the researcher has found that there is a lack of empirical information documenting the effects of change on the information technology (IT) tiered support (TS) teams (referred to as IT teams throughout the remainder of this document) that support both the change effort and the end users of the modified or new system (i.e., systems and solutions development, verification/testing, database administration, access, and technical and customer support) (Chaudry, Wang, Wu, Maglione, Mojlca, Roth, Morton, &

Shekelle, 2006). The researcher will seek to address this information gap by studying the effects of change and, in particular, the dynamics of personal transition processes within a particular IT work environment, focusing on IT teams selected for this study.

It is essential to emphasize that *transition* and c*hange* are not identical concepts. One is a precursor to the other; in other words, change encourages or causes transition of some sort, with transition being understood as a psychological concept and change understood as a kind of event. According to Bridges (2010),

> Change is situational: the move to a new site, the retirement of the founder, reorganization of the roles on a team . . . Transitioning, on the other hand, is psychological; it is a three-phased process that people go through as they internalize and come to terms with the details of the new situation that the change brings about. (p. 4)

Specifically, Bridges' (2010) three phases of transition are:

1. Letting go of the old ways;
2. Going through an in-between time when the old is gone, but the new isn't fully operational; and
3. Coming out of the transition and making a new beginning.

Per Bridges (p. 2), transition is not automatic and occurs much more slowly than change. Transition takes longer because people undergo three separate processes. In phase 1, letting go, people must let go of the way that things used to be as well as the way that they used to be. This may mean giving up the way that tasks used to be accomplished, possibly for the course of his or her career. In phase 2, saying goodbye, there is a feeling of discomfort and people may want to rush ahead into the new situation although he or she is most likely not ready to do so. It is called the neutral phase and should be experienced to ensure there is not a relapse into the previous phase. Phase 3, moving forward/new beginnings, is where people begin behaving in a new way. Phase 3 is

normally only successful when enough time has been spent in phase 2 and people have put the past behind them and are ready and willing to move forward. Bridges provides a deeper dive into the actual psychologic experience and expression of transition. The Bridges Transition Model provides context, a list of feelings and an expression of the psychological phases of transition for the individual, to the Kübler-Ross grief construct stages of loss.

Dr. Elisabeth Kübler-Ross postulated a series of feelings and reactions experienced by survivors of an intimate's death, inspired by her work with terminally ill patients motivated by the lack of curriculum in medical schools on the subject of death and dying. Kübler-Ross (1969) originally studied the phases of transition as they relate to death and dying, identifying these phases as: (a) denial and isolation, (b) anger, (c) bargaining, (d) depression, and (e) acceptance. These phases are not linear, may occur cyclically and some or all may be experienced by those suffering a loss. Later, she went on to determine that these very phases can be, and are, inherent to transitions of any type including divorce, changes in job, changes in responsibilities associated with a role/job/life, etc. The term “transition” was used by Kübler-Ross to describe the process of moving from one state to another in works beyond the original inception of the grief construct and this helped to show the applicability of the grief construct beyond death and dying to other life changes. The grief construct is a transition process expressing the feelings and responses associated with the transition. The grief construct may seem dark, or morbid, based on the original application, but the applicability goes beyond death and dying to what is perceived by the individual to be highly detrimental personal transition responses that feel as if the individual is going through the phases of grief or loss. The

grief construct has been revisited and/or extended since its original inception; as such, it is applied to the realm of business and other areas/disciplines involving people and change/transition processes (Bridges, 2004, 2010, 2013; Goodman & Loh, 2011; Kearney, 2003; Kearney & Hyle, 2003, 2004; McDonagh & Coghlan, 2006). An example of the application of the grief construct to technology disciplines was well expressed by Dr. William Andrew Von Canon: "The sun-setting of a project [feels] like death when completing a systems change [or transformation]," (Von Canon, 2017).

Change is not necessarily a negative process but it may be deemed negative based on the individual experience and how change is handled; change does not have a negative connotation. Although they may be justifiable, changes of any sort succeed or fail based on whether the people affected are willing to do things differently (Bridges, 2010; Goodman & Loh, 2011). The success or failure of technology changes in businesses and other kinds of organizations depends on how information technology teams handle the change—not only in terms of technical implementation—but also and very importantly, with regard to how they process the stages of transition from a psychological standpoint while assisting customers in doing the same. As a result, the researcher was focally interested in exploring the psychological aspects of change—as experienced during the transition process—and their impact on the professional lives of individual IT team members who initiate and participate in revolutionary change events that promote individual transition experiences.

Statement of Problem

While it is a generally accepted fact that policy and technology changes directly impact consumers of products and services, policy and technology changes also impact

those individuals and teams responsible for initiating and implementing such changes. However, many organizations demonstrate limited, if any, recognition and support for employees performing in the dual role of change implementers and change supporters in the workplace; on this premise, the organization, itself, remains distanced from the realities regarding how IT workers are impacted by change and the associated transition process. Furthermore, with change efforts, especially those requiring new means of operation, there is an accompanying shift in systems (i.e., infrastructure/hardware and tools) and processes. These shifts may include changes to work roles and responsibilities, including the ways in which roles are initiated and performed within information technology teams. Nevertheless, in order to support and sustain underlying infrastructure systems, IT staff must be able to work with and through the change effort while going through a transition themselves and also supporting others through transition (Venkatesh, Morris, Davis, & Davis, 2003). Otherwise, the transition process will take longer, and the change will cost more money or fail altogether.

To compound these issues, there is a lack of empirical research that might, otherwise, guide practitioners in addressing transition efforts aimed at individuals within information technology teams responsible for implementing and supporting changes in the areas of new technology, policy, and practice (Chaudry, et al., 2006; Litwin, 2010; Ratogi, Daim & Tan, 2008; Yeuk-Mui, 2001). Therefore, this study's overarching problem was situated in the gap that persists regarding the lack of research on change and transition for IT workers; in effect, the problem pointing to the omission of this particular group as a viable subject of study speaking to theory, policy, and practice specific to individuals within IT teams and their direct experiences with change and its

psychological transition processes (this research study's context). As such, in order to guide both practitioners and researchers, more knowledge was needed about the experiences of individual IT team members during technological change and team transitions, necessarily incorporating psychological transition processes that draw from the work of Kübler-Ross (1969).

Purpose and Research Question

The purpose of this research was to further our understanding of the transition process—inherent to change events—as it related to the experiences of individuals within the IT teams under study, taking into account the dynamics of their change efforts (implementation and support activities) which include working with people, processes, and systems. The point here is that change events occurring within technology-driven organizations position IT workers at the nexus of dealing with both people and systems in order to facilitate the mandated change and move the organization forward. Thus, handling multiple areas of technological concern and interacting with a variety of people intensifies the demands with which members of IT teams are faced when implementing and supporting change. For example, information technology teams include staff providing help desk support, data management, environment and configuration management, and systems development and validation (Oxford University, 2015). Infrastructure includes, but is not limited to, databases, access systems, and physical machinery (computers, servers, and networks) that provide information management structure. It was the aim of this study to provide an opening into the lived experiences of IT team members who spoke to their encounters with change, the psychological transition processes, and their understandings of these dynamics in their professional lives. The

team dynamic provided context to the individual experiences of transition as it related to the higher level psychological process as posited by Bridges, and the individual feelings associated with transition as put forward by Kübler-Ross.

As such, this study provided empirical evidence on the experience of individuals within IT teams during organizational change and transition, aimed at determining whether this experience mapped to or correlated with the stages of grief and loss as proposed in the grief construct (Bridges, 2004, 2010, 2013; Goodman & Loh, 2011; Kearney, 2003; Kearney & Hyle, 2003, 2004; Kübler-Ross, 1969). Therefore, using the Kübler-Ross (1969) grief construct as the theoretical lens through which this study was designed and conducted, the researcher specifically explored the psychological impact of transition (the context) inherent to significant change events. The research question was, "*How are the phases of transition experienced by individuals within information technology teams during a major change effort?*"

Statement of Potential Significance

This study has the potential to add both theoretical (scholarly) and practical information to the literature on technology specific to the functions of businesses and organizations in the 21st century, with a purposeful emphasis on the human dynamics that underscore an IT team's ability—as a group and as individuals—to adapt to and carry out the change mandates of the organization to which the team is responsible; that is, to ensure the effective and efficient functioning of the organization while managing their own human reactions, psychological transitions, and adaptations to change processes. In this context, the grief construct is uniquely significant because it supports investigation into the transition experiences of the people participating in this research study.

Therefore, as the study's theoretical foundation, the work of Kübler-Ross is central to the exploration of change and transition for IT teams.

In a more general sense, this study of technology workers could potentially contribute additional substance to the overall body of literature in the area of technology research. For example, Yeuk Mui (2001) noted that front line service, defined as call center and help desk support, is under-researched and the studies of groups who support change is normally conducted to gain insight into the impact on those who use the systems or the services offered. Response to system users, time to resolution of issues and user experience are the main components of studies Yeuk-Mui referenced and not those providing the support for the systems and users (IT teams) and how their experience may impact the user experience or systems/service quality. While Yeuk-Mui's study discussed the gap in research on those supporting end users/customers, the study is applicable to ongoing support for business and technical systems that undergo change on a regular basis as this is what call center and help desk centers support; and the process of transition is relevant and important to performing the responsibilities associated with their roles. There appears to be little research on the people (IT teams) in the technology sector in general. In contrast, while Bridges (2004, 2010) continued his investigative focus on making sense of change by studying the transition aspect, or psychology of change, for technology workers, additional research on this topic is needed. Ten years after Tam's (2001) study on *Information technology in frontline service work organization*, Goodman and Loh (2011) conducted a generally focused study on business transition and stated that the human component of change requires continuous investigation to understand how those participating in the completion of any form of

organizational change experience the transition process. Current information addressing organizational change and IT teams appears to be concentrated on end-users or consumers experiencing transition challenges brought on by changes to the service or solution, rather than the transition experiences of those implementing and supporting change efforts (Goodman & Loh, 2011; Yeuk-Mui, 2001). "There was a dearth of research, particularly for role changes . . . Cost-effectiveness was generally not evaluated, nor was the wider impact of change … " (Sibbald, Shen, & McBride, 2004, p. 932). Based on continued queries on studies examining the lived experience of IT teams during change, there is still a gap in 2017 in research specific to this particular group of people during change. While the studies just cited provide certain insights into the human side of technological work environments/issues related to technology workers—including change—they also point to the need for ongoing, more current studies, thus providing scholarly and practitioner based information to extend an understanding of the experience of transition for individual IT team members.

Finally, this research study is potentially significant to administrators, in addition to IT teams (practitioners) and scholars, because it offers empirical evidence regarding how to more effectively navigate the transition process for those responsible for mandating, promoting, and supporting the change effort and extend scholarship in support of the technology field. In other words, data from this study might help administrators better understand and create requirements and processes that are feasible for both the organization's future goals and objectives as well as for enhancing the capacities of IT teams to carry out those goals positively and productively—in the best interests of the organization and the teams themselves. Furthermore, data obtained from

this study might be applicable to several technical disciplines; thus, it may be transferable, although it may not be generalizable. On this basis, similar technical disciplines could benefit from insights concerning the integration points necessary within and between systems. These systems include human resources and infrastructure systems, as well as the accompanying policy, processes, and procedures that guide the individuals, teams, and the institution.

To sum up its potential significance, this study provides insights into a hidden aspect of the change efforts that are endemic across technology-based environments; namely, the experiences of transition for the underlying support system, IT teams, who are charged with supporting changes to technology/infrastructure, providing solutions to ongoing processes and procedures, and adapting themselves to changing roles and responsibilities. This study also contributes to scholarly literature as it relates to revolutionary change in technology and transition for individuals, using the team as the context for a shared experience. Ultimately, IT teams' responses to the change and transition experience contribute to the success or failure of the change itself, as well as to the ways in which consumers of the change are supported. Using the qualitative interview process as the study's primary investigative instrument, the researcher gathered data from eight selected study participants across two IT teams; in this way, seeking to understand their experiences of change and transition as expressed by the participants themselves.

Conceptual Framework

After a thorough review of the literature, the researcher determined that a qualitative research approach was the most appropriate way to determine how IT team members carry out and sustain change efforts within the information technology realm,

while also acknowledging and attending to the psychological transition processes that accompany the change experience. The researcher reviewed the theories of several scholars and technology experts, noting their respective theoretical lenses on the topic of organizational change, including Paradox (Lewis, 2000); Mandatory Change (Lewin, 1943, 1947, and 1951; Van de Ven & Poole, 1995; Van de Ven & Sun, 2011); and Ambivalence, Resistance, and Acceptance (Piderit, 2000). Although these theories proved informative and useful in an overall sense, several are clearly dated—addressing organizational change in a more general context, not specific to contemporary technology models—and they were, collectively, presented from the perspective of the organization and the impact or influence of change on the organization as a whole. As such, these theories did not concentrate on the experiences of individuals and teams directly implementing and supporting the change effort. Consequently, the researcher chose to advance a study of change that emanates from the perspective of current IT teams experiencing the psychological aspects of transition (this study's context) associated with change while, in fact, implementing and supporting the change effort.

Bridges (2004, 2009, 2010, and 2013) authored several versions of his book, *Managing Transitions*, with the understanding that change is situational and happens without people actually transitioning in the sense of experiencing a revolutionary inner process. On this point, Bridges (2004, 2013) described transition as a psychological process through which people gradually accept the new situation and the changes that come with it. He identified three phases of the process: Endings, Neutral Zones, and Beginnings. Through this work, Bridges (2004, 2009, 2010, and 2013) focused on ways to manage the overall process of transition and the associated variables that require

consideration. In managing transition, he looked subjectively at loss, mapping the phases of transition to the stages of loss and grieving observed by Kearney and Hyle (2003) and represented in the Kübler-Ross grief construct. Table 1 shows a mapping of the phases of the transition process as represented by Bridges to the phases and feelings associated with transition as represented by the Kübler-Ross grief construct.

Table 1

Bridges Phases of Transition Mapped to Kübler-Ross Grief Construct Stages

Bridges Transition Phases	**Kübler-Ross Construct Stages**
Ending, Losing, Letting Go (Denial, Shock, Anger, Frustration/Stress)	Denial and Isolation
Ending, Losing, Letting Go (Denial, Shock, Anger, Frustration/Stress)	Anger
The Neutral Zone/The In-Between (Ambivalence, Skepticism, Acceptance)	Bargaining
The Neutral Zone/The In-Between (Ambivalence, Skepticism, Acceptance)	Depression
The Neutral Zone/The In-Between (Ambivalence, Skepticism, Acceptance)	Acceptance
The New Beginning (Impatience, Hope, Enthusiasm)	Acceptance

Note. Taken, in part, from *Change versus Transition Model* (Bridges, 2013, p. 4)

The Kübler-Ross grief construct underscores the conceptual framework of this study, similar to the ways in which the construct underscores the work of Bridges and others in addressing the psychological phenomenon of transition in relation to change events. Kübler-Ross (1969) studied grief extensively and proposed the grief construct model that shows the phases of grief and their application to any form of loss for the individual—including transition in life and work—thus, expanding beyond her specific focus involving the moving from one stage, life itself, to the final stage of death. This makes the Kübler-Ross grief construct the best lens to use in order to better understand the true experience of transition for those moving from one stage of work and providing support to another, as IT workers have to do in order to support new and expansive technological and process changes while supporting others through the same. Thus, the researcher used the Kübler-Ross grief construct as the theoretical lens for this study, and the Bridges Transition Model served as a study focus tool, providing criteria for the context of this study just as the team provides context for the individual team members, in order to better explore, understand, and accommodate the data related to the transition experiences of the IT team members/study participants. The Bridges Transition Model provided the context for what may be expected in the overall transition process while Kübler-Ross provided the actual responses to the change event; process and expected state of mind versus actual response. Bridges served as a guide while Kübler-Ross provided detailed feedback and responses in the form of feelings and reactions as expressed by individuals within the team.

To further illustrate the broader applications of the Kübler-Ross grief construct across a variety of disciplines and change/transition events, following are some examples.

There have been several nursing studies that have utilized the Kübler-Ross grief construct as a theoretical lens to investigate the emotional experiences of medical professionals during changes to health care practice or services offered (Filej, Skela-Savič, Vicic, & Hudorovic, 2009; Humphrey, 1997; Jeffreys, 1995; Massey, 1991, 1992; Perlman & Takacs, 1990; Schoolfield & Orduna, 1994). Humphrey (1997) completed a quantitative dissertation looking at the effect of loss and the associated grief on individuals who remain employed after organizational change at a medical clinic. Change was proposed as an unexamined, not accounted for, form of loss affecting the individual. "The goals of change have been primarily concerned with organizational survival and productivity rather than the welfare of the employees," (Humphrey, 1997, p. 20).

Massey (1991, 1992) studied the experiences of nursing staff at a mental health facility undergoing change due to downsizing. Massey confirmed that nursing staff experienced the stages of grief during a major organizational change event:

> Grief has distinctive characteristics. Nurses working in a hospital due for closure in 15 months were assessed, and it was found that nurses with long service experienced an anticipatory bereavement in response to the expected loss of their hospital. This reaction is different from the uncomplicated grief which follows the death of a loved person, and is therefore called institutional loss. Feelings identified included initial disbelief, personal anxiety and anxiety about community care, physiological symptoms of anxiety, guilt, anger, feelings of internal loss, avoidance and searching behaviors, acknowledgement of grief, idealization, and identification phenomena Institutional loss. (Massey, 1991, p. 33)

Perlman and Takacs (1990) studied human emotions of nursing staff during organizational change. Additional phases were added to the original Kübler-Ross Grief Construct to provide a more informed description of the change experienced by individuals as researchers did not feel that the construct related all that an individual might experience emotionally. Per Perlman and Takacs (1990):

> Even though organizations spend a considerable amount of time, money, and effort trying to change, they frequently are not fully satisfied with the results. A major reason for this situation is that organizations seldom deal consciously or constructively with the human emotions associated with organizational change. Resources and energy from within individuals are critical to help accomplish change. To cope with and work through the changes that affect them, organization members must deal with the emotional process of letting go, of allowing the past to die, and of experiencing the depression. The emotional voyage of the change process involves 10 phases: 1. equilibrium, 2. denial, 3. anger, 4. bargaining, 5. chaos, 6. depression, 7. resignation, 8. openness, 9. readiness, and 10. Reemergence. (p. 33)

Schoolfield and Orduna (1994) analyzed the impact of an overarching organizational change on the staff nurses of a large oncology unit in the Midwest. Reactions of nursing staff are compared with a grief-change framework which was found to be useful in explaining staff nurse behaviors and attitudes. The study showed that there is a correlation between what nurses experienced emotionally and the phases of the grief construct.

In addition to medical and healthcare-related studies, changes to educational systems (Clapper, 1991; Kearney & Hyle, 2003; Triolo, Allgier, & Schwartz, 1995) and business systems (McDonagh & Coghlan, 2006) have been studied utilizing the grief construct. These studies have shown that the impact of transition associated with changes to role, job function, or loss of a job requires moving through phases of emotional experience similar to the phases of grief as represented in the grief construct.

There are five phases associated with the grief construct that correspond to the emotional experience of individuals on a team going through change and transition. The phases are: (a) denial and isolation, (b) anger, (c) bargaining, (d) depression, and (e) acceptance. These phases represent the “feelings” experienced by the individual (and/or team) in the context of the change event and the subsequent transition. Phases are

described as follows. Denial is defined as "refusal to accept the diagnosis or change event" (Kearney & Hyle, 2003, p. 114). Anger is defined as "feelings of anger, rage, envy, and resentment associated with the impending death or change event" (Kearney & Hyle, 2003, p. 114). Bargaining is described as "attempts to trade one action for avoidance of death or loss" (Kearney & Hyle, 2003, p. 114). Depression is defined as "the replacement of anger with a sense of loss" (Kearney & Hyle, 2003, pp. 114-115). Lastly, Acceptance is defined as a stage in which "anger and depression about death or loss has dissipated; an emotionless state" (Kearney & Hyle, 2003, p. 115).

These phases and their associated feelings may be experienced by anyone in response to a change event of any type and dealing with subsequent transition issues. In the case of IT teams, the loss associated with changes to roles, responsibilities, business methods, processes, procedures, and infrastructure/technology serves as the catalyst for moving through the transition process. Furthermore, although the stages of grief are typically addressed linearly, the stages can occur simultaneously, or some might be skipped or repeated. Figure 1 shows the "Change Curve" (Connelly, 2015), indicating how the feelings experienced through the stages of loss are represented as highs and lows, eventually leveling out to the final stage of Acceptance.

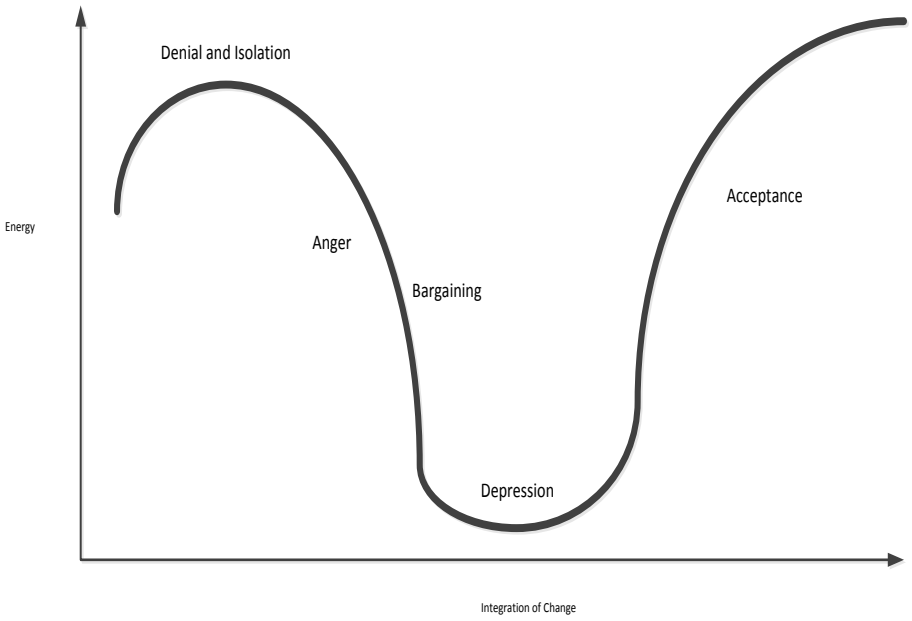

Figure 1. Kübler-Ross Five Stage Model (Change Curve).

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A representation of how the transition process corresponds to the phases of grief in the Kübler-Ross grief construct (as represented in purple boxes in purple text) is shown in Figure 2, "Change versus Transition" (Bridges, 2013). It includes feelings that occur after Acceptance, many of which may or may not be recognized by all who go through a transition, but which yet have been recognized by some individuals. Note that Bargaining and Depression, as represented in the grief construct, are not listed in the transition model. However, they may occur as part of the subset of feelings.

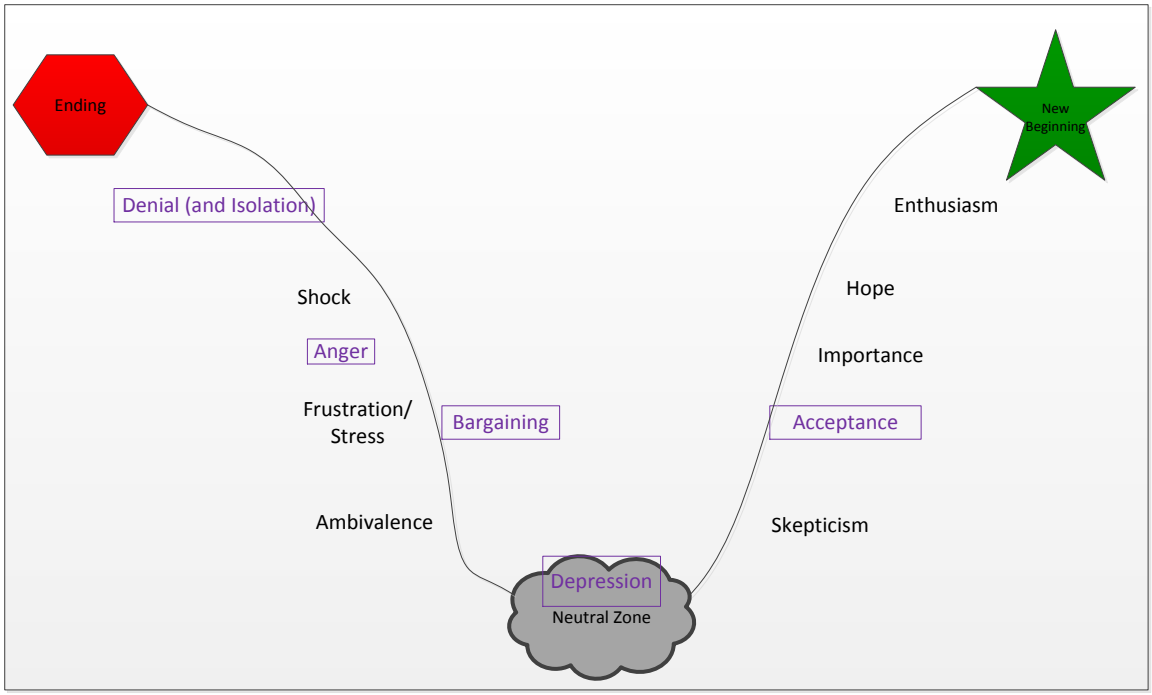

Figure 2. Change versus Transition.

Reprinted from Moravian.org by W. Bridges, 2013. Retrieved from http://www.moravian.org/wp-content/uploads/2013/06/Bridges_Transition_Model.pdf.

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Summary of Methodology

Qualitative research methodology was used to answer the research question, "*How are the phases of transition experienced by individuals within information technology teams during a major change effort?*" Specifically, a basic qualitative research design utilizing interviews to capture the change and transition experiences of individuals within two IT teams responsible for supporting internal and external customers during a technology-driven change event within the operations of two particular organizations (i.e., an IT group within a government agency and a Health Information Technology (HIT) group within a government-sponsored/contracted non-

profit company). Study participants were purposefully selected, to include eight individuals within two IT teams that is undergoing, or has undergone, revolutionary change that includes changes in the IT systems and the roles and responsibilities of IT staff. Three participants were identified via networking and an additional ten were found via snowballing, but only eight consented to participate in the study. This study fills the gap in previous research, as proposed by Goodman and Loh, 2011, McDonagh and Coghlan (2006) and Yeuk Mui (2001) that indicates a need for studies within the technology sector.

Data collection consisted of a pre-candidacy form, per participant, providing background and experience for each individual participant as well as a list of responsibilities for their current roles; and semi-structured interviews conducted individually with each study participant. Interview data was coded and analyzed to uncover significant statements and derive meaning from participant responses. Data analysis included first-cycle and *a priori* coding processes using open coding, followed by a conceptual and theoretical theming process (Saldaña, 2013). In turn, and based on emergent themes and patterns, the researcher has provided thick and rich descriptions of the findings so as to capture participant experiences and understanding of change and transition in a technology-based workplace. To ensure trustworthiness, several techniques were utilized including, but not limited to, member checking of interview notes and transcriptions, an audit trail of events by the researcher throughout the data collection and analysis phases, and thick, rich descriptions (Merriam, 2009).

Study Limitations and Delimitations

This study was delimited to a qualitative study of eight individuals within two IT teams in transition, situated in work settings performing software/solution architecture and development/engineering, infrastructure management/development operations (DevOps), solution verification/testing, and customer and technical support. The teams included an IT team providing technical architecture, development, testing and customer support services to a government agency; and a Health Information Technology (HIT) team within a non-profit organization providing infrastructure, solution verification and customer and technical support for insurance providers and insured consumers.

Transferability is the degree to which the findings of this inquiry can apply, or transfer, beyond the bounds of the project to another site where relatable issues and processes are at play. Thus, while findings are not generalizable to another situation, they could transfer in terms of being useful/applicable (to some degree) to another scenario. In other words, findings from this study may not be transferable to non-IT organizations undergoing change and the associated psychological transition experiences.

In addition, as individuals within a team were disbursed across locations thus participating via audio interviews, there were limitations in studying the actions and reactions while providing responses to research questions, but the researcher met each participant before pre-candidacy forms were completed to get a sense of personality traits and expressions. Remote participation may have limited non-verbal observations during the collection of data but this was balanced by having each participant describe their thoughts and provide descriptive feelings during data collection. To address this concern, the researcher requested both audio and video participation from all research participants,

but most participants were concerned with anonymity and thus all interviews were completed via audio/voice recording only.

Definition of Key Terms

Although definitions of the terms used within this document are included in the actual written content, Table 2 provides a list of terms, acronyms (as applicable), and definitions listed in alphabetical order. The table also indicates the appropriate sources for each of the definitions.

Table 2

Terms and Definitions

Term	Theorist/Author	Definition
Customer Support Staff (CSS)	Hersh, 2010	Workers in this role support the technology deployed in clinical and public health settings. HIT technical/software support staff maintains systems in clinical and public health settings, including patching and upgrading software. They provide one-on-one support in a traditional "help desk" model to individual users with questions or problems. (p. 3, p. 6)
Epoché	Moustakas, 1994	A preparation for deriving new knowledge and an experience in itself; a process of setting aside predilections, prejudices, predispositions, and allowing things, events, and people to enter anew into consciousness, and to look and see them again, as if for the first time.
Grief Construct	Kübler-Ross, 1969	A normative way, or means, of mourning/transitioning. (p. 59). The feelings associated with the *transition* process.
Health Information Technology (HIT)	Brailer, & Thompson, 2004	The application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision making; a sub-grouping of IT. (p.

Term	Theorist/Author	Definition
		46)
Information Technology	Leavitt and Whisler, 1958 Oxford University, 2015	The study, design, development, implementation, support, and management of computer-based knowledge. (p. 34) The application of computers to store, retrieve, transmit and manipulate data, often in the context of a business or other enterprise. (p. 175)
Organizational Change	Bennis, 1966 Burke, 2002	Company or organization going through a transformation. Organizational change occurs when business strategies or major sections of an organization are altered. (p. 23) Also known as reorganization, restructuring and turnaround. (pp. 1, 20-22)
Planned Change	Lippitt, Watson, & Westley, 1958	Initiatives driven from the top down. (p. 2)
Strategic Human Resource Development	Bratton, 2007	The process of linking the human resource function with the strategic objectives of the organization in order to improve performance. (p. 39)
Thick, rich description	Merriam, 2009	The collection of sufficient, detailed descriptions of data in context; reported in sufficient detail and precision to allow judgments about transferability to be made by the reader. (p. 43)
Transition	Bridges, 2010	Transition is psychological. It is a three-phased process that people go through as they internalize and come to terms with the details of the new situation that a change brings about. (p. 4)
Triangulation	Merriam, 2009 Yin, 2009	Utilizing data from different sources. Four types (Denzin, 1978): across data sources, theories, methods, and among different investigators. (p. 215)
Trustworthiness	Merriam, 2009	The reliability and validity of qualitative research considered from the epistemological

Term	Theorist/Author	Definition
		foundation of the research and the epistemologically biased arguments of the evaluation. (pp. 209-214)

Chapter 2: Literature Review

Overview

In this review of the literature, the researcher synthesized research from the existing body of work that explored the constructs associated with change and transition processes as they impacted individuals and groups. The aim was to show how the research supports or challenges the phenomena of change and transition relative to the experiences of information technology staff in the Metro DC area, as observed through the theoretical lens of the Kübler-Ross grief construct. As such, the researcher discussed theories and studies relevant to the primary constructs that formed the foundation of this study: information technology as work sector; and the Kübler-Ross grief construct, an individual feeling-based transition process. Additionally, the researcher explored sub-constructs referenced in the literature on information technology and the grief construct in order to gain a wider, yet applicable, perspective of these primary constructs. In implementing the review process, the researcher utilized several search engines to explore and retain data, including The Business Source Premier database, ABI/Inform Complete Plus, Dissertations and Theses Online, and ERIC (EBSCO). Key search terms included change, transition, and information technology.

This study explored processes of psychological transition as experienced by individuals within selected IT teams (study participants) that initiate and support change in the technology-driven work setting. To this end, theorists whose work is concentrated in the change and transition experience were purposefully explored, including Piderit (2000), who espoused ambivalence, resistance, and acceptance in response to "change;" and Lewis (2000), who began investigations of paradox in response to "change." Moreover, both Piderit (2000) and Lewis (2000) explored the impact of change in the

context of the organization, focusing their studies on the effects of the response to change on the organization as a whole. In turn, the researcher also reviewed the work of Kearney and Hyle (2003), who explored the phases of transition as experienced by individuals and teams during an organizational change. In their case, Kearney and Hyle explored the ways people move through the psychological stages of loss associated with change, emphasizing phases of transition based on Kübler-Ross's grief construct. Thus, they explored change and transition from the perspective of the human experience, not the change event itself. In other words, the change event was the context, and the human experience of change was manifested in the individual transition process associated with the event. It is within this contextualization that the Kübler-Ross grief construct most closely maps to the exploration of IT teams' change and transition experiences; that is, the grief construct supports the individual human, psychological basis of transition that involves moving from one state/stage to another. For example, when IT team members experience a modification of roles and responsibilities due to a change in infrastructure/technology, they go through stages of transition while still maintaining responsibility for supporting customers during this period of time. An understanding of the transition process that is experienced during change as it directly impacts technical staff that are responsible for promoting and implementing change for other staff and consumers of new technologies; and insight into how the transition process affects the success and timing of the change event is what this study hoped to accomplish.

Purpose

The purpose of this literature review was to build a scholarly, theoretical framework from which to conduct a study of individuals within IT teams and their

experiences with change and psychological transition in the workplace. In line with the researcher's assertion that a problematic gap exists in technology-based research involving IT workers —a gap that also implicates a lack of significance attached to the workplace demands and psychological challenges/transitions faced by IT workers during change events—this literature review is intended to illustrate where and how technology and change studies come together, or not, relative to the organization, the IT team, and the individual members of the team. Therefore, to guide this study's purpose, the researcher explored and interrogated relevant scholarly journals and other texts associated with the following constructs: Information Technology (IT), Change, Transition, and the Kübler-Ross Grief Construct. On this basis, the literature review provided the needed theoretical background upon which to undertake a study of the experiences of a specific, understudied group, IT teams – and specifically members of IT teams. The researcher examined selected IT teams (members) to observe and develop an understanding of how their experiences of transition—due to major change efforts involving technology, roles, and responsibilities—were reflected in the phases of grief as presented in the Kübler-Ross grief construct (denial and isolation, anger, bargaining, depression, and acceptance).

Methods: Conducting the Literature Review

Definitions of Constructs and Identification of Search Terms

The following definitions are intended to provide appropriate clarification and understanding regarding the theoretical and conceptual constructs essential to this literature review and to the study as a whole.

- Information technology is defined as “the study, design, development, implementation, support and management of computer-based knowledge” (Oxford University, 2015, p. 169).
- Transition is “the inner process through which people come to terms with a change, as they let go of the way things used to be and reorient themselves to the way that things are now”, (Bridges, 2001, p. 1, para 2).
- Organizational change is defined as a difference in form, quality, or state over time in an organizational entity (Van de Ven & Poole, 1995, p. 512).
- The Kübler-Ross grief construct (Kearney & Hyle, 2003) is defined as a means of mourning a loss or “transitioning”, progressing through the five stages of grief: denial and isolation, anger, bargaining, depression and acceptance.

To facilitate the review process, the researcher used specific search terms to gather information on the proposed topic of IT workers’ experiences with change and transition. Primary search terms included change, transition, employee involvement, and information technology. These terms were selected to ensure that queries would produce results that directly address key aspects/issues pertaining to the study problem and to also include background information relevant to a study framed in the technology realm. Queries were conducted in several search engines, based on the primary search terms and the discipline studied.

Search Tools

The actual search for appropriate and vital resources involved the use of several databases to gather relevant information. The following databases were used: (a) The Business Source Premier database, (b) ABI/Inform Complete Plus, and (c) ERIC

(EBSCO). In all, data and theoretical information from research covering the last 10 to 15 years, plus key literature from earlier years, comprise the body of work upon which this literature review is based. In addition, the researcher explored previously written dissertations from reputable universities to ensure that studies such as this one have not taken place previously, as well as to access any references that might be relevant and useful to this review and to the study itself.

Critique of Scholarly Literature

The grief construct, as originally introduced by Kübler-Ross (1969), served as the main framework and theoretical lens of investigation throughout the course of the study; to be more thoroughly addressed the following content is organized according to topical/thematic content. The intention behind this method of organization is to lay the contextual groundwork for addressing the problem of IT workers' experiences of change and transition in the workplace. The first topical/thematic area under review focuses on studies concerned with information technology—including health information technology—to be followed by a review of change studies, the Kübler-Ross grief construct, and concluding with studies surrounding transition studies.

Information Technology and Health Information Technology

Health information technology (HIT) is a subset of information technology (IT). The focus of health information technology is the support of health systems and the associated data prescribed by the system (Brailer & Thompson, 2004), whereas information technology focuses on the systems themselves (Oxford University, 2015). The reason for including health information technology in this study was because there is pertinent information on change and systems due to health care reform (HCR). Health

care reform and the impact of implementing new infrastructure in support of a major change is a part of the research study as the staff that support the change to infrastructure and those consuming the new system are the same, IT teams.

In this section, the earlier work of Argarwal and Prasad (1999) and Yeuk-Mui (2001) was reviewed to formulate an understanding of previous research as it serves to highlight the associated gaps in research relative to contemporary IT teams and their challenges with change and transition. Next, studies associated with Gebhauer, Klempl, and Fleisch (2008) were reviewed to provide more recent information on IT support services, but not addressing the support staff specifically. Their work provides some context to the original statement by Yeuk-Mui (2001) that the service to the end-user or customer has been explored more than the experiences of those individuals and teams providing the service. And finally, HIT-relevant studies advanced by Buntin, Jain, and Blumenthall (2010), Doebbeling and Pekny (2000), Kibbe and McLaughlin (2008), Ratogi, Daim, and Tan (2008), and Sequest et al. (2008) were discussed to show how the concept or construct of transition is understood in terms of its effects on systems, but not in terms of the psychological aspects of transition experienced by people involved in different HIT systems.

Argarwal and Prasad (1999) stated, "In order to better understand and manage the process of new technology adoption, several theoretical models have been proposed, of which the technology acceptance model (TAM) has gained considerable support" (p. 363). The purpose of this model is to predict the acceptability of a tool and to identify the modifications that must be made to the system in order to make it acceptable to users. A

system is defined as a product, solution, or infrastructure offered for use by internal or external customers. Figure 3 shows the basic TAM model structure.

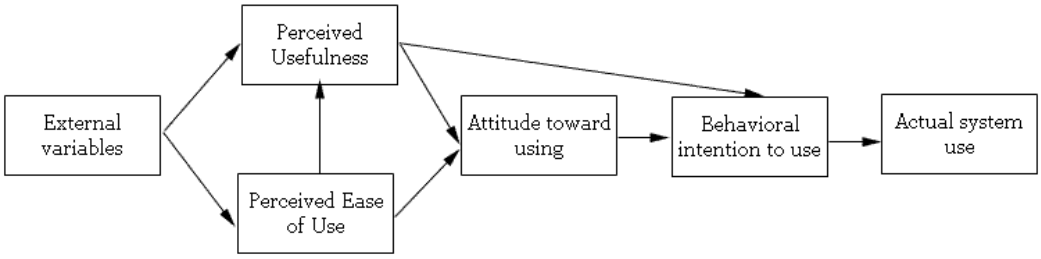

Figure 3. Technology Acceptance Model (TAM)

Reprinted from "Are individual differences germane to the acceptance of new information technologies?" by R. Agarwal and J. Prasad, 1999. *Decision Sciences*, *30*(2), p. 368. Copyright 1999 by Decision Sciences Journal.

The TAM does not account for variables of individual differences such as personality, demographics, and situational variables for IT teams or customers. Argarwal and Prasad (1999) posited that individual beliefs and perceptions intervene for the missing variables. Using the TAM, the researchers set out to determine and test such variables as (a) ease of use, (b) level of tenure, (c) education level, (d) extent of prior experience, and (e) participation in training as possible responses to the use of new and existing technology. According to Argarwal and Prasad (1999):

> The objective is to clarify this process by proposing a theoretical model wherein the relationship between individual differences and IT acceptance is hypothesized to be mediated by the constructs of the technology acceptance model. (p. 361)

In line with this thinking, the researchers conducted a quantitative study of 230 users of IT innovation. To empirically test the research hypothesis associated with TAM, the researchers employed a field survey. They also reviewed and analyzed the data from

the TAM to differentiate individual variables that represent the realm of individual differences from the acceptance of information technology and beliefs regarding whether the new technology was a good fit for the individual consumer and for the current (work) environment. The research results indicated that information technology and the use of new forms of technology or innovation tend to have a positive or negative outcome depending on the ease of use, which emerged as the main variable. The researchers suggested that further areas of research would encompass the addition of individual variables in conjunction with the realm of information technology, specifically looking at how these variables play into technology innovation and acceptance. The results of the Argarwal and Prasad (1999) studies helped to bridge the implicated gap between systems transition processes (the more conventional research approach at the time) and human transition processes by looking at individual transition experiences during technology change events. In this way, they trained an intentional focus on the roles and responsibilities of people—and their levels of acceptance of change— in order to provide information on how best to successfully implement and maintain technological changes within an organization.

Also interested in exploring the technology sector from a more humanistic vantage point, Yeuk-Mui (2001) stated, "While the literature abounds with studies about information technology (IT) and its effects on manufacturing work organization, frontline service work is relatively under-researched" (p. 177). Conducting a quantitative research study, Yeuk-Mui (2001) investigated the use of information technology, work organization, and work attitudes of employees. He also analyzed the effects of the automated, informational, and networking capacities of information technology on work

skills and knowledge; analyzed the monitoring of work processes; and evaluated employee participation in the study. The results of the study indicated that effective technology management, reliable co-workers in other departments, and supportive immediate supervisors were important factors that contributed to employee job satisfaction, stress reduction, and work capability. Yeuk-Mui (2001) stated, "Management policies together with the structural position of frontline service employees in the corporation shape the way IT affects work organization and employee work attitudes" (p. 203). Yeuk-Mui's (2001) findings provide some context to this researcher's study of IT teams and their change/transition experiences because his study focused on front-line service workers, defined as those individuals who provide help desk support to customers; hence, a staff-oriented focus. However, that study looked at the impact of employee satisfaction and work capability on the manufacturing organization and the consumers of a product, as opposed to focusing on the roles and challenges specific to help desk staff, the latter being a more direct correlate to IT teams involved in the proposed study. In other words, help desk staff and IT teams are both creators and consumers of a technological change and, consequently, significantly more vulnerable to the psychological transition experiences associated with such change. Therefore, gaps remain between the results of Yeuk-Mui's (2001) research problem focus and the problem that this study aimed to address.

Gebauer, Klempl, and Fleisch (2008) discussed the extension of "service business" (p. 59), a concept that encompasses traditional customer support and (manufactured) product-related services through utilizing new innovations to support customers. The researchers believed that "cognitive biases limit the motivation of

managers to facilitate creative potential for new customer support services" (Gebauer et al., 2008, p. 60). The researchers explored twelve mini-cases and eight in-depth cases, using four cognitive biases for comparison during data analysis: (a) disbelief in the financial potential of an innovation, (b) risk aversion, (c) tendency to set over-ambitious objectives, (d) and fundamental attribution error. According to Gebauer et al. (2008), "The results suggest that disbelief in the financial potential, risk aversion, tendency to set over-ambitious objectives, and fundamental attribution error play a critical role in creating customer support services" (p. 65). In evaluating the relevance of this work to the proposed study, gaps between respective study purposes and focus persist. The situations of staff within the organization was not the objective of the 2008 study. Rather, the question of a management approach from which to extend customer services to accommodate growth within the product line was the main focus for Gebauer et al. Furthermore, the influence of change events and the associated transition experiences on staff members were not addressed. The study suggested in this research explored that gap.

In their article, "Health Information Technology: Laying the Infrastructure for National Health Reform," Buntin, Jain, and Blumenthall (2010) addressed the establishment of the Health Information Technology for Economic and Clinical Health (HITECH) Act (2009) under the Patient Protection and Affordable Care Act (PPACA) (2010). This act created a foundation for restructuring health care delivery and achieving several goals: (a) improving health care quality, (b) reducing costs, (c) increasing access, and (d) sharing information. In addition, the authors discussed initiatives intended to meet the directives under the HITECH Act (Buntin et al., 2010, p. 1214). Along with current

practices and plans for new initiatives, research will continue to dictate what is required to address meaningful use and standards, fund regional centers, and support clinical registries and ongoing studies related to health information technology. As envisioned, the HIT system will allow those consuming the information to store, analyze, and act on the data generated through the systems. According to the article, the consistent use of electronic records can contribute greatly to the successful outcome of the initiatives. In order to comply with meaningful use objectives, a firm or agency must:

> Improve the quality, safety, and efficiency of care while reducing disparities in access and health; engaging patients and families in their own care; promoting (population and public) health; improving care coordination; and promoting the privacy and security of electronic healthcare records (EHR)). (Buntin et al., 2008, p. 1215)

In addition, the authors stated that in order to meet meaningful use objectives, HIT must be expanded beyond its current capabilities. Expansion will require modifications to systems and the associated staff support; thus, affecting those technology workers who support systems and other staff members within the organization. Buntin et al. (2008) proposed a staged, multi-year approach to address each of the attributes (quality, safety, efficiency of care) necessary to support the expansion and efficient use of health care systems. According to their proposed recommendations, regional extension and research centers would be established, suggesting an increase in efficiency that would decrease costs over time. Finally, Buntin et al. (2008) presented two ways in which health information technology is important to health care reform: (a) public health and disease prevention support and (b) workforce and provider education support. In this article, the authors did not discuss the people associated with improving the delivery of health care through HIT, although they did address the advancement of

systems and the consistent use of technologies and solutions, such as EHR, to promote and support PPACA. This article shows that there is a gap in including those who utilize and support the use of new technologies within HIT, and thus IT, when defining, planning and implementing new technologies; although those that are excluded are responsible for systems implementation, support of the new systems, support of consumers of the new system and personally processing the change – the experience of transition that this research studied.

In earlier research, Doebbeling and Pekny (2000) discussed the role of HIT in medical practices, including the impact of the new system on operations and how implementation might be successfully sustained. They also addressed the associated costs and time involved in bringing a system up, including training employees to use the new systems. Acknowledging both HIT challenges and possibilities for success, Doebbeling and Pekny (2000) argued:

> An underlying theme . . . is that HIT must be an integral part of the health care system and that being aware of the "system," its properties, its time-varying characteristics, its complexity, and the surroundings in which the system exists strongly influences the success of Health Information Technology. Successful adoption of health IT requires an understanding of how clinical tasks and workflows will be affected; yet this has not been well described. That is, the probability of a successful HIT implementation is greatly increased by a well-characterized, deliberately designed host set of health care processes. Furthermore, expectations of HIT within a health care process must be realistic with respect to benefits and costs. (p. 500)

The Doebbeling and Pekny (2000) study implicated the existence of gaps in how systems and staff are supported during change events, including how staff acclimates to change by way of their personal transition processes. The study did not directly address the people involved (in this case, medical professionals), but it did speak to the systems/framework necessary in support of successful IT functions in the health care

sector, also pointing to the necessity of implementing modifications (changes, updates, replacements) to system processes over time. In this work, however, IT workers and their issues with modifications or change and subsequent psychological transitions was not a part of the focus. Essentially, the Doebbeling and Pekny (2000) study was concerned with the potential, overall (positive) impact on practice when HIT is brought online in an analytical and thoughtful way.

Expanding upon the work of Doebbeling and Peckny (2000), the researcher suggests that the matter of IT modifications implicates the inevitability of change events and, with them, the need to address the abilities (intellectual, physical, and psychological) of IT staff to effect and support change in effective and healthy ways. Therefore, the purpose of this research study was to investigate and understand the experience of transition for IT teams who support technological change. As a particularly significant example of initiatives that reinforce technology's influence in the workplace, health care reform has affected those directly involved with implementation and support of health information technology, as well as the systems, people, and processes that integrate with them.

Kibbe and McLaughlin (2008) discussed the advancement of HIT to enable the transformation (the movement from one means of use of health information technology to a new paradigm) of health care. The authors do not believe that transformation is sufficient to support reform; in order to support health care reform, the technology and infrastructure systems and modes of operation must be transformed from the current "as is" state to a future "to be" state. They pointed to initiatives regarding adoption, governance, interoperability, privacy, and security intended to support the belief that

transformation, along with many other initiatives and modifications to processes and policy, must accommodate the advancement of health information technology systems. They also maintained that electronic health records and other HIT advancements have not resolved existing issues with quality health care delivery; yet, these records have helped to decrease the number of deaths associated with poor quality data and/or lack of data and information necessary to support beneficiaries of health care.

Kibbe and McLaughlin (2008) also addressed an executive order, the Strategic Framework (2004), that created the position of National HIT Coordinator and "envisioned better clinical decision making at point of care, improved health care quality, lower health care costs, improved coordination of care, and protection of patients' individually identifiable health care records" (p. 392). Both the Strategic Framework (2004, 2012 and 2015) and the Federal HIT Strategic Plan (2008, 2012 and2015) include initiatives to improve the nationwide, secure, interoperable HIT infrastructure necessary for continued health care transformation. Initially, the Strategic Framework was established to energize and accelerate development of HIT, while the Federal HIT Strategic Plan "sets forth the goals and objectives necessary for further HIT progress" (Kibbe & McLaughlin, 2008, p. 394), aimed at improving HIT in order to support transformation. While the authors argued that technology often develops more quickly than policy changes, they noted that progress in health information technology has been slow based on studies dating back to 2004. On this point, they focused their discussion on establishing a more continuous and consistent use of EHRs to help in the continuous transformation of HIT.

To conclude their contribution to the technology literature and to this literature review in particular, Kibbe and McLaughlin (2008) did not discuss the impact of change and technology development on staff members responsible for supporting the systems involved in change events. Instead, they focally argued for the advancement of transformation to support the infrastructure of HIT systems. Nonetheless, the researcher maintains that changes to infrastructure are implemented by IT teams who support the organization and consumers of the change, while simultaneously living through the challenges of change and the associated transition process. As such, their situations need to be studied and addressed—theoretically and practically—in order to better position IT staff to handle change and experience healthy transition processes. Once again, the research study responds to the authors' call for "continuous transformation" (Kibbe & McLaughlin, 2008, p. 94) by exploring the experience of transition for IT teams, the members of which implement and support technology changes as both professionals and human individuals.

In the article, "Charting Health Information Technology Futures for Healthcare Services Organizations," Ratogi, Daim, and Tan (2008) discussed the progression of health information technology by reviewing the literature that addresses the emergence of different technologies over the course of slightly less than a 10-year period, from 1999 through 2008. Table 3 presents an overview of the area of study, titles of articles/studies, years of publication, and authors for the relevant articles within the past 10 years (2006-2007) as compiled by Ratogi et al. (2008).

Table 3

Selective Literature on Health Information Technologies

Area	Title	Year	Author
Emerging Health IT Applications	The impact of converting to an electronic health record on organizational culture and quality improvement	2007	Nowinski et al.
	User interpretations of future information system use: A snapshot with technological frames	2007	Karsten and Laine
	Expanding multi-disciplinary approaches to healthcare information technologies: What does information systems offer medical informatics	2007	Chiasson, Reddy, Kaplan, and Davidson

Note. Table 2 was adapted from the article, "Charting Health Information Technology Futures for Healthcare Services Organizations" (Rastogi, Daim, & Tan, 2008, p. 3).

The studies and articles discussed by Rastogi et al. (2008) represented the advancement of health information technology—purposed to support medical professionals—during the time period specified. The authors stated that, based on this research (keeping in mind the timeframes of these studies), five technologies were anticipated to have a future in the healthcare industry: (a) radio frequency identification (RFID), (b) semantic web, (c) wearable devices, (d) e-health, and (f) artificial intelligence (AI). The efficiencies associated with the introduction of standards of service, e-health,

and EHRs through the use of technology forecasting techniques added to the services offered by medical offices and facilities and, thus, have been credited with advancements provided by HIT.

Further, Rastogi et al. (2008) discussed health databases, data warehouses, and intelligent systems aided by automated devices as methods to extend and support HIT for medical professionals in practice, specifically physicians, relative to a case study they conducted in 2008. Providence Health and Services (PHS), a leading health care provider in the Pacific Northwest, was the study site. Per Rastogi, et al.:

> PHS, with information systems centered in Seattle, is a non-profit health provider organization with presence in Oregon, Alaska, California, Washington and Montana. PHS includes 28 hospitals, more than 35 non-acute facilities, physician clinics, a health plan and education facilities. (Rastogi et al., 2008, p. 5)

Formal and informal interviews were conducted with key staff to gather data for this case study, and experts in the industry were contacted to verify the results of the interviews. Further, technology forecasting tools that perform patent and scenario analysis to predict emerging technologies were used during the interview and analysis phases of the study. To clarify, technology forecasting is aimed at predicting future technological capabilities, attributes, and parameters. In turn, patent analysis is used to trend emerging technologies, and scenario analysis is appropriate for studying technologies that suggest an "evolving concept."

Rastogi et al. (2008) concluded, "There is evidence to show that many system implementations across all industry sectors ended in failures . . . in particular a factor that may cause implementation factors is a lack of an 'across the organization' top-down leadership philosophy" (pp. 3-4). They argued that the benefits of new capabilities of HIT allow the transformation of health care in support of a "prevention-oriented, consumer-

driven model of healthcare" (Ratogi et al., 2008, p. 19), including the creation of easy to use, optimized user interfaces that have proven to make HIT more efficient and effective while also decreasing errors associated with prognosis. The authors stated that successful implementation is an area in need of further research in order to ensure success of technological change efforts across the industry. Similar to the literature reviewed thus far, this researcher seeks to connect the call for ongoing advancements in healthcare technology to the inevitable changes and modifications that are inherent to improvement. Again, this research study looked at the staff that is responsible for implementation and support of change. Moreover, the researcher posits that the experiences of those responsible for change directly influenced the success or failure of the change. Thus, efforts to deepen an understanding of their experiences of transition helped organizations and administrators plan for more successful implementation and sustainment approaches.

Sequist, Cook, Haas, Horner, and Tierney (2008), who broadly explored the use of health information technology—including its best implementation and how it might be sustained—stated, "One of the primary challenges to the effective use of health IT remains its adoption (by doctors, nurses, technicians, insurers, etc.) and successful implementation by HIT staff in support of professional staff" (p. 355). Their primary purpose, as expressed in this article, was to demonstrate that the progress of health information technology implementation has been slow, but that the current use of electronic health records (EHR) provides good examples of meaningful advancement in the health care field. According to the authors, using the implementation of EHR as a model could be an effective strategy with which to move the overall HIT effort forward. The question under consideration here is what makes HIT implementations succeed or

fail? Because IT teams implement and support the systems, they are crucial to the success of improvement measures. As such, this researcher continues to argue that the dynamics involving the capacities of IT team members to navigate change and transition need to be included in contemporary technology research. The research study delved into the experience of IT teams as they worked through personal transition stages related to technology changes in the workplace, while continuing to provide support to consumers who also navigated these changes. This study provided a rationale for why some HIT implementations succeed while others fail.

Health Care Reform

Health care reform (HCR) existed prior to 2010 in the form of state-based projects and programs, but initiatives directly related to HCR became formally recognized in 2010. Health care reform is defined as "a general rubric used for discussing major health policy creation or changes – for the most part, governmental policy that affects health care reform in a given place" (Gruber, 2011, p. 112). Jonathon Gruber (2011), a professor of economics at the Massachusetts Institute of Technology (MIT) who has also been involved in shaping health care law (Gruber, 2011, p. 151), authored *Health Care Reform: What It Is, Why It's Necessary, How It Works*, a book formatted as a graphic novel in which he defined and explained the attributes associated with the mission and direction of the Health Care Reform program in a simplistic, easy to follow manner.

In his book, Gruber (2011) covered the following key features of HCR. First, the Patient Protection and Affordable Care Act (PPACA) (2010), also known as the ACA, reformed the way people acquire insurance. As such, it requires that people buy insurance if they are financially able, although there is financial assistance for those who cannot

afford it. The ACA utilizes five components to accomplish its insurance coverage goals: (a) the so-called "Cadillac tax," (b) exchanges, (c) the Independent Payment Advisory Board (IPAB), (d) comparative effectiveness research (CER), and (e) fee reform. These components or constructs are associated with managing the new direction in health care and the associated economic factors of health care spending. The Cadillac tax discourages employers and their workers from over-expanding policies with tax free money (Gruber, 2011, p. 104), thus causing an increase in health care taxes for all. The tax was designed to slow the rising cost of health care and put pressure on employers to restructure employee health plans by increasing cost sharing on the part of employees and imposing a 40% tax on employers. In turn, a health insurance exchange (also known as HIX)— a set of state-regulated and standardized health plans from which individuals may purchase subsidized health insurance—was put into place. As an advisory board, IPAB is represented by an independent, non-partisan group of doctors and health care experts appointed by the president and confirmed by the senate, each member to serve a five-year term. IPAB is situated to make recommendations on how to improve the quality of medical care and lower costs by making the program more efficient. The CER component compares expensive treatments to cheaper alternatives and determines whether or not more expensive treatments work better. Fee reform signifies a coordination of care guidelines—across providers—under which physicians are not incentivized to provide additional, unnecessary, or expensive care to pad billing. To this end, Accountable Care Organizations (ACOs) have formed as coordinated groups that provide care for one consistent amount. The ACA requires changes in the management of health care and the associated insurers. Changes to technology systems, processes, and policy are required as

part of the ACA. This has a direct effect on the individual insured, the insurers, physicians and medical providers, as well as those responsible for implementing the infrastructure and systems (hardware, software, licensing, and compliance) that support all forms of health care.

Initial implementation of the new electronic health care system was unsuccessful according to Scheuer and Smetters (2014). Consumers could not access the system and enroll in health care programs. The reason for the failure was attributed to lack of planning and testing. Scheur and Smetters suggested that those responsible for supporting the systems were not ready. Information technology staff implemented and supported the new system, but planning did not include the HIT staff. Planning included only the actual infrastructure: the new system, including the machines (servers and databases), and (web) access points as described in the HITECH Act (2009). Clearly, the initial problems that characterized new electronic health care systems implementation stand as important reference points from which to assert the need for studies aimed at the roles and responsibilities of IT staff during change events in all the various sectors of technology. This research study looked at the change and transition experiences of IT teams who implement and support technology changes and, by extension, how working through psychological transition experiences implicates their professional and personal capacities to perform their work effectively. As such, the researcher isolated this study's focus to IT staff and their challenges with change, thereby not emphasizing specific effects relative to the change event itself.

Prior Change Studies

The experiences of medical professionals, specifically nursing staff, have been studied to understand the mental processing that occurs to incorporate change into professional life (Chaudhry et al., 2006). Studies confirm the recognition that IT modifications to support HCR and the ACA must make accommodations for new means of doing business for medical professionals and facilities; further, that examinations of what such modifications and accommodations mean to the institution and to the individual are needed. But, most studies do not speak of the new means of doing business in the context of supporting those who ensure that systems are working as required while keeping the end user in mind; namely, IT teams.

Previous studies on medical professionals undergoing change (due to regulatory reform; not related to technology innovation specifically) have investigated or presented results that show that the mental exploration occurring during any modification happens internally; moreover, that this mental exploration has an outward response which can be observed at an emotional level (e.g., denial, anger, etc.) (Clapper, 1991; Humphrey, 1997; Jeffreys, 1995; Kearney, 1999; Kearney & Hyle, 2003, 2004; Massey, 1991, 1992; Perlman & Takacs, 1990; Schoolfield & Orduna, 1994; Triolo, Allgier, & Schwartz, 1995). Schoolfield and Orduna (1994) reviewed literature on the psychological effects of change and discussed the impact of an overarching organizational change on the staff nurses of a large oncology unit in the Midwest. Nursing staff reactions were compared with a grief-change framework synthesized from the literature. Both Lewin's (1947) outline of the change process (freeze, change, unfreeze) and Perlman's and Takacs's (1990) expanded version of Kübler-Ross's stages of grief were utilized by Schoolfield

and Orduna (1994) to describe responses to change based on individual exposure. This framework was useful in explaining staff nurse behaviors and attitudes, and it offered interventions specific to each stage of the change process useful to the clinical nurse specialist (CNS).

Furthermore, studies reviewed by Schoolfield and Orduna (1994) indicated that when medical professionals undergoing change were included in structuring the change event and were provided with time to acclimate, modifications were accepted and sustained over time—although the phases of grief were still experienced. In contrast, their investigations of other studies on change involving medical professionals showed that medical professionals who had change thrust upon them, and who were not given time or training to acclimate to new methods of practice or performing duties and responsibilities, suffered through stages of loss. As a result, they were less willing to be change agents or help to support and sustain the change. In effect, unless the change was forced and provided no recourse other than individual compliance, negative responses (such as resistance or ambivalence) slowed the change effort and could have contributed to additional training costs to the institution, including regulatory fines for not meeting institutional compliance in a timely fashion or by an acceptable date (Chaudry et al., 2006). These studies did not show that employee retention was an issue for medical professionals, but issues of employee satisfaction and performance could be inferred from the data.

To further understand the possible responses to loss or change in the workplace, it was important to review other studies on this topic to see if there were any similarities in reactions. To that end, the researcher examined an in-depth, interview-based

Heideggerian phenomenological study conducted by Vickers and Parris (2007). Note that Heideggerian phenomenology emphasizes lived experience and the meaning that the experience holds for the individual. In this case, the study was comprised of 10 individuals who had been made redundant (i.e., job was made obsoleted because of duplicated responsibilities) one or more times. The study looked at the experiences of redundant staff after layoffs, some of whom played the role of separation manager (i.e., the manager terminating the staff from the position or company). Findings indicated that "workers are expected to be pliable and tractable; to 'fit in'" (Chaudry et al., 2006, p. 113). Further, participants' responses revealed that they experienced feelings of alienation in the form of powerlessness, social isolation, shock, betrayal, humiliation, and shame in the midst of professional loss. Participants also spoke of a lack of comprehension concerning how "this could be happening" and a feeling of being numb, not knowing what to do next. Some study participants shared that they were whisked away immediately after being made redundant and were not given time to say goodbye or clean out desks; some were made to pack up with a security escort. Overall, the study results indicated that approximately 60% of the individuals involved did not bounce back, demonstrating a lack of resiliency. In addition and in relation to their study, Vickers and Parris (2007) referred to previous studies that concentrated on those left behind after layoffs, noting observations of staff suffering from survivor syndrome and the associated feelings of guilt, grief, and anxiety when left behind. In general, researchers recommended that organizations consider the long-term effects of layoffs and redundancy on individuals. Researchers also recommended that additional studies be done to explore multiple redundancies and assumptions of resilience in workplaces, the idea being that

research on assumptions of resiliency might be useful to policy makers, employer groups, unions, and human resource professionals.

Employee Involvement

Another important study was conducted by Litwin (2010) on employee involvement (EI) with technological change, or IT, in the HIT sector (Kaiser Permanente Northwest Region's patient scheduling module). Litwin (2010) stated:

> New technologies offer an important avenue by which EI can improve firm performance. Litwin also contends that those studies that do consider EI in the context of technological change may be focusing exclusively on workplace-level features of the employment relationship, ignoring variation in functional—and strategic—level aspects of employment relations. (p. 866)

Litwin (2010) discussed the association between aspects of workplace technological change and business performance. There may be a good return on investment (ROI) for new technologies, but there is an associated cost for that ROI. Cost may be associated with people, schedules/time, and effective implementation practices. He developed a study through which he aimed to explore how company performance could increase with EI if technological change is handled properly. The study site was Kaiser Permanente Northwest Region in the Portland/Vancouver metropolitan area, as well as the communities of Longview and Kelso, Washington, and Salem, Oregon where the patient scheduling module served as the study context. The study was a quantitative, employee survey-based study that ran from October 2004 through August 2007, across 16 clinics. Based on his findings, Litwin (2010) concluded, "This study offers convincing evidence that EI in implementation moderates the performance effects of IT" (p. 883). In the following passage, Litwin (2010) addressed some of the study data:

> Overall, only 11% of respondents claimed that they were first introduced to the technology by a fellow member of the bargaining unit (as opposed to a manager

> or an IT staffer), though 18% asserted that they had, in fact, received follow-up training from a co-worker. About 40% noted the importance of "super-users"—fellow members of the bargaining unit pulled from their regular, frontline positions to assist in the development and deployment of the system—to their successful use of the scheduling module. (pp. 879-880)

Theoretically, employee involvement may be viewed as a component of the experiences associated with an organization's staff members. Through studying staff, a pattern might be found linking the individual's experience of change and transition with her/his level of participation in the process. Therefore, in this literature review, the researcher chose to address employee involvement linked to the ROI and effectiveness of an organization, as posited by Litwin (2010), because EI could emerge as an element of significance to the proposed study. Furthermore, the Litwin study is relevant because it reinforces the idea that possibilities for successful implementation of technological change are increased by understanding the experiences of IT staff who implement and support change efforts. This research studied the experiences of change and transition through the eyes of the IT teams who are responsible for implementation and support—of both the organization and the end user. Through this study, the researcher provided information on the psychological transition processes of IT team members and shed light on how change events might be better planned by the organization so as to support these human processes and work toward better ensuring a successful technological change.

Kübler-Ross Grief Construct

A grief construct is simply defined as "a normative means of grieving," (Kearney & Hyle, 2003). The term grieving is now applied to many types of loss, such as the death of a loved one, the loss of a job or income, major rejection, the end of a relationship or divorce, drug addiction, incarceration, the onset of a disease or chronic illness, an

infertility diagnosis, and even minor losses, but was originally applied specifically to the experience of death by Dr. Elisabeth Kübler-Ross at the University of Chicago medical school. Kübler-Ross began using the term "transition" to express the movement from one stage (life) to another (death) and the term has been used to describe and express the psychological process experienced as caused by a change event. The use of the term "transition" to express the psychological process aided in expanding the use of the grief construct beyond death and dying. Kübler-Ross' project evolved into a series of seminars which, along with patient interviews and previous research, became the foundation for her book. The research was done to address the lack of curriculum in medical schools on the subject of death and dying. Interviews were performed with dying patients during different phases of the dying process. The five stages of grief, as conceived by Kübler-Ross (1969), are: (a) denial and isolation, (b) anger, (c) bargaining, (d) depression, and (e) acceptance. Following are definitions of each stage:

1. Denial is defined as "refusal to accept the diagnosis or change event" (Kearney & Hyle, 2004, p. 114; Kübler-Ross, 1969, p. 52).
2. Anger is defined as "feelings of anger, rage, envy, and resentment associated with the impending death or change event" (Kearney & Hyle, 2004, p. 114; Kübler-Ross, 1969, p. 64).
3. Bargaining is defined as "attempts to trade one action for avoidance of death or loss" (Kearney & Hyle, 2004, p. 114; Kübler-Ross, 1969, p. 94).
4. Depression is defined as "the replacement of anger with a sense of loss" (Kearney & Hyle, 2004, p. 114-115).

5. Acceptance is defined as the final stage in which "anger and depression about death or loss has dissipated; an emotionless state" (Kearney & Hyle, 2004, p. 115).

The stages, or phases, as referenced in the grief construct, are not linear and may be replaced, repeated, or occur simultaneously. Repetition of different phases of grief extends the transition process which may add additional time to the change effort. This may have a profound impact on the overall timeline/schedule. Understanding how IT teams process transition, the purpose of this study, provided data regarding how change is best handled as it applies to the overall transition process experienced by those who are responsible for implementing and supporting change efforts.

Several researchers have performed studies analyzing how grief is applied in change events not related to death. Kearney and Hyle (2003), Vickers and Parris (2007), and Zell (2003) have completed studies and/or reviewed studies for a compilation of evidence regarding the actual stages of grief, how the stages of grief are applied, and the outcomes of those applications. Studies have been conducted in which researchers have intentionally applied death, dying, and rebirth processes to technology firms, education systems, and medical establishments. In such cases, when the grief construct was applied to situations separate from death and dying, the phenomenon under study was termed "transition."

Goodman and Loh (2011) studied organizational change and team effectiveness in order to better understand responses to internal, organizational change and to recommend methods for handling such responses. The study acknowledged that organizations are in a constant state of change, that change involves people, and that people within the

organization actually do the changing. The "Change Link" (Goodman & Loh, 2011, p. 244), as represented in Figure 4, represents drivers of change; further, how change moves from external sources and motivations to influence internal organizational factors, including changes to strategy, products and services, organizational culture, and team stakeholders' roles and responsibilities.

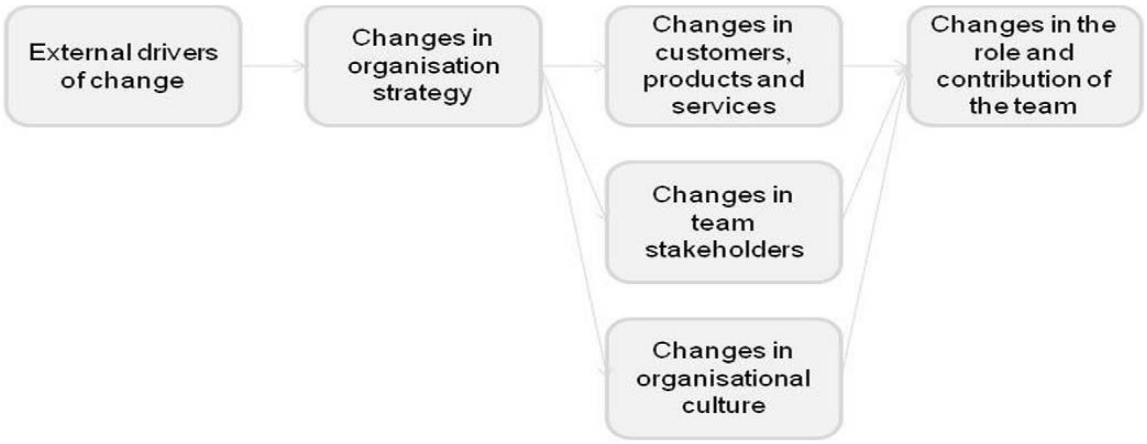

Figure 4. The Change Links.

Adapted from "Organizational Change: A Critical Challenge for Team Effectiveness." By E. Goodman and L. Loh, 2011, *Business Information Review*, *28*, p. 244. Copyright 2011 by Business Information Review.

Goodman and Loh (2011) used the Kübler-Ross Change Curve, as represented in Figure 5, as the first proposed approach to recognizing reactions to change in an organization and, then, monitored reactions so that a response could be planned by team leads and supervisory staff. Essentially, they looked at staff members' responses to change in order to provide insights that would help prepare supervisors to work with the transition process of employees when internal business processes were in flux.

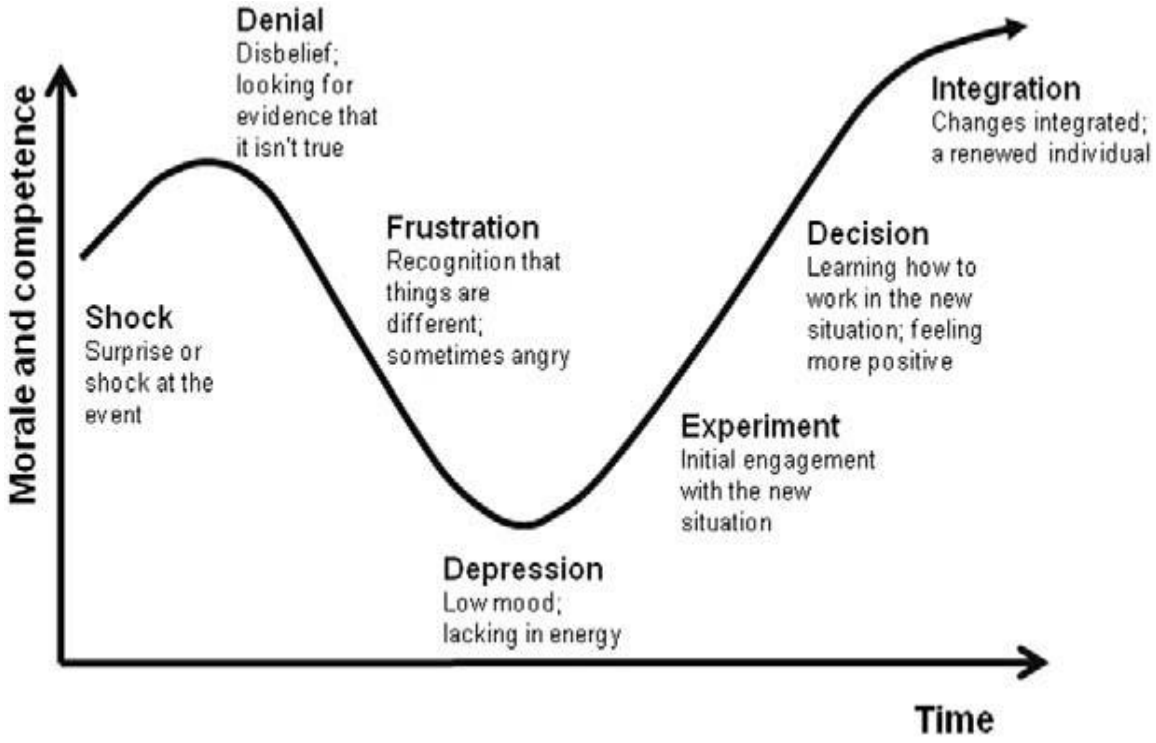

Figure 5. The Kübler-Ross Change Curve as expressed by Goodman and Loh. Reprinted from "Organizational Change: A Critical Challenge for Team Effectiveness," by E. Goodman and L. Loh, 2011, *Business Information Review*, *28*, p. 244. Copyright 2011 by Business Information Review.

Using the Kübler-Ross grief construct as a theoretical lens or means of exploration, the Goodman and Loh (2011) study continues to provide support for extending research on the experience of staff during change events, clearly in the interest of contributing to employees' successful transition experiences and to the organization's effectiveness, Thus, their work resonates with this research study's exploration of IT teams and their transition experiences during change, also theoretically grounded in the Kübler-Ross grief construct. Again, for IT teams who implement and support

technological change, it is increasingly important to acknowledge the personal effects of change and transition that they, themselves, experience.

Kearney and Hyle (2003) studied a series of management change efforts which originally came about due to Kearney's work as a corporate trainer at WorldCom, Inc., when it merged with MCI in 1999. They conducted their study at a technology training school with several campuses, day and evening classes (both short-term and long-term), and multiple means of funding. Thus, this setting provided a study context combining education and technology. The study was four-phased, comprised of: (a) a brief demographic profile, (b) two drawings representing organizational change (representing two of the four phases), and (c) unstructured interviews. Students were also given a list of feelings from which to select feelings with which they could identify. Data collection occurred over an eight-week period. The expectation of the researchers was that they would find grief-related issues evident in educational settings (similar to for-profit organizations). They perceived that, in either scenario, emotion is typically avoided when staff/stakeholders are confronted with change. Thus, grief theory would also be relevant to the educational setting because emotion is a part of the transition process. The researchers concentrated on the individual and the associated feelings/responses in comparison to the phases of grief. The outcome of the study supported the original perception that employees who had experienced organizational change, as well as those who anticipated organizational change, experienced grief. Reactions were unique to the individual and did not necessarily include all stages of grief. Regardless of whether or not the change was thought to be good, there was some reaction to change based on the grief

construct phases of grief. Barger and Kirby noted, “Grief occurs even in response to change that is perceived to be ‘good’” (in Kearney & Hyles, 2003, p. 113).

Zell (2003) completed qualitative, semi-structured, and multi interview-based research over a two-year period, looking at ways 40 individuals and groups worked through resistance to change in a professional bureaucracy; specifically, professors positioned in a large physics department at a large, public university. There were two levels of analysis: the individual and the group/department. The study returned results showing that “the change process closely resembled that of death and dying identified by Kübler-Ross in the study of terminally ill patients” (Zell, 2003, p. 73). Some participants in the study were observed to occupy two phases of the grief construct simultaneously, as posited by Kübler-Ross (1969). During the Denial stage, participants avoided talking about the department’s situation or the suggested change; during the Anger phase, participants demonstrated a tendency toward blaming society and the federal government for forgetting the contributions of physics as a science; during the Bargaining phase, professors began writing more grant proposals, hoping to put off change; and during the Depression phase, reality began to set in, and the realization that partnerships would not work and that the federal government was the only cure were established. In other words, participants indicated that without federal support, administrative personnel cuts loomed. During the Acceptance phase, professors declared that the “‘era of physics’ was over” (Zell, 2003, p. 77), and that new discoveries in the discipline were not and would not be occurring. In the type of institution studied during that time period, change was not normally mandated or enforced unless professionals (i.e., professors) chose to undergo change. Norms and skills were adjusted within the process of skills assessments and

upgrades. “As a result of their autonomy and deeply ingrained patterns of beliefs and behaviors, unless professionals agree with proposed or necessary changes in an organization’s core processes, such changes do not occur” (Mintzberg, 1983). The study returned results showing that the mourning process may occur for any modification in life, values, or beliefs (although not necessarily in the same way as the loss and mourning associated with dying and death). The study suggests that additional research is needed to understand the nature of change in other professional bureaucracies, such as hospitals, consulting firms, and law enforcement. Certainly, it reinforces the complex, human components of change across sectors and demographics–from IT teams to university professors. Overall, change and transition research could also investigate the possible relationship between stage of grief/transition and how the completion of tasks occurs, using grief work and mourning processes, to help individuals and organizations work through losses, experience rebirth, and move on with their lives. This research study looked into how IT teams experienced transition and showed the relationship of the transition process to the overall change effort.

Transition

Bridges (2004, 2010) defined transition as a psychological part of change experienced by human beings, and that change happens continuously. Like Kübler-Ross, the term “transition” is used to express a psychological process as experienced due to a change event. Bridges process is a higher level process that is used to express the overall phases of transition and provide context to the criteria established in the Kübler-Ross grief construct as the IT team provides overall context for the shared experience of individual team members that informed this research study. He proposed three phases of

transition that occur, over time and at different speeds, based on where change is initiated. Bridges (2004, 2010) described the three phases of transition as:

1. Letting go of the old ways;
2. Going through an in-between time when the old is gone, but the new isn't fully operational;
3. Coming out of the transition and making a new beginning.

Bridges (2013) observed that those who initiate the need for change acclimate to change most quickly. Those who have change handed down to them, without explanation and support, experience change and the associated phases of transition most reluctantly. Figure 6 illustrates transition over time, using Level of Management as a monitor where those who push down change (manager) experience transition quicker than those who have change pushed down to them.

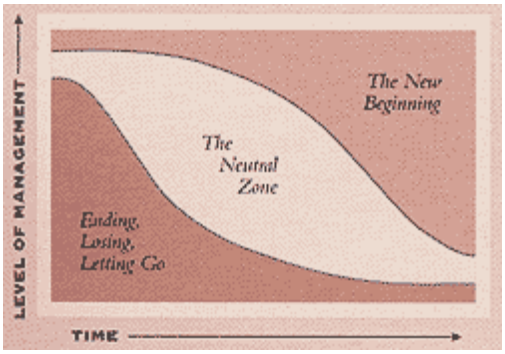

Figure 6. Transition: The Marathon Effect.
Reprinted from Moravian.org by W. Bridges, 2013. Retrieved from http://www.moravian.org/wp-content/uploads/2013/06/Bridges_Transition_Model.pdf.
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These phases of transition, as conceptualized and described by Bridges (2004, 2010, 2013), correspond to and occur in parallel with the Kübler-Ross (1969) grief

construct. The parallels between the two constructs are illustrated in Table 4 and as shown in Figure 2. Bridges describes the feelings experienced during each phase of transition and what must happen in order to move forward in the transition process. For example, while feeling denial, shock, anger and frustration during the initial phase of transition, the individual will be letting go of how they previously performed their role and responsibilities; and this occurs during the first two phases of the Kübler-Ross model, denial and isolation and anger.

Table 4

Bridges Phases of Transition Mapped to Kübler-Ross Grief Construct Stages

Bridges Transition Phases	**Kübler-Ross Construct Stages**
Ending, Losing, Letting Go (Denial, Shock, Anger, Frustration/Stress)	Denial and Isolation
Ending, Losing, Letting Go (Denial, Shock, Anger, Frustration/Stress)	Anger
The Neutral Zone/The In-Between (Ambivalence, Skepticism, Acceptance)	Bargaining
The Neutral Zone/The In-Between (Ambivalence, Skepticism, Acceptance)	Depression
The Neutral Zone/The In-Between (Ambivalence, Skepticism, Acceptance)	Acceptance
The New Beginning (Impatience, Hope, Enthusiasm)	Acceptance

Note. Taken, in part, from *Change versus Transition Model* (Bridges, 2013, p. 4)

Inferences from Study

Individuals within technology firms and groups have been studied using the Kübler-Ross grief construct as a theoretical lens, although not specific to IT teams. In general, this theoretical framing of qualitative research has shown that the construct is

relevant in many disciplines and has multiple applications, including—but not limited to—technology (Kearney, 2003; Kearney & Hyle, 2003, 2004), education (Clapper, 1991; Kearney & Hyle, 2003; Triolo, Allgier, & Schwartz, 1995), and medical facilities and agencies (Humphrey, 1997; Jeffreys, 1995; Massey, 1991, 1992; Perlman & Takacs, 1990; Schoolfield & Orduna, 1994). Thus, in this literature review, the researcher has sought to show the commonalities of human responses to change in the professional realm, across organizations. At the same time, the researcher maintains that (members of) IT teams remain an understudied group relative to change and their psychological transition experiences.

The idea that workers facing change events in their respective settings experience the same phases of transition (denial and isolation, anger, bargaining, depression, and acceptance) associated with the Kübler-Ross grief construct has been validated by multiple researchers, including those who have studied staff working in technology companies, but not IT teams. Several medical or health institution-based studies have been conducted showing the effects of modifications to practice, methods, systems, and/or the closure of medical institutions (and thus displacement or the loss of jobs) on nursing staff (Humphrey, 1997; Jeffreys, 1995; Massey, 1991, 1992; Perlman & Takacs, 1990; Schoolfield & Orduna, 1994). These studies confirmed that staff members experienced the Kübler-Ross phases of grief and also demonstrated that phases may occur out of order and/or may be duplicated.

The researcher determined that the Kübler-Ross grief construct was the best theoretical lens through which to examine the transition experiences of IT team members, using the IT team as context to the shared experiences, when confronted with change

events (e.g., changes to job, role, responsibilities, practice, process, procedure, or infrastructure). The grief construct has already been used to explore the experiences of individuals in contexts beyond its origination in death and dying (Bowlby, 1980; Kübler-Ross, 1969). These other contexts include: (a) downsizing/ right-sizing (Massey, 1991, 1992; Triolo, Allgier, & Schwartz, 1995), (b) restructuring and reorganization (Daugird & Spencer, 1996; Humphrey, 1997; Jeffreys, 1995; Kearney & Hyle, 2003, 2004; Schoolfield & Orduna, 1994; Stein, 1990a, 1990b; Vickers & Parris, 2007; Zell, 2003), and (c) transition and organizational change (Bridges, 2004, 2010, 2013; Goodman & Loh, 2011). Based on the credibility of these prior and relevant studies/applications, the researcher used the grief construct to better understand the experiences of IT teams undergoing change and the effects of psychological transition in the workplace.

Theoretical Framework for Study

The Kübler-Ross (1969) grief construct explored loss and grief—more specifically, death and dying—as a human transition process in response to the most critical of change events. The exploration took place from the perspective of the person undergoing the experience. The change event was the context; the context was death and dying. Among theoretical frameworks, Kübler-Ross's grief construct most closely informs the exploration of change and transition that the researcher hoped this study would accomplish; that is, to highlight the affective, transition experiences of IT team members facing the challenges of change. The Bridges Transition Model provided a corollary to Kübler-Ross grief construct and thus is also explored in the context of this study.

Chapter Summary

This chapter presents a synthesis of the information found while completing a literature review of the main constructs—transition and information technology. The materials reviewed show the gaps in research on the experiences of IT staff during change events and the transition stages associated with change; further, how these gaps influence the overall change effort. Change is the event or situation, and transition is the psychological, three-phased process:

1. Letting go of the old ways;
2. Going through an in-between time when the old is gone, but the new isn't fully operational; and
3. Coming out of the transition and making a new beginning (Bridges, 2010).

This dissertation examined the gaps in research associated with understudied IT teams, aimed to provide insights into the nature and possible reasons for these gaps, and offered recommendations regarding how to address them. Thus far, some of the gaps in research—as referenced in the literature—include gaps in understanding how IT staff participate in change and the associated transition process, how transition directly influences staff roles and responsibilities, and how transition affects staff satisfaction with the work experience. These gaps may directly influence how successful a change effort could be. Understanding how IT team members experience the psychological stages/effects of transition associated with change is the first step in responding to the proposed gaps and answers the research question proposed in this study.

Finally, the success of staff transition experiences may affect the overall change or modification plan of the organization, including—but not limited to—cost and

schedule. Rework, repeating work cycles to accomplish a change, may extend a change event and also increase costs. All of these variables influence the professional and personal experiences of IT staff members who are charged with initiating and supporting organizational change.

Chapter 3: Methods

Overview of Methodology and Research Question

The purpose of this interview-based qualitative study was to examine how the psychological stages of transition (this study's context), as associated with workplace change events, were experienced by staff members of two information technology (IT) teams, using the Kübler-Ross grief construct as a theoretical lens. The research question was, "*How are the phases of transition experienced by individuals within information technology teams during a major change effort?"* The researcher used a constructivist approach to frame the research regarding the experiences of change and psychological transition in the IT workplace. The researcher posited that subject descriptions of their experiences with change and transition would reflect multiple and varied perspectives; as such, providing complex qualitative data for analysis and interpretation of thematic content and, hopefully, yielding valuable insights into the phenomenon of human change and transition in the professional IT environment while contributing to scholarly literature. The level of analysis was the individual while the team provided context to the overall shared transition experience. That being said, and with human experience and behaviors serving as the focal point, it was important to establish an understanding of the nature of experience, in general, and as it specifically pertained to this study. Experience is defined as personally observing, encountering, or undergoing something (Sullivan, 2009). The experiences that were explored in this research were the psychological transition experiences of IT team members due to change efforts, expected to reflect feelings associated with the grief construct (denial and isolation, anger, bargaining, depression, and acceptance). Based on these feelings, the researcher described how staff responded to a change event during which there was lack of knowledge of new systems,

new modifications in work responsibilities, new methods of performing duties, new or modified technology systems, and observations of others being displaced from roles (Kearney & Hyle, 2003, 2004).

Rationale for Research Approach and Design

This qualitative study was designed to respond to the research question that informs it, thus representing an inquiry intended to uncover and interpret findings involving human concerns and behaviors; findings that are not concrete or measureable in conventional, quantitative terms. Essentially, the qualitative model enables the researcher to investigate the real experience and significance involved in processing any event from an individual perspective (Merriam, 2009). Along with its emphasis on the exploration and interpretation of human subjects' real-life experiences, "A qualitative study [yet] allows for the investigation of a specific phenomenon in a systematic manner" (Merriam, 2009, p. 3). In this case, the researcher hoped to gain an understanding of the transition experiences of information technology staff during or after a major change effort as focused through the five phases of grief (i.e., denial and isolation, anger, bargaining, depression, and acceptance) delineated in the Kübler-Ross (1969) grief construct and the Bridges (2004, 2010) three phases of transition to fill the gap and offer empirical evidence regarding how to more effectively navigate the transition process for those responsible for mandating, promoting, and supporting the change effort and extend scholarship in support of the technology field. Individual staff members comprising two selected IT teams—working within an IT-based environment and charged with supporting a technological change effort—were interviewed to examine the Kübler-Ross grief construct and the Bridges transition model.

Traditionally, one or more of four philosophical paradigms may be relevant to a particular research project—typically based on the study's topic and purpose, associated contexts, and the perspectives that drive the researcher's approach and choice of methodology. These philosophical paradigms are positivism, constructivism, realism, and pragmatism. Positivism (ontological) asserts that the only authentic knowledge is based on sense, experience, and positive verification (Merriam, 2009, p. 8); that is, knowledge based on external factors that can be verified and measured. Based on this philosophical rendering, positivists advocate that scientific methods can be applied to studies of the social world. Postpositivism recognizes that the way scientists think and work and the way we think in our everyday life are not distinctly different. Scientific reasoning and common sense reasoning are essentially the same process. There is no difference in kind between the two, only a difference in degree. Postpositivism recognizes that all observation is fallible and has error and that all theory is revisable. Where the positivist believed that the goal of science was to uncover the truth, the postpositivist believes that the goal of science is to hold steadily to the goal of getting it right about reality, even though we can never achieve that goal (Merriam, 2009, pp. 8-9). Similarly, realism (ontological) is the belief that reality is external; that it exists independently of observers. Therefore, both positivists and realists believe that the same research methods can be used in the natural and social sciences. On the other hand, constructivism, as associated with Piaget (1967), is a theory of knowledge (epistemology) that argues that humans generate knowledge and meaning from interactions between their experiences and their ideas. Pragmatism, as associated with Dewey (1938), is a process through which theory is extracted from practice; that is, the activity of lived experience. In consideration of

how/if any of these four paradigms would inform the study, the researcher used an constructivist approach to gain knowledge about participants' experiences of change and psychological transition in the IT work setting. Through an interview process that directly questioned the individuals about these issues, the researcher gathered feedback that provided a response to the research question based on the participant experiences and practices related to change efforts. Thereafter, the researcher analyzed and synthesized the interview data to describe and interpret the specific phenomenon and the associated activity under investigation.

Research Procedures

The researcher conducted a basic qualitative study (Merriam, 2009). Consistent with this methodology, the researcher gathered and analyzed qualitative data for themes and patterns, followed with a thick, rich description of participants, the setting, and the phenomena under investigation. The researcher found study participants via networking with three known information technology staff members from three firms known by the researcher in the DC metro area. The three IT staff members that were contacted via networking consented to participate and provided names of 10 additional team members, five of whom were willing to participate in the study. Thus, this study focused on the perceptions of eight IT workers—three contacted directly by the researcher and five through snowball sampling. Although the sample size is relatively small, using Kuzel's (1992) guidance and the homogeneity of the sample, the researcher deemed the sample size of eight to be appropriate to achieve saturation regarding the phenomenon under study.

The researcher interviewed the IT workers regarding their individual experiences of transition due to a change effort. Each semi-structured interview ranged between 60 and 90 minutes. Interview questions queried participants on: (a) their roles and responsibilities prior to, during and after the revolutionary change event; (b) how the change event was introduced; (c) what support was provided for the change event and associated transition process; (d) feelings and reactions experienced during different phases of the change event/transition process; (e) the outcome of the change event with associated feelings; (f) a reflection of the change event and transition process; and (g) whether or not other change events and transition processes may have affected the most recent transition process for the individual. The researcher recorded interviews using DropVox, a tool for recording audio data to be stored in Dropbox, an electronic data storage tool (Merriam, 2009, pp. 109-110). The recorded interviews were transcribed, verbatim, by a contracted transcriptionist from *GoTranscripts* for review by the study participant (Merriam, 2009, p. 110); and were reviewed for first level coding by the researcher as described by (Saldaña, 2013, pp. 45-182). The researcher analyzed data using Computer Assisted Qualitative Data Analysis Software (CAQDAS), ATLAS.ti version 8, based on transcripts created from individual interviews and data associated with common themes across all interviews. Using a qualitative research first level and *a priori* coding process, the researcher identified common themes and patterns that emerged from the data; that is, within individual interviews and across the compilation of interview data. As the main instrument or measurement device utilized for the study, the researcher ensured that data was properly recorded, reviewed, and member checked for accuracy (Merriam, 2009, pp. 117-125). In turn, the researcher systematically analyzed

and synthesized all data to properly determine and communicate the findings of the study through an extensive descriptive process that includes thick, rich description thereby representing the phenomenon in such detail that one can begin to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations, and people (Lincoln and Guba, 1985).

Research Setting/Context

A purposeful selection of two IT teams, one HIT team and one IT team, comprised of eight members, four from each company/agency, were interviewed for this study. The participants were selected based on previous and/or current experiences with change. Specific to the research setting, the researcher culled four research participants who were employed by an HIT department within a non-profit in Washington DC and four IT contracting staff members working at a government agency located in Montgomery County, Maryland. The researcher has worked with some members of these IT teams as a mentor, program executive or senior executive staff member within the non-profit organization from 2010 to 2013; and as a program manager and executive consulting director with the federal consulting firms from 2013 through 2015. The researcher currently does not work with any of the participants and has no direct or indirect supervisory/managerial responsibility for any participants in the research study, and thus did not impact participants work lives.

One of the IT teams that participated in this research study was a team of four individuals that are a part of a non-profit company providing operations services (i.e., infrastructure management, solution verification, and customer and technical support) to federal employees; and the other IT team is comprised of contracting firms staff of four

people that provide system architecture, development/engineering, solution verification and customer and technical support to a government agency. Both teams participate in up to three business days of remote work per individual per week and perform work from home offices 60% of the time. Team members of both IT teams reside on the same floors in the same buildings; and may also share space when at work via shared cubicle space with rows of cubes that are three to four cubes per row on each side of an aisle. Cube walls are from four feet to five feet high depending on location and include a built-in desk that is approximately four feet long by two and one half feet deep. Each cube is fitted with two chairs, one owner business chair and one visitor chair, along with a laptop docking station and up to four storage drawers and two overhead cabinets. The non-profit IT team has phones in the cube which they sign into when in the office; otherwise personal cell phones are used for phone communications. The contracting firm providing IT support to a federal agency uses contract firm provided cell phones or (most likely) personal cell phones for phone communications. There is limited privacy in both settings. Based on the research setting, participants' work schedules and lack of privacy, among other things prohibiting onsite research, interviews were conducted per individual from the participant's home office via phone, using audio tape recordings.

Sampling

The sampling techniques used for gathering participants for the research study included network sampling and snowball sampling (Merriam, 2009) where the researcher reached out to one staff member at each agency/company to determine feasibility for participation in the study and consent to participate, as well as to gain information on others within the organization and/or group who may participate in the research study.

Network sampling is reaching out to members of the IT community who meet the attributes of study participation to see if they may participate in the study (Merriam, 2009, p. 79). Snowball sampling is reaching out to a member of the IT community and having that person provide other study participants based on his/her knowledge of others who may meet the attributes of those who may participate in the study (Merriam, 2009, pp. 78-79). The researcher recruited IT team members from companies within the Washington DC area. Participants completed a pre-candidacy form that ensured that the selection criteria were met to participate in the study. Minimum criteria included:

- Each team member must have at least two years' experience in the role within an IT team.
- Each team member must be responsible for providing support to internal resources and/or external customers/consumers.
- Each team member must have participated in a major/revolutionary data, systems, or solution change event requiring changes to technology, systems, solutions, processes, practices, roles, and/or responsibilities.
- Each team member must have participated in a major, revolutionary change event to technology/infrastructure that provides a brand new solution/product/tool and impacts how work is done by the individual on the team and internal and external customers that the team member supports (may be ongoing or have recently reached completion) (Erakovich & Anderson, 2013, p. 167).

Candidate participants were provided with an explanation of the research study and information on how the data collection process would proceed via the research

consent form. Once the participants agreed to participate, they were asked to sign the George Washington University (GWU) Internal Review Board (IRB) Consent form to ensure respondents were participating of their own accord and without duress. This form has been archived on an encrypted thumb drive and will be held for five years. Further, each participant was given an alphabetical letter, from A to H, to ensure anonymity during data gathering. Once the participant signed the consent form to engage in the study and to the audiotaping of the interview, and completed the pre-candidacy form, an interview schedule was determined. During the data analysis process, each alphabetical letter was replaced with a pseudonym.

Information technology teams were utilized in the study to provide additional and more complete context to the individual (team member) transition experience during the change initiative just as the Bridges Transition Model served to add context to the Kübler-Ross grief construct as the lens and theoretical framework for the study. Teams were identified because IT workers are structured in teams to complete projects or tasks; thus the individuals in this study experienced the change effort as a team member and as an individual. Acting as a member of a team, while participating in a change effort, serves as another data point and as a possible means of bilateral (individual/team) support and direction. Participating as a team member during a change event is a part of the overall experience. And separating the individual from the team would take the individual and thus the study of the phenomenon out of context and the phenomenon would not be as completely understood.

Data Collection

This study used semi-structured, in-depth interviews as the main means of data collection (Merriam, 2009, p. 89). Interviews with study participants took place over a three week period (February 22, 2017 through March 10, 2017), virtually, in home offices, and were audio taped using DropVox, an audio recording application, for transcription. The audio-taped interviews were transcribed by a contracted transcriptionist at *GoTranscripts* and were provided to each participant for member checking within two to five business days of the interview, to ensure accuracy of intent of response—after review by the researcher. All transcribed materials are archived on an encrypted thumb drive. Further, the key linking the letter to the participant name (i.e., alphabets A through H) is stored in an electronic spreadsheet separately from all other research materials.

Logistics. The semi-structured interview process, involving all study participants, was scheduled to be conducted in 90 minute intervals. There were eight participants (Merriam, 2009) from two teams, based on the size of the small IT teams. There were one to three virtual interviews per day and interviews were held six days per week from Monday through Sunday, excluding Saturday, and were dependent on the availability of the participant. In advance of the scheduled interview session, each participant was provided with a description of the way the interview would be structured and was able to ask clarifying questions about the interview process, the interview structure, and about how data would be handled/stored. The researcher called the participant at the prearranged time and ensured there were not any outstanding questions prior to starting the interview. The DropVox recording device was verified to work appropriately prior to the first interview by recording a pre-candidacy question and answer session and playing

it back to ensure it was clear and had recorded the complete session and saved the interview to Dropbox. The test recording was then deleted to ensure recordings could be removed.

Interview protocol. To carry out the interview process, the researcher used an interview guide (Merriam, 2009, p. 110) comprised of a mixture of structured and unstructured questions (Merriam, 2009, p. 89). Each prospective participant was provided with a form containing "Pre-Candidacy" questions designed to determine suitability of the candidate for participation in the study, prior to the study. "Interview Questions" were questions designed for use in the actual research interviews, with participants approved for the study. The pre-candidacy questions (labeled P-C) and research guide interview questions (labeled IQ) are represented in Table 5.

Table 5

Interview Guide: Pre-Candidacy and Interview Questions

Question Order	Question	Question Type
P-C1	What company, agency, or firm are you with?	Pre-Candidacy Question
P-C2	How long have you been with the institution?	Pre-Candidacy Question
P-C3	What service/solution does your company supply?	Pre-Candidacy Question
P-C4a	What is your role and job title?	Pre-Candidacy Question
P-C5	What was your previous role and job title?	Pre-Candidacy
P-C6	How long have you acted in the defined role?	Pre-Candidacy Question

Question Order	Question	Question Type
P-C7	What are the responsibilities associated with your role?	Pre-Candidacy Question
P-C7a	Describe your responsibilities, how you fit into the team/organization.	Pre-Candidacy Question
P-C8	Describe the number, types and sizes of major change efforts that you have participated in acting in your current role?	Pre-Candidacy Question
IQ-1	Describe a change initiative or project that you participated in and/or observed. (Type, length, reason and size of audience/consumer/end-user for project.)	Interview Question
IQ-2	What were your responsibilities for your role before and after your transition?	Interview Question
IQ-3	Were there modifications to your responsibilities during or after the transition?	Interview Question
IQ-3a	If so, describe the modifications.	Interview Question
IQ-3b	How did/do you feel about the modifications?	Interview Question
IQ-4a	What transition/individual support were you given by the organization in support of the change (e.g., training, participation in planning, etc.)?	Interview Question
IQ-5	Describe your experience with the initiative or project.	Interview Question
IQ-5a	How did you feel (before, during, after)?	Interview Question
IQ-5b	What thoughts went through your mind at each stage of the change event?	Interview Question
IQ-5c	How would you classify the experience at each stage of the project?	Interview Question

Question Order	Question	Question Type
IQ-5d	If your experience changed with time, how did it change and what triggered the change in your experience?	Interview Question
IQ-6	In what state is the project or initiative?	Interview Question
IQ-7	What was the outcome if completed?	Interview Question
IQ-8	What organizational changes occurred during transition?	Interview Question
IQ-9	How have your thoughts and feelings changed over the course of the effort?	Interview Question
IQ-10	Have you experienced any of the following (denial and isolation, anger, bargaining, depression, acceptance)?	Interview Question
IQ-10a	If so, please describe what and how you felt, and if your feelings changed over time.	Interview Question
IQ-10b	If so, please describe when these feelings occurred during the project timeline.	Interview Question
IQ-11	Please share whether you have had prior experience with major change/transition efforts and how they affected your most recent experience.	Interview Question
IQ-12	Are there any additional questions you feel may be pertinent to this study?	Clarifying Question
IQ-4b/12a	What type of support, if any, was provided to you by supervisory or management staff?	Clarifying Question

In concluding this discussion of the study's data collection methods, a number of important measures surrounding the interview process should be noted. Specifically, to ensure that proper procedures were followed in conducting research with human

participants—where information obtained from the study may have a detrimental impact if improperly disseminated, misunderstood, or misinterpreted—it was necessary to obtain proper written permissions from the participants. In this regard and as stated earlier, interviews and data collection was conducted virtually at a time mutually agreed upon by the researcher and participant. Moreover, all scheduling of interviews occurred after the pre-candidacy form was received from the research participant and was documented in a separate spreadsheet with the candidate pseudonym, the time of the interview and a contact number. Interview times were also validated at least one day prior to the confirmed interview time. Very importantly, all data generated from the study is properly stored on external, encrypted thumb drive disks and has not been shared beyond the researcher, with exception to the transcriptionists. Names of research participants were not used during recorded interviews. Note that the dissertation chair, dissertation committee, and IRB will only see masked or de-identified final data, not raw data.

Data Analysis Procedures

The researcher utilized basic qualitative data analysis to show how research participants have experienced (or are possibly continuing to experience) stages of psychological transition (this study's context) during change events in the workplace, mapping their responses to the Kübler-Ross grief constructs and the Bridges transition model that served as the study's theoretical lenses. Specifically, qualitative data analysis involved reviewing interview transcripts to discover emergent themes and patterns to allow for thick, rich descriptions of findings; determining high level common themes and categories (first level coding), and common, in depth themes that crossed categories. CAQDAS, ATLAS.ti version 8, was used to analyze and tease out common themes found

in transcript data. The researcher also kept an audit trail of events (i.e., a chronological log that provides documentary evidence of the sequence of activities that have affected the research) as they occurred throughout the study, recorded both electronically, in e-mail, and in a hand-written journal to ensure the researcher followed proper procedures and can verify what occurred at what time. The data analysis procedures used in this study, as recommended by Saldaña (2013, pp. 45-182), are listed as they occurred as follows:

1. Created and organized data files.
2. Reviewed interview transcriptions as provided by a contracted transcriptionist per extraction from Dropbox.
3. Submitted transcriptions to participants for member checking.
4. Reviewed feedback from member checked transcriptions. Note that participants were not allowed to change transcriptions but did provide feedback, using Microsoft Word tracking within the transcription, for clarity that was included in the data analysis.
5. Read through text pertaining to each transcription, made notes, and expanded upon predetermined (a priori) and emergent codes using inductive reasoning.
6. Reviewed codes to ensure consistency, and made changes accordingly.
7. Entered/uploaded data (transcribed files) in ATLAS.ti version 8.0 and entered open/free codes to associate with quoted text.
8. Analyzed data utilizing Saldaña's coding method (Saldaña, 2013, pp. 185-191).

To ensure that all aspects of both Bridges transition model and Kübler-Ross emotions and behaviors constructs were explored in this study, the researcher: (a) created

a starter list of codes using words and phrases relating to emotions experienced while going through the phases of grief/loss as represented in Bridges transition model and Kübler-Ross emotions and behaviors; (b) generated categories based on code patterns; (c) tested categories against data from interviews by comparing and contrasting raw data (responses) to initial codes/categories; (d) scribed brief memos (a theorizing write-up of ideas about codes) per interview and per the works of both Kübler-Ross and Bridges to explain categories/pattern significance. The researcher then: (a) reviewed data, transcripts and notes; (b) familiarized herself with data again and spent time reflecting and ordering/reordering data; (c) extracted key concepts, looked for patterns, and verified fit. And finally, the researcher mapped findings to the Kübler-Ross grief construct and the Bridges transition model.

Trustworthiness

Trustworthiness is a means of ensuring the credibility of the study (Merriam, 2009, pp. 209-223). The aim of trustworthiness in a qualitative inquiry is to support the argument that the inquiry's findings are "worth paying attention to" (Lincoln & Guba, 1985). In any qualitative research project, four issues of trustworthiness demand attention: credibility, transferability, dependability, and confirmability. Credibility is an evaluation of whether or not the research findings represent a "credible" conceptual interpretation of the data drawn from the participants' original data (Lincoln & Guba, 1985). Transferability is the degree to which the findings of this inquiry can apply, or transfer, beyond the bounds of the project to another site where relatable issues and processes are at play. Thus, while findings are not generalizable to another situation, they could transfer in terms of being useful/applicable (to some degree) to another scenario.

Dependability is an assessment of the quality of the integrated processes of data collection, data analysis, and theory generation. Confirmability is a measure of how well the inquiry's findings are supported by the data collected (Lincoln & Guba, 1985).

To ensure dependability, all audio taped interviews were transcribed, word for word. Purposeful sampling, selecting research participants who provided rich information, was utilized to support transferability. The researcher used member checking (participant review of data for corrections and validity) and an audit trail of all events and decisions made about data during the study for confirmability purposes. Member checking also supported credibility. In addition, based on the selected research engagement and the experiences of the researcher in the specific domain (the field of information technology), a subjectivity statement and reflexive journaling activities are employed to ensure an understanding of the researcher's affiliation with the selected discipline of study (information technology); as such, to assist with elimination of any bias based on previous or current experience. Note that Merriam (2009) proffers that three methods of trustworthiness are recommended in a qualitative study. For the purposes of this study, member checking, an audit trail and thick, rich descriptions are used to support trustworthiness.

The Researcher's Role

As the human instrument for data collection and analysis, the researcher played the role of an active listener, working to observe, hear, and understand the experiences of IT teams participating in this interview-based study (Merriam, 2009, pp. 117-125). As the study progressed, the researcher's role included acting as a reflective scholar-practitioner in order to capture, interpret, explain, and present participants' experiences as brought

forth through the study. If there were commonalities among the participants, the researcher teased out these common themes during data analysis. This process requires a disciplined awareness on the part of the researcher to let themes in the data emerge; themes that were ultimately interpreted and presented through a process of rich description in reporting the findings.

From the outset of this project, the researcher presented as unbiased a setting and approach as possible to ensure that credible and reliable data was obtained. Throughout the study process, the researcher adhered to a reflexive journaling practice and subjectivity statement, both of which are intended to provide information with regard to in-common (among researcher and study participants) experiences or backgrounds that could have an effect on the outcome of the data in the study or the presentation and defense of the overall findings from the study. In this sense, then, completing this study required setting aside, to the extent possible, any preconceived ideas or theories about its potential outcome (Merriam, 2009).

Subjectivity Statement

It is important to examine the position of the researcher to ensure integrity of the study (Merriam, 2009, pp. 117-125). This researcher has 20 plus years of experience in the information technology sector, including participating in and leading infrastructure and technology change efforts as both a consultant and as an internal employee of technical and non-technical enterprises for government and commercial agencies and enterprises. These change efforts entailed modifications to infrastructure, practices, processes, procedures, and roles and responsibilities; thus, also encompassing management of change and transition processes for information technology teams and

staff. The researcher continues to manage and direct change efforts for federal government agencies where cost, effectiveness, and success are dependent upon the ability of information technology workers and other staff to properly process and navigate through the stages of transition that accompany change events. The researcher does not currently have a direct or indirect supervisory or consulting role with participants in the study.

The researcher has not directly or indirectly managed or mentored the prospective research study participants for one to four years, so participation in the study did not have a professional or personal impact on participants or how the data collected is conveyed to the researcher during the study. Participants were able to contribute to the study without fear of repercussions to their work lives and that was conveyed both verbally by the researcher and in the George Washington University (GWU) Internal Review Board (IRB) Consent Statement for Exempt Research.

The researcher observed and followed epoché, the on-going process of avoiding any pre-suppositions of what responses to queries during data collection should be; and bracketing, suspending judgement and concentrating on the analysis of the participant experience (Husserl, 1977). Data was collected/recorded and transcribed, by a professional transcriptionist, exactly as provided without re-interpretation by the researcher. Data was coded using Saldaña (2013) first level coding methods as represented in *Data Analysis Procedures*. The data was reviewed by a third-party for completeness and to ensure it follows qualitative research and GWU doctoral handbook standards. Although the researcher has experience in the realm of IT, transition and change, she did not participate in the study so her beliefs and understandings were not

included in data collection. The researcher used ethical methods completing the study, including when collecting, reviewing, interpreting and presenting the data.

Human Participants and Ethics Precautions

Ethical issues must be addressed by the researcher before, during, and in concluding any research study. Per Merriam (2009, pp. 161-163), the researcher must respect the rights and sensitivities of the participant. To ensure ethics were applied appropriately, the researcher:

- Submitted the Dissertation Proposal Approval Form and final dissertation proposal to the Dissertation Chair and Committee for validation and approval.
- Submitted the Initial Review Application (HRP-200 form) and the Student Investigator Responsibilities Agreement (HRP-290 form) to The George Washington University (GWU) IRB; to receive signoff from the IRB and the Dean prior to beginning research.
- Provided consent forms, which were signed by the participant, describing the study and ensuring approval by both parties.
- Provided a one-page description of the study to each participant as part of the research consent form.
- Ensured confidentiality of the study via verbal and written acknowledgement.
- Alerted participants that they would be able to review data for corrections and validity; member checking.
- Shared final results of interviews/data collection, via transcript, with each participant.

Chapter 4: Findings

In this chapter, the researcher presents the findings—based on analyses of the data yielded from interviews with Information Technology (IT) workers who served as participants—in order to provide insights into the study's underlying research question: *How are the phases of transition experienced by individuals within information technology teams during a major change effort?* In support of the overall findings, it is important to note that each participant reviewed his/her transcript for accuracy—the process of member checking—in order to provide verification and clarification of the content conveyed in the interviews and as recorded in the subsequent transcripts. Specific to presentation, the findings are organized thematically, representing the dominant feelings and thoughts expressed by study participants throughout their interviews. In addition, the themes are aligned with the "Feelings/Behaviors" represented in the Kübler-Ross grief construct (Denial and Isolation, Anger, Bargaining, Depression and Acceptance); and the feelings represented in the three phases of the Bridges Transition Model (Letting go, The Neutral Zone and The New Beginning). Through the use of "thick description" that characterizes the writing/reporting of qualitative research findings, participants' "stories" of transition in the IT work environment come to light, supported by relevant interview excerpts that further illustrate this chapter's discussions of thematic findings.

First, however, the researcher opens the chapter with a recap of background information pertaining to the research participants in order to provide context to the data summarized in the chapter and show the range of experience, levels of expertise, and responsibilities associated with providing services and support to consumers and

customers during a major change event. This section is followed by an overview of the codes and themes identified from semi-structured interviews. It also includes tables and figures that visually represent these items. From here, the researcher's discussion of the findings that emerged from this research follow and predominate throughout the remainder of the chapter.

Participant Background Information

There were eight research participants—all of whom worked in the metro DC area. There were four participants from the IT firm/project and four HIT participants. Research participants were in-house employees at the non-profit organization and supplemental contracting staff to one government agency. Staff from the two IT contracting firms served on one or more federal contracted revolutionary change projects as one combined team. Typically, IT staff are designated as managers, senior/lead staff, and mid-level staff. Their roles within IT include various responsibilities for (a) solution verification/testing, (b) data and database analysis and administration, (c) configuration and environment management, (d) systems and solutions architecture, (e) computer engineering/product development and (f) customer and technical support.

Participant backgrounds represented a wide range of characteristics across such areas as age, culture, and experience. There were three men and five women who participated in the study. Age ranges varied from 30 to more than 50 years old. The respondents were culturally diverse, coming from and/or born in Africa, China, India and the United States (US). English was a second or third language for five of the eight research participants. As represented by this sample, the length of work experience in IT

ranged from five years to more than 20 years. It is important to note the participant culture and years of experience as these factors may play a part in the transition experience and the response to change for the individual. Significantly, each study participant revealed a current or previous experience with a revolutionary change that impacted how Information Technology solutions and services were then being delivered to internal (other teams or groups within the organization) and external (oversight boards or committees, insurers, other government agencies or end users) consumers/customers.

To start the process of obtaining a viable study sample, the researcher contacted three leads/managers via networking activities in order to determine their interest in participating. In turn, these leads/managers referred others (i.e., via snowball sampling) as potential study subjects. In total, the researcher made initial contact with 13 individuals as likely study participants via networking and referrals from snowballing. However, of the 13 possible participants, only eight ultimately consented to join the study. In terms of workplace stability across participants, all had been in their current work roles for at least three years during the time frame in which this study was conducted. As a post-script, five of the participants remained with their respective firms after completion of this research project. In contrast, two participants moved on from the firms where they had been employed during the study, and one participant retired during the course of the study. To verify that each research participant possessed attributes (roles and experience) pertinent to this study, a pre-candidacy form was distributed to all possible study participants. The pre-candidacy form requested the following information: (a) name, (b) role/title, (c) responsibilities associated with role, (d) total years of experience, (e) years of experience in current role, (f) number and type of change

projects, and (g) a brief description of a major change project she/he worked on. Table 6 provides information on the IT/HIT team work roles represented by each participant and his/her years of experience in the role specific to the revolutionary change that was discussed in this research. The table only represents years of experience in the current role, not total years of experience in technology. With exception to one study participant, all research participants had at least 10 years of experience in information technology.

Table 6

Research Participant Role and Years of Experience in Role

Participant	Role/Change Event	Team	Years of Experience in Role
Angela	Testing Team Lead/Tier 2 Support Change to Agile delivery method	HIT	6
Cara	IT Configuration Manager/Operations Change to infrastructure and solution delivery method	HIT	8
Donna	Lead Software Tester/Tier 2 Support Transition from Mainframe to web entry	HIT	10
Gina	Senior Test Analyst/Tier 2 Support Change to Agile delivery method	HIT	6
Deepak	Senior Software Engineer/Architect Change to Data Warehousing	IT Contractor	6

Participant	Role/Change Event	Team	Years of Experience in Role
Priya	Senior Quality Assurance Analyst/Reports Engineer/Customer Support	IT Contractor	4
Lei	Enterprise Architect/Chief Architect Change to automated pricing	IT Contractor	10
Vishal	Senior Functional Tester/Test Lead Change to Data Warehousing	IT Contractor	10

Research Participants

As previously stated, there were eight research participants with varying degrees of experience at different levels within the health information technology (HIT) firm or IT agency. A brief description of each participant provides context to how each participant responded and his or her overall demeanor. Descriptions also provide context into the accumulated data as years of experience, work culture, and cultural background may shape user responses, including the linearity of feelings and responses or lack thereof. Alternately, although terms/feelings may have been defined, they may have different meanings to different people based on cultural perspective (cultural underpinnings). As it applies to work culture, contracting resources (contractors and consultants) are normally expected to be prepared to "deal with" change and acclimate, but that is not always the response. The original identifiers, A through H, are replaced with pseudonym (names) in the remainder of the research.

Angela is from the United States and possesses more than 20 years of overall experience as an in-house employee in HIT, and approximately six years in the current

role as Testing Team Lead and Tier 2 Support. As a Testing Team Lead, Angela is responsible for: (a) writing test plans to verify solutions, (b) authoring test scenarios to simulate customer use, (c) assigning testing activities to junior, mid-level and senior testing staff, (d) working with the business analyst to verify requirements are verified, (e) tracking testing issues and providing metrics on issue reports, (f) mentoring testing staff, (g) working with other technical disciplines and providing troubleshooting of issues and issue resolution for end users and customers. Angela is mild mannered, soft spoken, and knowledgeable of the company, company practices and company history. Angela is straight forward and provides specific and direct answers to questions. Angela appears to be a hard worker, willing to do whatever it takes to meet assigned tasking and cover assigned responsibilities. Angela prefers direction/guidance on assignments versus an open ended approach to be defined by the participant. Angela has participated in several major change initiatives and projects.

Deepak is from India and has more than 10 years of experience as both an employee and contractor in IT, and has participated in more than one revolutionary change initiative. Deepak is a contractor acting as a Senior Software Engineer and Systems Architect often times leading major change efforts as a supervisor and/or as a hands-on participant. As a Systems Architect, Deepak: (a) researches, designs and develops software solutions, (b) instructs and mentors other staff on design and development best practices, (c) works with third-party vendors to complete systems architecture design and development and (d) provides Tier 3 technical support to resolve solutions issues found by vendors and customers. Deepak is even keeled, has a pleasing,

content demeanor, and communicates clearly and directly—describing (and implementing) technical ideas to all levels and types of technical and non-technical staff.

Cara is from Africa and has more than 10 years of experience—initially as a contractor then as an internal employee for an HIT firm; and has participated in at least two revolutionary changes within the HIT firm—one as a contractor and the other as an employee. Cara serves as an IT Configuration Manager, leading infrastructure, systems environment and solutions integration and implementation efforts for external consumers while providing support to internal customers. Cara is responsible for: (a) infrastructure management of servers and databases in support of corporate solutions and services and internal development and testing, (b) environment builds, (c) solution releases and release management; and (d) vendor coordination for upgrades and external tools. Cara has a calm demeanor and a lyrical response—where sentences run together as one continuous thought. Cara appears calm by actions and demeanor but the words betray the calmness often exuding that a lot is going on and needs to be expressed. Cara has experience as the first to initiate and implement revolutionary change for the enterprise. Cara had to (a) analyze the current infrastructure set up and configuration; (b) gather business and technical requirements from internal staff, across teams, and with customer technical support teams and third-party vendors; (c) work with third party vendors and other internal technical staff to select tools for the transformation; (d) design business and technical workflows; (e) develop the new automated provisioning system; (f) test the new automated infrastructure set up; (g) and implement a new environment provisioning system that allows for the creation of virtual infrastructure environments using profiles and virtualization tools instead of manual processes and man hours. Cara was a contractor

at the time of the revolutionary enterprise change event and had to work to obtain buy in from internal resources and external customers and hardware and tool vendors—while learning how the company worked, how people responded to change, and what the new role meant for the enterprise and the individual—as a contractor with no responsibility for resources. This revolutionary change impacted everyone in the company and external customers—and assists in answering the question posed in this research regarding the individual experience of transition during a revolutionary change event.

Donna is from the United States and has more than 20 years of experience within an HIT enterprise. Donna was a Lead Software Tester and Tier 2 Support and participated in two major change events during the course of employment with the company. Donna retired during the course of the data gathering process for this research study. Donna was responsible for: (a) writing test cases and scenarios in support of solutions development and release, (b) reporting issues found during testing, and (c) troubleshooting assigned customer issues for submission to solution development staff for correction. Donna was knowledgeable about the assigned role and those processes and procedures specific to the testing domain within the organization. Donna has a forceful command of speech expressing thoughts annunciating each word. Donna's approach was to do what was necessary to get the job done and then to move on to the next task.

Priya is from India and has approximately four years of experience in IT as a contractor. Priya served as a Senior Quality Assurance Analyst, Reports Engineer and Customer Support. Priya is responsible for writing test scenarios and test cases, data entry, solutions testing and verification and customer support during user acceptance

verification. Priya was calm, but felt somewhat inexperienced and nervous—not knowing what to expect. Priya has served in the same role for the course of experience within IT but has been placed on two major change initiatives within one government agency. Priya has had to learn as the change events moved forward with intermittent guidance and access to customers for who support is provided.

Lei is from China and has more than 20 years of experience in IT as both an in house employee and contractor. Lei is a contractor acting as an Enterprise Architect and has served as a chief information officer and chief technology officer. Lei is a leader and manager, often times initiating revolutionary change events acting as the expert for new technology. Lei is responsible for: (a) research and development of systems to support enterprises, (b) design and development of solutions, (c) hiring and mentoring of technical staff, and (d) management of human resources. Lei is deliberate in responding and providing answers to questions and descriptions of past events. Responses to questions appear to be a form of story-telling which may be indicative of cultural norms from the participant's country of origin. The participant is knowledgeable and likes to be recognized for accomplishments.

Gina is from the United States and has more than 20 years of experience as an in house employee in IT and HIT companies, or agencies, and as a contractor for IT enterprises. Gina is a Senior Test Analyst and Tier 2 Support, currently an employee acting in a Testing Team Lead role. Gina is very experienced and knowledgeable about testing and test team interfaces with other groups within the organization and oversight and customer communities and agencies outside of the current HIT enterprise. Gina: (a) provides mentoring to managers, directors and senior directors in the organization and

coaches peers, (b) writes test plans and test scenarios for solutions verification, (c) leads new initiatives for electronic systems, (d) reports on and manages metrics, and (e) supports the oversight committee and customers during user acceptance verification and audit. Gina has a thoughtful, very expressive, direct, no-nonsense demeanor and has a lot to say. Gina is participating in a multi-year revolutionary change initiative that has been implemented for use across the company and for consumption by end users and consumers of enterprise services.

Vishal is from India and has a decade of experience as a contractor within IT consulting firms. Vishal is a Senior Functional Tester and Test Lead, both hands on and a supervisor responsible for leading testing efforts. Vishal has participated in at least two major/revolutionary change efforts for government agencies. Vishal is responsible for: (a) authoring test plans, (b) creating test cases and test scenarios, (c) assigning test cases for execution to testing team members, (d) recording and managing issues found during testing, and (e) providing support to customers during verification. Vishal was nervous during the interview but provided helpful details about change project attributes. While Vishal claimed to not experience anything but excitement and anticipation during the change initiatives, descriptions of what was experienced and how Vishal felt during different stages of transition pointed to feelings associated with loss as represented in the Kübler-Ross grief construct.

Overview of Codes, Categories, and Themes

"Qualitative codes are essence-capturing and essential elements of the research story, that, when clustered together according to similarity and regularity (a pattern), they actively facilitate the development of categories and thus analysis of their connections"

(Saldaña, 2013, p. 8). A code is a word, phrase, or sentence that represents aspects of data that captures the essence or feature(s) of data (Saldaña, 2013). During the first level round of coding, the researcher used *a priori* Emotion Coding based on the feelings/behaviors indicated in the (Kübler-Ross) theoretical lens to provide an initial list of possible codes for consideration. Then the researcher expanded on the initial code list based on the definitions of the feelings associated with the grief construct. And finally, the researcher focused in on and reviewed feelings expressed during the Bridges transition process and added them to the list of preliminary codes. Categories are clusters of codes that form a pattern, similarity and regularity (Saldaña, 2013). Categories in this research study were related to the feelings and behaviors observed in data. Themes were constructed, without losing the meaning of the data while capturing the significance. Data was coded, sorted and synthesized. In general, upon considering several codes that were similar in nature, the researcher combined such codes when deemed appropriate. Themes aligned with the phases of loss in the Kübler-Ross grief construct. Each participant's responses are aligned with the Kübler-Ross stages of grief and the Bridges phases of transition based on the predominance of responses for each feeling. As previously discussed by Kübler-Ross, stages of loss did not necessarily occur linearly or independently. This is also true for the phases of transition as described by Bridges. Relevant quotes from study participants are discussed and provided per theme. With the Kübler-Ross stages of loss and the Bridges phases of transition serving as the organizing frameworks, Table 7 displays the codes, categories, and themes that emerged from the *a priori* coding procedures. Table 7 also lists a descriptive emergent code, The Change Link: Outcome/Successful. The Change Link, as represented in the literature review

shows the change process and how it impacts effectiveness of team members along with the end state of the change event. Data analysis from this research study showed that the end state of a change directive was always successful regardless of the feelings experienced throughout the transition process. Success was a consistent theme in the study and was experienced by all participants.

Table 7

Participants' Perceptions in Relation to the Kübler-Ross Stages of Loss and the Bridges Phases of Transition

Codes	**Category** ***Kübler-Ross and Bridges***	**Themes**
Denial, disbelief, isolation, limited or no support, no training, no help, limited resources, one-to-many	Denial and Isolation	Isolation from others; Unique role
Upset, mad, angry, rage, envy, resentment	Anger	Anger due to lack of communication, direction and support
Bargaining, deal making, schedule slippage, no end date, ongoing, trade, avoidance, handling expectations, go back, negotiation	Bargaining	Constant negotiation due to unreasonable demands and schedules
Overwhelmed, helpless, tired, loss, low, depression	Depression	Loss of direction and little to no support; helplessness
Emotionless, acceptance	Acceptance	Required acceptance of the change initiative and the associated outcome
Disbelief, surprise, terror, horror, disgust, anger, frustrated,	Ending, Losing, Letting Go	Frustration at not being heard,

Codes	Category *Kübler-Ross and Bridges*	Themes
stressed, dissatisfaction, insecurity, worry, anxiety		communicated to or supported; Anxiety due to not being able to meet leadership's demands; stress as a physical and emotional response
Uncertain, mood swings, doubt, emotionless, disbelief/could not believe it, acceptance, overwhelmed, vulnerable	The Neutral Zone/The In-Between	Required acceptance of the change initiative and the associated outcome
Confident, assurance, excited, happy, anticipation	The New Beginning	Confidence that anything is possible once the change initiative is complete; Excitement prior to change initiation
Successful, completion, unsuccessful, ongoing	Change Link: Outcome/Successful	Success as an expectation; no room for failure

The perceptions of research participants as represented in Table 7 show themes across the stages of loss and transition (the categories) as posited by Kübler-Ross and Bridges, respectively. The first theme is mapped to the first research category and stage of the Kübler-Ross grief construct (Denial and Isolation) and points to those who participated in new roles and/or roles that were unique to the group or enterprise; the only person in the role experienced a sense of isolation as there was limited to no direction on how to convey or proceed in the role from predecessors or management/leadership thus moving the individual to proceed as she/he deemed appropriate. The second theme as

mapped to the second research category/stage of Kübler-Ross grief construct and the first phase of Bridges transition process (Anger) represented in Table 7 was experienced by research participants in reaction to lack of communication about the change initiative, lack of response to reported issues and concerns by management/leadership, and lack of support, via training, to aid in processing and supporting the change event. The third theme as mapped to third research category/stage of the grief construct (Bargaining) was experienced by study participants who constantly had to negotiate responsibilities and completion of tasks associated with meeting unreasonable schedule demands. This theme was ongoing throughout the completion of the change initiative for those participants who experienced it. The fourth theme as mapped to the fourth research category/stage of the grief construct (Depression) was experienced in combination with isolation when there was little to no direction from or support by supervisory staff, or leadership and the individual participant (Angela) did not know what to do; she felt helpless. Theme five - *required acceptance of/acclimation to the change event* - was universal for all participants in the study but one participant (Angela) did not recognize it as such as she still suffered through ongoing cycles of transition although team members had moved on. Acceptance did not mean that each individual was ready for work or to move on; some were and some were not.

All study participants expressed feelings related to theme six of the research as mapped to the Bridges transition theory phase 1 – Ending, Losing, Letting Go. Research participants consistently listed frustration at not being recognized or heard when expressing concerns or issues with the change initiative, and stress as a physical and emotional response while trying to accomplish tasks with limited to no training and few

resources. Additionally, there was "Anxiety" about what was to come, how new things would be accomplished or received (or not); and meeting overall demands of the position and responsibilities associated with her or his role. Theme seven, *required acceptance*, correlated with those last disparate emotions experienced prior to determining that there was nothing else to do but accept what was occurring. Although acceptance was indicated, Frustration and Anger were still apparent in lingering feelings that overlapped with the associated phase of transition. Theme eight, *confidence*, that something was accomplished and anything could be accomplished, was one of the last themes expressed in data. Other feelings associated with the category pointing to the theme: happiness, excitement and anticipation—were experienced by some study participants at the onset of the change initiative not at the end of or after the change initiative.

The final theme, *success*, was expressed and experienced by all study participants. Success was aligned with completion of the change initiative regardless of whether the initiative/project went well or not. Success was not an indication of the goodness or positive experience associated with the change event. Failure was not an option and the change initiative was a requirement for the individual and all (the IT team) involved.

Figure 7 provides a visual representation of the distribution of codes—representing all participants—as noted by the researcher during data analysis.

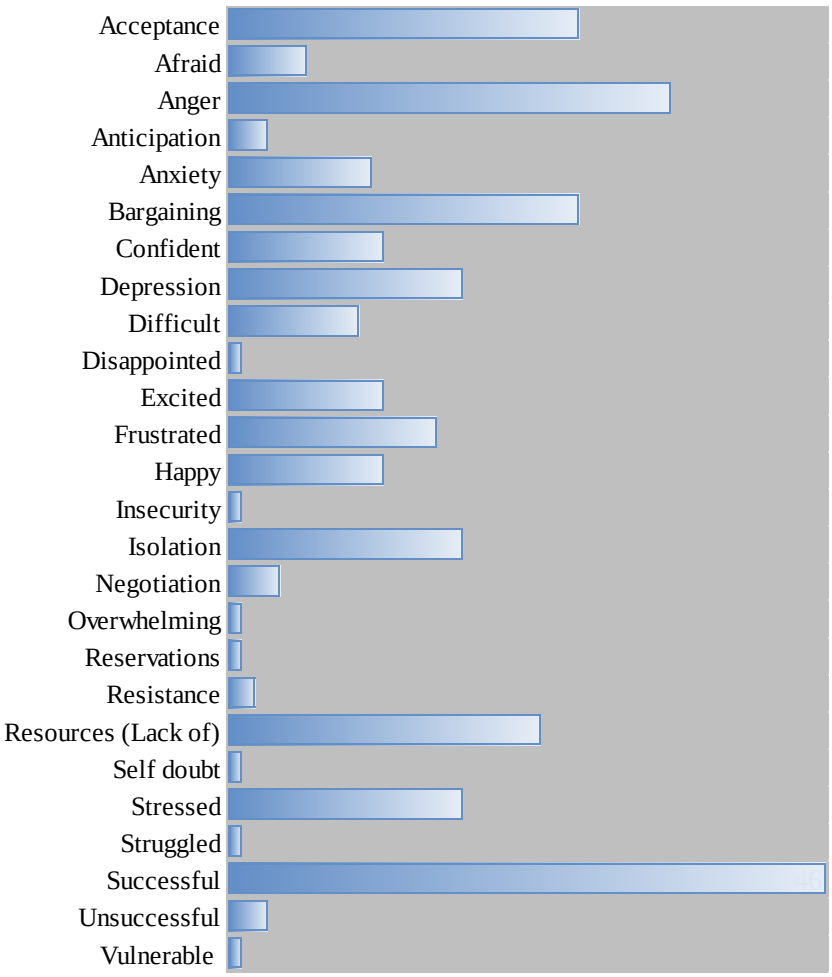

Figure 7. Frequency of codes

Specific to those responses to change, feelings/behaviors or emotional associations most often acknowledged by study participants during their interviews, the researcher identified five categories, mapped to the study constructs, that emerged from the final coding processes as the most frequently cited representations of feelings/behaviors that participants associated with organizational change in the IT environment. As expressed by Saldaña (2013), "it is very difficult to sidestep quantitative representation and suggestions of magnitude in any qualitative research," (Saldaña, 2013, p. 77). As expressed in Figure 8, the researcher used magnitude coding; a form of coding that "consists of and adds a supplemental alphanumeric or symbolic code or sub-code to

an existing coded datum…to indicate its intensity, frequency, direction, presence, or evaluative content (Saldaña, 2013, pp. 72-73).” Anger appeared as the most frequently identified feeling/behavior. Bargaining and Acceptance tied for the second most expressed stage of loss by participants, while Denial and Isolation and Depression tied for the third most experienced stage of loss—thus accounting for all five most frequently coded responses that the researcher subsequently identified as the key categories of this study. There were 34 occurrences of Anger in interviews; 27 occurrences of both Bargaining and Acceptance in interviews, and 18 occurrences of both Denial and Isolation and Depression represented in the data collected from eight interviews. Figure 8 shows the prevalence of categories in correlation to the Kübler-Ross stages of loss based on how often they occurred in the data.

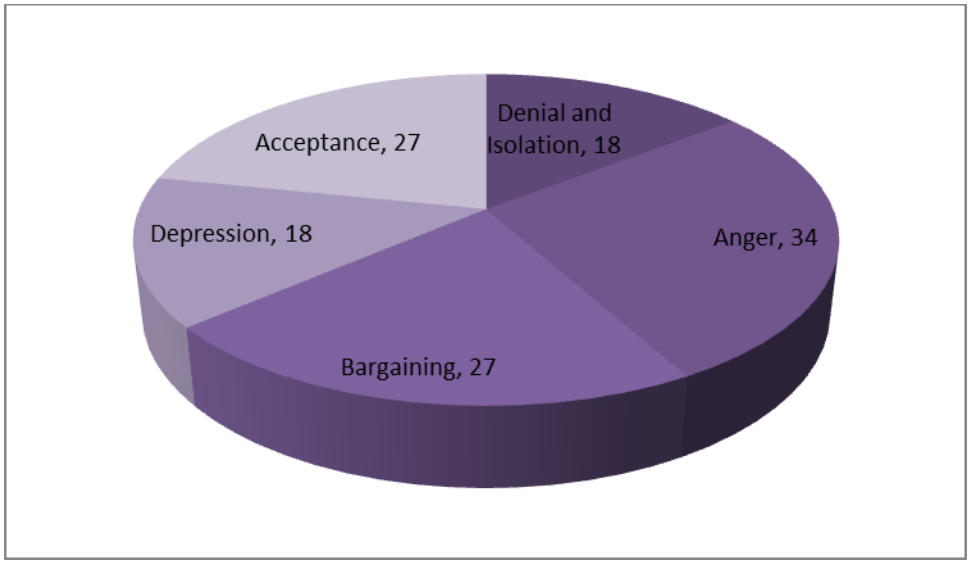

Figure 8. Prevalence of categories based on how often a code was experienced

Each research participant experienced one or many feelings associated with or responses to change as theorized by Kübler-Ross and Bridges. Transition from one phase

of loss to another was not necessarily linear and responses to change were not mutually exclusive—meaning the research participant may have continued to experience a specific response while moving to the next stage of loss as represented in Kübler-Ross or may have repeated certain stages. Research participants experienced transition differently, thus how each person defines or expresses a different stage of loss may be unique to that person and (slightly) different from other study participants.

The experiences of study participants are expressed in Tables 8 and 9. Some feelings, such as Anger, overlapped with other responses to change using the Kübler-Ross grief construct in Table 8. For each study participant, the box in the column for a specific category is marked with an "X" if it was experienced by the research participant. The grey space between each stage of loss represent the gap in time between movement from one stage of loss to another; a period of fuzziness where feelings or responses may not have been fully defined or realized and/or a true transition to the next stage was not complete. The prevalence of each participant's experience of a stage of loss is not represented in Tables 8 and 9, only that the participant experienced the specific stage at some point in the transition process. Prevalence of experience of each stage of loss is shown in Figure 8.

Table 8

The Kübler-Ross Stages Experienced by Participants

Participant	Denial and Isolation		Anger		Bargaining		Depression		Acceptance
Angela	X		X				X		
Deepak			X						X
Cara	X		X		X				X
Donna			X		X				X
Priya			X		X				X

Participant	Denial and Isolation		Anger		Bargaining		Depression		Acceptance
Lei							X		X
Gina			X						X
Vishal					X				X

Happiness and/or Excitement occurred for three study participants prior to or at the beginning of the change initiative instead of during the last stage of transition (The New Beginning) as expressed in the Bridges transition model in Table 9. This expression of the data leads to expansion of the Bridges transition model to a phase that occurs while waiting for change to begin. Although Acceptance is also a response to transition represented in the Bridges transition model in phase 2, The Neutral Zone, it does not have the same meaning as that represented by Kübler-Ross where Acceptance is the personal resignation to the change or loss and readiness to move on. Acceptance as represented by Bridges is described as creating a new way of thinking and working. Per the data, research participants did not experience feelings associated with phase 2 of the Bridges transition model and only one experienced phase 3, The New Beginning.

Table 9

The Bridges Phases Experienced by Participants

Participant	Pre-Change (Excitement, Happiness)	Ending, Losing, Letting Go (Anxiety, Frustration, Stress)	The Neutral Zone	The New Beginning (Confidence)
Angela		X		
Deepak		X	X	
Cara	X	X		
Donna	X	X		X
Priya		X		
Lei		X		

Participant	Pre-Change (Excitement, Happiness)	Ending, Losing, Letting Go (Anxiety, Frustration, Stress)	The Neutral Zone	The New Beginning (Confidence)
Gina	X	X		
Vishal	X	X		X

Angela participated in a two-year change initiative to split technical groups into two groups, one to support major release efforts and another to support project efforts in support of moving to an Agile-based continuous delivery method. The initiative was a new method of providing solutions to customers and a new method of operations for the HIT company. Direction was not provided by management on how to accomplish the new way of doing business so the process for making the change to the new method was at the discretion of the participant and all others involved in the transformation process in support of the major change. Angela acknowledged experiencing Isolation and Anger (in order as represented during change) and the researcher observed that Angela also experienced Depression through references to feeling low or down over the course of a year during the first year of the two year change event. Isolation continued through the Anger stage and both ceased once she began to experience Depression. At the Depression stage, which she remained in for a few (three to four) months, Angela swallowed her feelings and continued to do her part of the change. Angela did not verbalize experiencing, nor did the data show that she experienced Bargaining or Acceptance. Angela also experienced feelings associated with transition including feeling frustrated, overworked and stressed which are represented in Bridges' Transition process during phase 1 (Ending Losing, Letting Go). Per the data and participant response, Angela did

not experience phases 2 and 3 of the Bridges transition model, The Neutral Zone and The New Beginning.

Deepak led a 15-month change initiative to migrate data to Healthcare.gov as part of the Affordable Care Act (ACA) transformation. Deepak acknowledged experiencing Anger in the first couple of months and Acceptance as described in the Kübler-Ross stages of loss. Deepak experienced the stages of Anger and Acceptance, in order as represented. His Anger moved to Acceptance quickly as he was able to reconcile expectations of the experience with reality. Deepak also described feeling stressed and having no work/life balance during the course of (most of) the change initiative, often times working long hours in the office and going home and doing more work. Deepak stated that the change initiative was disorganized and there was a feeling of disbelief at the beginning of the change project. Deepak did not experience the other Kübler-Ross stages of loss: Denial and Isolation, Bargaining and Depression. Deepak showed feelings associated with transition including feeling overworked, stressed and finally experiencing acceptance which are feelings represented in Bridges' Transition process during phase 1 (Ending Losing, Letting Go) and phase 2 (The Neutral Zone). Deepak implemented new ways of thinking and doing work/completing tasking as defined by Acceptance in phase two of Bridges' Transition model as he approached the end of the change initiative and began the cleanup effort to define and implement consistent processes that mapped to the new solution/change initiative. Per the data analysis, Deepak did not experience phase 3 of Bridges' Transition theory, The New Beginning.

Cara originally thought the major change initiative would be a chance to learn and do something new, so there was nervous excitement at the beginning. Cara took on a new

role that didn't previously exist in the company, while managing a revolutionary infrastructure and solutions delivery change project moving systems delivery to an automated process that was scheduled to be completed in nine months but took two plus years to complete. Cara described the task to implement a change to how environments and infrastructure were provisioned for use as "daunting." Once the change event was initiated, Cara acknowledged experiencing Isolation, Anger, Bargaining and Acceptance (in order as referenced during change) as described in the Kübler-Ross grief construct. Cara experienced Isolation as she was thrust into a new role with limited support and no predecessor to direct her. Isolation continued through the Anger and Bargaining stages as there was a fight for support in the new role and a major adjustment to her life and overall contribution to the change – being in a brand new role yet not owning the role as she was a contractor. As some part of change occurred and little successes occurred, Isolation, Anger and Bargaining dropped away and she was able to move forward. Bargaining occurred prior to Anger. Cara did not acknowledge or appear to experience Depression as represented in the data. Cara also described feeling stressed and anxious through most of the change effort as represented in phase 1 of the Bridges transition model (Ending, Losing, Letting Go). Anxiety replaced depression during the transition. There were constant negotiations on what could be accomplished in designated project timeframes. Bargaining in regard to her role and what she felt she should and should not do and negotiation on what could be accomplished were a major component throughout the change life cycle. Cara did not appear to experience phases 2 and 3 of the Bridges transition model (The Neutral Zone and The New Beginning).

Donna participated in a major, two-year effort to sunset/retire a mainframe data management system and move to web-based technologies in support of data management and manipulation of health insurer information and customer records. The interviewer thought the change initiative was necessary and useful. Donna was initially excited and anticipatory of the change to come. Donna stated it was a learning experience that inspired her to go back to school and take classes to understand the technology used in support of the transformation to new systems. Donna expressed experiencing Anger, Bargaining and Acceptance (in order and) as represented in the Kübler-Ross grief construct stages of loss. Donna did not hold the Anger long as she soon was drawn to the depth of knowledge required to complete her part of the change effort. She became embedded in the change process and the new technology. As she learned more, over the course of two or so months, her role expanded beyond what she expected so she transitioned to the Bargaining stage—trading what was her current predicament for the role she expected to fill as part of the change event. Once she reconciled herself to the expectations of her part of the change event, she was able to move to Acceptance. The interviewer stated that while there was no training or transition support from management or the enterprise as a whole, the testing team provided support and aided each other throughout the process of implementing the change initiative. Donna did not state that she experienced, nor did the data show that she experienced Denial and Isolation, and Depression as represented in Kübler-Ross grief construct. Donna became confident that the work in support of the change could be accomplished after some time had passed from the initiation of project and once initial hurdles were overcome. Donna did not experience phases 1 and 2 of the Bridges transition model (Ending, Losing, Letting go

and The Neutral Zone), but Donna did experience some feelings associated with phase 3 of the Bridges transition model (The New Beginning) – confidence and enthusiasm - after the change project was complete. At the end of the project, Donna felt good about the accomplishment.

Priya participated in a major, two-year change initiative to develop and implement mobile access to travel for a government agency. Priya had to develop verification scenarios to prove the newly developed mobile solution worked correctly. There were organization changes during the change event, including new management and (voluntary and involuntary) loss of resources. There was no support or training provided by the agency or contracting firm; learning and understanding occurred while working through the change initiative. There was limited to no direct contact with consumers of the newly developed solution so that made it difficult to support the user acceptance component of the solution implementation process. If there was a question or concern regarding development of test and verification scenarios, an account manager was notified to ask the customer and provide the response back to Priya. Priya originally felt flabbergasted about how to proceed and frustrated that there were no tools and access to users in support of the change initiative. Priya acknowledged experiencing Anger, Bargaining and Acceptance (in order as experienced and) as represented in the Kübler-Ross grief construct and also exhibited feelings associated with the Bridges transition phase 1 (Ending, Losing, Letting Go)—frustration and being overwhelmed. Priya expressed that she experienced Anger off and on throughout the change process—most often when she was frustrated with herself for not being able to move forward due to situations that did not allow her to do so. As her role was defined but did not match what she was told her

responsibilities would be, she had to contend with bargaining with herself and adjusting her expectations to her reality in order to move forward. Both Anger and Bargaining were cyclical and continuous until she accepted that her role was not as originally defined and she was able to become fluid—responding as necessary to accommodate for what was required. In that way, she reached the Acceptance phase and was ready to move on to the next change assignment, mentally and emotionally. Priya did not experience Denial and Isolation, and Depression as expressed in Kübler-Ross or phases 2 and 3 of the Bridges transition model (The Neutral Zone and The New Beginning).

Lei led a major, two-year, change initiative to transform a government pricing solution from a manual, postal system based submission process to a web/Internet-based service; and decommissioned the existing system. Lei was the first contractor on the project, was considered the expert, and was not provided with any training support as the expert in the industry for this type of transformation. As Lei began work on the change initiative, there was a change in leadership (the chief information officer was removed) and a suggested change in how the transformation should occur. Lei's responsibilities were expanded soon after the project started. Lei had to hire resources to support the effort, determine and develop the new systems and solutions architecture, and implement a new solution. It was a political hot bed due to the change in leadership and Lei did not have skills to manage the politics of working across government agencies with new leadership who proposed a new direction. Lei stated there was a lot of pressure, there was a feeling of insecurity in the position and about the way ahead and the prospect of the path to move the change initiative forward was overwhelming. Lei had to learn how to better manage resources and be considerate of others feelings while learning how to deal

with the political aspects of the situation. Lei acknowledged experiencing Depression and Acceptance (in order as experienced) which are stages of the Kübler-Ross grief cycle. Depression began when stress kicked in due to the many tasks, roles and responsibilities he had to take on to accomplish the change event. He would ponder how he was going to perform the duties of the job as he took the metro into work each morning and as he left late in the evening. Depression went on for some time, a few months, until more resources were hired and he was able to begin adjusting to the added responsibilities with some support from the client—and finally reach Acceptance. Lei did not appear (in the data), or by response, to experience Denial and Isolation, Anger or Bargaining as represented in the Kübler-Ross grief cycle; nor phases 2 and 3 of the Bridges transition model (The Neutral Zone and The New Beginning). The participant experienced a lot of stress as expressed in the Bridges transition phase 1 (Ending, Losing, Letting Go) during the first year of the project because he felt burdened by so many different things to tackle at once.

Gina is participating in an ongoing (three years) revolutionary change project initiated to change how quickly solutions are developed, tested and delivered to internal and external customers by implementing an Agile, continuous improvement effort. In support of the change directive, the verification and support team has changed how they function such that the tester assigned to the Agile delivery team does not have support from the larger verification organization. There is no supervision or support from team mates having similar experience or expertise. There was one training session on Agile methods but no information or direction on how to make the transformation or how processes and procedures would change in support of the directive. Gina previously

provided supervision and training to verification staff and also participated in testing of solutions. Per Gina, the Agile teams are taking in too much work and there has been no additional training and limited support from management for staff participating in this new direction while acting in a new role. In addition, Gina has been tasked with providing mentoring to new staff under a new college graduate mentoring program, and extending the support effort to include oversight for external verification efforts, and trouble-shooting of external verification issues prior to submission to a solution problem tracking tool. Gina was originally excited by the opportunity to do something new. Excitement soon turned to Frustration and eventually Acceptance in the form of resignation to how things work—feelings associated with phases 1 and 3 of the Bridges transition model (Ending, Losing, Letting Go and The New Beginning); however excitement (phase 3) was experienced prior to, or at the onset of, the change initiative, not at the end (or toward the end) that is yet forthcoming—so excitement is associated with a *Pre-Change* response. Gina also acknowledged feelings associated with the Kübler-Ross grief construct, Anger and Acceptance (as experienced in order). Gina experienced Anger off and on during the course of the project and still experiences Anger as she has acclimated to the way things are. Gina expressed that "it is what it is and will not change," Acceptance, as she has resigned herself to the situation and is ready to move forward and move on. Gina did not experience the Denial and Isolation, Bargaining or Depression stages of the Kübler-Ross grief construct or phase 2 of the Bridges transition model (The Neutral Zone).

Vishal participated in an eight-month data archiving change initiative that revolutionized how data was stored for government agencies, ensuring regulatory and

legal policy for data storage was followed, as the lead tester. Vishal was responsible for a team of three to four people and was responsible for developing a master verification plan, and for instructing and supporting verification resources while performing testing and supervising staff. The change initiative was supposed to occur over a five month period but lasted eight months. Vishal was at first weary of the project but became more relaxed as certain hurdles were overcome. The change effort required long hours, often times working until late at night, completing more work at home and returning to the office after little sleep to repeat the cycle. One major challenge was the lack of access to end users of the new solution who could provide insight and verification that testing was on the correct path. Per Vishal, there was no training; it was "learn as you go" and the change process was not fully defined and had not been done before. Vishal did not acknowledge experiencing any feelings associated with the grief construct during the change event but did recognize that there was weariness and stress during the course of the project, feelings associated with the Bridges transition model, phase 1 (Ending, Losing, Letting Go). Vishal used the terms, weary, relaxed and confident to describe feelings associated with the initial, middle and end of the change effort, respectively. Based on Vishal's interview, the researcher observed that the he experienced Bargaining and Acceptance, responses associated with the Kübler-Ross grief construct, during the change event. Bargaining appeared during the first month or two of the change project as he had to map his role to his responsibilities while learning and doing something new. Once Vishal adjusted to the new job dynamic, over the course of the first six to eight weeks, he moved to Acceptance—pushing forward and readying himself for whatever came his way. Vishal was willing to do whatever was necessary and accept anything that

was handed to him. This dynamic played out for Vishal in the data from this research unlike any other research participant. In addition, Vishal spoke of feeling confident once the change event (that he did not believe would come to fruition) was accomplished. This feeling is associated with phase 3 of the Bridges transition model (The New Beginning). Per data analysis Vishal did not experience phase 2 of the Bridges transition model (The Neutral Zone); or the Denial and Isolation, Anger and Depression stages of the Kübler-Ross grief construct.

The data shows that all phases of the Kübler-Ross stages of loss were experienced by research participants, not necessarily in the order originally presented by Kübler-Ross. As stated by Kübler-Ross, feelings and responses to change may not occur in order and may occur cyclically and simultaneously. The feelings associated with Bridges' phases of transition (Ending, Losing, and Letting Go; The Neutral Zone/The In Between; and The New Beginning) also emerged, but participants did not always experience these feelings in the order outlined in Bridges transition model. Three study participants expressed that they experienced Excitement and Happiness, phase 3 of the Bridges transition model (The New Beginning), prior to the initiation of the change event. In addition, outcomes, as expressions or manifestations of the later stages/feelings associated with transition, were identified and coded by the researcher as Successful. For example, study participants widely identified or used the term, Successful, during the Kübler-Ross Acceptance phase. In effect, participants appeared to use this code in association with completion of the project or change event with which he or she had been involved. Regardless of the emotions experienced or the difficulty of the project, and even if the project was (or is) ongoing, the change initiative was considered a success if some

component of the overall change event was completed. Success, as described by participants, was more situated toward "surrender" or "resignation" rather than a successfully completed task or project. An example of a component of a change event/initiative is when a phased approach to deliver different parts of the overall initiative was put in place once it was discovered that all could not be accomplished on time, on budget, with existing resources and/or within schedule. All that needed to be accomplished included changes to systems and solutions infrastructure, systems and solutions architecture, business processes and procedures, practice, policy and the associated documentation and knowledgebase of information. In addition, internal resources, external oversight groups and end users may have required training on new methods of doing business or requesting and receiving customer and technical support.

Analysis of Findings

In the next nine sections, the researcher presents an analysis of (study) findings based on eight categories—Anger, Bargaining, Acceptance, Denial and Isolation, and Depression; and Ending, Losing Letting Go, The Neutral Zone and New Beginnings—that emerged from the qualitative data analysis. To reiterate, in light of the study's conceptual framework, the researcher aligns the codes with categories representing the components of the Kübler-Ross construct and the Bridges transition model and organizes them in the order of prevalence as represented in Figure 8. Therefore, the following discussions of findings, supported by relevant excerpts from participant interviews, lays the groundwork upon which to answer or, at the least, provide insights into the fundamental research question: *How are the phases of transition experienced by individuals within information technology teams during a major change effort?*

Study Finding 1: Anger / Kübler-Ross Stage 2: Anger

The researcher identified Anger as the most frequent category found in the data analysis process. As described by Kearney and Hyle (2003), anger signifies "feelings of anger, rage, envy, and resentment associated with the change event" (p. 114). For the purpose of this study, Anger represents the second stage of the Kübler-Ross grief construct. This category incorporated several codes (descriptors of feelings) across the interviews, including anger, rage, envy, and resentment. However, only anger was consistently expressed across interviews. For example, participants expressed that they typically experienced anger as a response to company leaders' lack of support; that is, limited or no information, no training, no individual support, limited communication, or lack of inclusion in planning of the change event – thus leading to the theme associated with the category (Anger).

Angela expressed anger over not being given information about the reason for the change initiative and how it would impact her role. There was no direction provided on how the Test Team Lead role should be carried out going forward, nor any information provided about whether current responsibilities, assigned to the Team Lead role, should be completed as before or would change. Per Angela, it was difficult to know what to do or when a specific task should be accomplished when there was limited communication from the supervisor and senior management. There was a lack of clarity, no understanding of how the Test Team Lead fit into a new organization structure that split the team into two groups, one for projects and one for enterprise solution releases. As the change directive was handed down without direction or support from the supervisor, it left Angela with open questions and concerns and no feedback or understanding about

how to proceed regardless of how many times additional information was requested. So Angela did everything including: (a) leading the testing effort for the newly formed testing groups (versus group), (b) developing and updating documentation, (c) participating in both project and release meetings, and (d) providing customer support for multiple internal and external customers. Angela was angry and overwhelmed. Angela did everything, even tasks beyond the assigned role, to ensure everything was done. In Angela's words:

> Anger that the whole project will go forward, and it wasn't clearly defined to everyone. Even isolation, because I felt like there was a lot on me that I was supposed to get done because it wasn't clearly communicated. That is where the anger and isolation came from.

Cara was brought into the organization as a contractor to assist with solution build management and environment engineering. Soon after being brought in, a major change initiative to automate solution provisioning was initiated. Cara was asked if there was interest in assisting with this new direction and the response was yes. Then Cara was thrust into being the change agent not just within the enterprise but with known and unknown vendors, an external oversight committee and for internal teams and customers, without assistance from other staff. Responsibilities included infrastructure management (servers, computers, development tools, databases) and customer relationship management for internal company users of the infrastructure and external customers. Cara had to: (a) work in several roles, and (b) work across disciplines within the organization while being new to the organization, new to the role and not having resources or historic corporate knowledge in support of the "as is" state of the infrastructure and environments. The interviewer had to perform interviews with staff across disciplines and explain why the change project was necessary and how it benefited

the individuals interviewed when asked “what’s in it for me?” There were a lot of people who were against the initiative and Cara had to persuade staff and customers of the positive reason for the change, while learning about the internal culture, infrastructure systems and developing a new method of operations. As Cara stated, “I felt anger. I felt isolated, like there's a new kid on the block, being thrown in. I felt all of the resentment having to prove myself while I need something.”

Gina was assigned to a corporate change initiative as a member of a cross disciplinary team to allow for speedier delivery of solutions, using Agile methods with four-week Sprint development and verification cycles. Per Gina, although a specific methodology was to be used and one training class was provided, there was no means to resolve inconsistent practices to deliver software on an accelerated cycle. New enhancements and requests for changes were constantly being requested which required longer development and delivery cycles thus destroying the reason for the change initiative – to deliver solutions changes rapidly. Solutions delivery was still occurring on a regular delivery cycle every three to four months instead of every four weeks as expected using Agile methodology. There was no means to automate testing, lessoning the time to deliver the solution package, because there were not enough resources to do so. There was one tester per Sprint team of two developers and development did not complete in time to automate before the four-week Sprint was complete. There was not enough testing support for the development staff on each Sprint team and team resources were not experienced within their assigned disciplines (solutions development and testing). When issues were raised to the committee that was established to help with problems, sometimes there was a resolution and sometimes there was not. According to

Agile practices, the Sprint team should have been self-organizing and able to resolve issues within the team because resources should be knowledgeable and experienced. Unfortunately, Agile practices were not fully established or practiced and team resources were not necessarily knowledgeable of corporate solutions and practices or experienced in their jobs. Gina continued to bring issues to the committee established to assist with practice and process issues within the Sprint team and to senior management, but senior management was hands off and the committee often times did not know how to resolve issues. Gina stated:

> I think, for me, as they flow. It's just sometimes in my frustration levels, just puts me to the point of anger because I feel like people are not listening. Because you're trying to do as much as you can on a shoestring budget instead of having brought in additional resources. That's not being done, and I don't get to see the budget. I have no idea what the funds look like, but I just feel like they're trying to deliver things on a shoestring budget. But, of course, it could be possible, but in the end you're burning out your resources. I think what's happening right now is that people are starting to get burned out.

When a change event was thrust upon the individual, or when the change event was initiated by the company or agency with little to limited input from the individual IT employee, anger was a common response as evidenced from feedback from Angela. Two consistently cited reasons for experiencing the feeling of anger related to (a) lack of communication in terms of instructing or directing the individual regarding the need for the change event and (b) lack of guidance relative to how to best implement the change event. Additionally, when Gina provided input on workplace issues or concerns, and the enterprise or management function provided no response/no help in resolving the problem, Gina noted that anger was the response she experienced during that transition process. This code (and category) of Anger was present in most participants' interview responses—regardless of their levels of experience, whether she or he was an internal

employee or contractor, or whether she or he was a member of the Health Information Technology (HIT) or Information Technology (IT) group of participants.

The data also showed that some participants experienced feelings—anger, frustration, and stress—associated with the first phase of the Bridges transition model: Ending, Losing, and Letting Go. As previously defined, Anger is typically associated with feelings of rage and envy. Frustration is defined as "the feeling of being upset or annoyed as a result of being unable to change or achieve something" (Oxford Press Dictionary, n.d.) or "the prevention of the progress, success, or fulfillment of something" (Oxford Press Dictionary, n.d.). Stress is defined as "a state of mental or emotional strain or tension resulting from adverse or demanding circumstances (Oxford Press Dictionary, n.d.).

As an example of workplace frustration and stress, Gina pointed out that although the issues experienced during completion of the change initiative were discussed within the team and reported to senior management. More than once, senior management did not directly engage in resolving the issues but instead assigned a committee, not directly involved in the change initiative, to help resolve issues. This lack of response and support caused anger and frustration as Angela did not feel heard. Additionally, Angela continued to feel stress as leadership passed down the change initiative without planning and explanation. Upon several requests to have the participant's assigned role defined, along with responsibilities associated with the role, no information was provided for the first year of the change initiative. Without knowledge and understanding what to do, there was a great deal of stress and anger because the path to completing the project was not clearly defined. Other participants pointed out that the experience of not being heard or

acknowledged was frustrating, leading to increased feelings of stress when nothing was done to address or reconcile employees' concerns with the company's change in direction.

Study Finding 2: Bargaining / Kübler-Ross Stage 3: Bargaining

Although categories two and three (Bargaining and Acceptance) are tied for second place in the findings—based on prevalence of occurrence across the study data—the researcher next discusses Bargaining because, in terms of the stages of grief in the Kübler-Ross construct, Bargaining (third stage) appears prior to Depression (fourth stage). Furthermore, in the context of the grief construct, Acceptance is the fifth and last stage. Kearney and Hyle (2003) defined Bargaining as "attempts to trade one action for avoidance of the change event" (p. 114). This theme encompassed the following coded descriptors: bargaining, deal making, schedule slippage, no end date, ongoing, trade, avoidance, handling expectations, go-back, and negotiation. Study participants took part in Bargaining as a response to completion of a task or delivery of work toward a hardware, software, or solution release to another internal customer (a group within the organization receiving input or support from the study participant) or an external customer.

Per Cara, a release is a software package or bundle; or an environment configuration. An environment is the infrastructure, hardware servers and databases that support a software solution or tool. Bargaining was associated with negotiation. When a task that was necessary to be completed during the change event could not be completed, or could not be completed within the timeframe allotted in the schedule, then bargaining of what could be completed and when it could be completed, was negotiated. Negotiation

and bargaining also occurred with resourcing and availability of infrastructure (i.e., hardware or software) when a specific environment would not be available for use because it could not be properly configured, tested and delivered; or when a resource was not available to complete a task due to other commitments – work or tasks - within or outside of the change initiative. While some of the research participants engaged in or experienced Bargaining as a response to a change event, other participants indicated that such a practice or response was not acceptable by the enterprise or agency.

Cara stated that there was negotiation on what could be scheduled and completed within the project timeline from initiation of the project until delivery. There were multiple customers to deal with in creating and aligning the change initiative schedule. Every time a new task was added to the project schedule or a change was made to the direction of the change initiative to accommodate for everything that needed to be accomplished, some bargaining had to occur. Per Cara, to accomplish one main task, sometimes, other tasks had to be deferred or put on hold until the schedule and order of tasks could be re-forecasted. Additionally, Cara stated, to accommodate one person or group involved with a specific task to complete the change initiative, a deal had to be made with another person or group. And Cara did not have any direct support as it applied to resources or others who performed the same role as her. Cara was responsible for determining what needed to be done and when it needed to be done while meeting internal and external customer needs without direction on how things should be done and having others who could assist in getting things done. Cara stated:

> Bargaining, I had to negotiate as I learned more. Even though they wanted a year, I had to come back and say, ‘Well, based on what we've learned, we think it's

> XYZ, and we think it needs to be a phased approach.' There was lot of the back and forth.

In addition to having to negotiate to get things done, Cara was anxious for several reasons, including the timeline associated with the change initiative schedule and having the resources to support tasking associated with the change project. The balance between getting it done and having the resources to support the effort, while being a contractor not directly responsible for enforcing the completion of work, was a difficult task which required patience and perseverance to ensure that others felt they were being heard when they stated they did not feel the need for a change and/or understand how it would benefit them; and to ensure there was an understanding that a change was necessary and would benefit everyone. Cara was also experiencing the first stage of Bridges' Transition theory (Ending, Losing, Letting Go) while serving as a change agent, handling others concerns and issues and continuously bargaining. Cara also stated, "They're trying to abuse the resources though. No, that's the negotiation, and that's been shifting on a weekly basis. I'm very anxious about that."

Another example of ongoing and continuous negotiation/bargaining, at a lower level within the corporation is with Donna who was assigned the task of verifying new enhancements and modifications to the existing solution code base in support of a major change initiative to move insured record/data entry and records management from a mainframe system to a Web interface. Per Donna, the change was massive. Line-by-line verification was needed for every data field in the old system to ensure the new system data entry form mapped to the fields in the old system. The testing and verification was meticulous and took a lot of time to ensure data wasn't lost, fields weren't missed and data was complete and correct. There was a lot of planning and investigation by the

business analyst and the tester to ensure all requirements for the system re-engineering were accounted for and the data was correct. So there was multi-team, cross-team involvement over a two year period. Then two parallel systems were run.

Donna was extremely busy and took pride in ensuring that when the tested solution got to the consumer, errors were not found. When a change was made in how something should be handled, a change in code, the testing had to restart for the effected component or module within the solution. Regression testing, retesting of a piece of a larger solution, required a change in the participant's normal work day which required negotiation to determine what could be done in a reasonable timeframe. Often times, there was a tradeoff where one task might be accomplished but another would be deferred. Other times, the time to complete testing time was limited, so the bargain was to spend less time completing the testing task and to cover only those components that were high risk or most used first, just in case all testing tasks could not be completed within a predetermined timeframe; or testing would be limited to a higher level without digging deeper to verify a change at a lower level. For example, to accommodate for the bargaining of time to support testing of enhancements or modifications to the change initiative code base, Donna might look at the Web interface for a specific field on a screen and verify that the field would allow data entry for the field but not trace the data to the database and then back to the interface via a search for data in the field. Bargaining and negotiation were never ending tasks through the course of the revolutionary change. As stated by Donna, "Bargaining—that is an ongoing thing, bargaining. When we need two weeks to get this done, it's going to be maybe five days. Just, "Okay fine. Well, as long as you can get it to me here, then I could get this done here."

Across the data, research participants expressed the need to negotiate when inadequate time was given to complete a task or deliver a solution. They talked about dealing with layers of customers and managing input from entities such as external oversight committees and senior leadership; all this, in addition to interacting with internal customers in other groups within the organization, as well as dealing with those customers who consume the solutions and services offered by the enterprise. Overall, Bargaining occurred in response to feelings of anxiety associated with daunting, undefined, and/or under-resourced tasks along with associated deadlines and expectations of compliance on the part of leadership.

Study Finding 3: Acceptance / Kübler-Ross Stage 5: Acceptance

As a study category, Acceptance represents the fifth and last stage of the Kübler-Ross grief construct. Yet, it emerged as the second most frequently experienced feeling/behavior (tied with Bargaining) associated with responses to change in the information technology environment. The coded descriptors that mapped to the stage of Acceptance resonated as emotionless responses from participants, such as "it is what it is," and acceptance. All study participants experienced this feeling, by default, according to the data. In other words, each participant indicated that, ultimately, compliance with change was inevitable if she/he expected to retain her/his position in the enterprise. As such, if a change event was thrust upon them, or if they were assigned to carry out tasks associated with a major change, participants concurred that they had to accept the change.

As a contractor, Deepak led a major IT change project to accommodate for the handling of more and larger data sets, as existing databases were overflowing with data, and a relational database storage system that would grow with data (a data warehouse)

was needed to expand as data grew. The Deepak was responsible for leading the effort, bringing on and training additional resources in support of the change initiative, providing support for other internal teams, and providing Tier 2 and 3 support for external vendors providing the databases and infrastructure (servers) that the data resided on, all while determining how to accomplish the tasks necessary to successfully complete the change initiative. Deepak did not think the task could be accomplished as there was so much to do. Deepak's original role was simply to lead the effort from a technical perspective, not to participate in the actual hiring and development in support of the change initiative.

In a leadership role, Deepak would normally determine the design and/or architecture for the project and guide other staff on executing against the technical design plan. With increased responsibilities and ongoing addition of resources, plus around the clock work in support of the third-party solution and infrastructure vendors, there was little time to think about all that had to be done and all that had been accomplished. Before Deepak had a chance to think about it, the change initiative was complete. A weight was lifted and the next step was to concentrate on fixing the process to make changes to the data warehouse, change standard operating procedures to accommodate for the change to data handling and to organize and train resources to support what had been done – the change initiative to implement a new way of receiving, managing, storing and retrieving data within a government agency had been accomplished. Acceptance occurred before there was time to think about it, but there was still work to do. Deepak stated, "Yes, then there was no other way, so it was more like okay, you just had to accept it."

Cara was originally brought into the organization as a contractor for a specific role as a Migration Manager, but was placed in brand new role as a change agent to move the organization to automated version control, which meant that tasks being manually performed by an individual would be automated in a tool to support solutions delivery to customers. Cara, although a contractor with no direct reports or ownership of the tasks being automated or responsibility for the resources who manually completed the tasks, had to determine how to accomplish the change initiative, work with vendors to determine plans of action for each part of the change project, and work to get buy in from disparate resources who did not understand the need for a change or how the change would help versus hurt those responsible for the manual equivalent of tasks that would be automated. The tasks to complete the change initiative were daunting, overwhelming. It was a two-year process that was supposed to take nine months.

There was no one else in the role before or during Cara's tenure in the role as change agent/Migration Manager. There was no one to ask how to accomplish a task, what the pitfalls may have been or to provide information on the relationship with the vendors that would participate in the change initiative. Cara was the first so successful completion of the change project was based on how Cara could handle ongoing learning, on the job training and bringing together disparate internal and external entities to accomplish tasks. As time progressed, and the first then the second and third tasks were accomplished, there was more acceptance by those who were affected by the change initiative. Cara stated, "When people in the organization started to see results, there was acceptance and adoption."

As indicated by the data, Acceptance "by default" actually underscored the overarching theme of Acceptance. To clarify, participants knew, based on enterprise practices, that employees and contractors were expected to do as they were instructed and by any means necessary; that is, within policy or governmental regulations. For contracting staff, the expectation was that tasking and the approaches necessary to implement a major change event had to be accomplished because that was their charge as the contractors. However, some of the participants described treatment of the contractor, along with the need for additional resources to reach the end goal, as stressful because of the extended hours (overwork) necessary to complete tasking; and the additional (and often times undefined) responsibilities added to their assigned roles. Consequently, while there was acceptance as expressed by contracting and employee staff, it was given by default as they felt there was no other choice.

Study Finding 4: Isolation / Kübler-Ross Stage 1: Isolation

The fourth category to emerge from the analysis of interview data was Denial and Isolation. Denial is defined as "refusal to accept the change event" (Kearney & Hyle, 2004, p. 114; Kübler-Ross, 1969, p. 52). The researcher coded the following descriptors in association with Denial and Isolation: denial, disbelief, isolation, limited or no support, no training, no help, limited resources, and one-to-many. Several study participants described experiences of Isolation in relation to the following scenarios: (a) when they were the only person in the role, (b) when they were establishing a new role within the organization, and (c) when they had limited to no support from management/leadership in the change event. Not all study participants experienced isolation; however, two study participants used the term isolation to describe their experiences during the initiation of

change while a total of four study participants described feeling isolated (establishing a new/unique role without direction or support), without using the term or suggesting that what was experienced was isolation. All who experienced Isolation first had the feeling upon initiation of the change event at the beginning prior to moving on to Anger and other phases of loss.

Angela, a team lead for a testing group responsible for insurance enrollment verification, took on a new role as a team lead for a testing group that was split into two teams with different testing and support paths. Angela began to supervise two sets of resources that she was previously responsible for and also not responsible for. Based on the change initiative and the new corporate direction, resources, some of whom were junior untrained staff, were required to self-manage with limited to no direction from the team lead. Angela was initiated into the change event without information on the new role or the responsibilities associated with the new role. Angela's title did not change, but everything around her did. Angela's responsibilities to staff changed but were not documented or shared with her. There was a new testing and release structure where the team was split into supporting testing and verification for (a) quarterly releases (software solution packages) that would go to external customers, and (b) projects that had multiple start and end dates and supported multiple internal and external facing efforts and customers. Angela shared:

> Anger that the whole project will go forward, and it wasn't clearly defined to everyone. I would think mostly, even isolation, because I felt like there was a lot on me that I was supposed to get done because it wasn't clearly communicated. That is where the anger and isolation came from.

Lei was an IT contractor who was assigned to be a technical lead for a contract to transition manual pricing to a web-based, automated solution for a government agency.

Upon initiation to the project, the person who hired Lei left the agency and Lei was thrown into a new role. A very visible and unique role, taking on some responsibilities associated with the departed chief information officer (CIO), some responsibilities of the resourcing officer, and spokesperson responsibilities for the agency - in this revolutionary transformation that impacted multiple customer agencies. While being initiated into a new contracting job, Lei had to also re-acclimate to an expanded, unique set of additional responsibilities not normally assigned to a contractor. Lei had a difficult time being personable and thinking of others needs and the support necessary to be given to staff as a supervisor, and managing the resources beyond providing technical direction on how to accomplish the transition programmatically (via development and computer engineering).

In addition to working on human resource/capital development and management, Lei had to learn how to maneuver the politics involved with senior executive service staff within the government and staff at different levels across government agencies. Additionally, Lei had to work with external vendors in support of the transition effort. What was a technical lead job turned into an acting Chief Technology Officer (CTO) job – as a contractor. The change in, or expansion of, role turned into a redirection when the new CIO thought it best to take a new direction in how to implement the change in technology and processing although the new transformation tasks were already determined, scheduled and resourced. This put Lei in a precarious situation as the only one who knew of the original plans and how it was determined that the best path to successfully complete the change initiative was already laid out. Lei had to persuade the new CIO that the planned path to change was the correct path while being an ambassador requesting buy-in from internal agency resources and external agencies' senior executive

staff. Lei was the cross agency change agent expected to bring everyone on board for the revolutionary change event. Lei was the first from the company to begin work on the contract and the first and only person to serve as acting CTO as a contractor. There were several firsts and initially it was an independent, unsupported responsibility to act in the appointed role with the additional responsibilities. There wasn't anyone else who was having the same experience. Lei stated:

> I was the technical lead and also the technical manager of the project. Before I joined the project, the former CIO was fired. A new CIO had just joined, and he brought us in. So, I was chosen, and he asked me if I would be the technical lead for the people to help them implement the project. Initially, there was only one person from our company. He was a security guy. So, I was brought in as the first technical person. So, I had to do a lot of interviews and attend a lot of meetings, and later on we hired some developers, and so I needed to do some [attend] customer meetings and design the architecture. Also, because the previous CIO wanted to do a different approach. We had three servers, and he wanted to do a bit of that, for me to make change to all of them. That did not result in any success, and the new CIO wanted to do more Agile and quick delivery success; and one by one, instead of three at a time. So, I was more helping with the transition, re-architecture; and re-design; and, also, I had to do some hands-on work as well.

Isolation was a concern for participants who had been thrust into new roles in order to accommodate their respective firms' decisions to implement revolutionary change events. In those situations, each of the individuals had been charged with taking on a new role and new responsibilities without the provision of historical reference and resources to aid her/him in moving forward. For participants supporting both internal and external customers, the experience or feeling of isolation was an issue because the time and backing needed to accomplish some tasks internally, while also providing external customer support, was lacking; as such, others had to be brought in, and this was not easily done. Although isolation was not acknowledged by some of the participants, it was experienced based on observation of the participant and review of the data.

Some study participants stated that they did not feel isolated but described conditions acknowledging they were. For example Angela stated that the Team Lead role was the only role directly affected by the change initiative to split testing teams into two groups, and the new responsibilities associated with the Team Lead role were not communicated to the Team Lead nor were they documented as part of the overall change initiative. As the Team Lead role was the only role impacted and other resources would continue doing their work as previously assigned, the situation points to isolation as a factor in the change project. There was no one else in the role, no one who could provide direction and no support given to the Team Leads in the transition process to the new, undocumented responsibilities. This, by description, is isolation.

Study Finding 5: Depression / Kübler-Ross Stage 4: Depression

Representing the fourth stage of the Kübler-Ross grief construct, Depression emerged as one of the third most experienced feelings associated with responses to change in the IT work environment (along with Isolation). The coded descriptors that mapped to the Depression category include: overwhelmed, helpless, tired, loss, low, and depression. Depression is defined as "the replacement of anger with a sense of loss" (Kearney & Hyle, 2003, pp. 114-115). Only one participant (Lei) acknowledged depression during the course of a revolutionary change event in the workplace, but a second participant (Angela) experienced depression as observed by the researcher during the interview data collection process. Angela stated she felt "low" or "down" and experienced depression when faced with no alternative other than to proceed forward with a particular change event without direction or support; and Lei acknowledged feeling depressed while taking on multiple roles across agencies while fighting to move

forward with the change initiative as originally planned. Both participants, Angela and Lei, experienced that depression was a response to feeling overwhelmed.

Angela, as previously described, was not provided with a description of responsibilities associated with the team lead role and did not know what tasks were the responsibility of the Team Lead role and which were not; nor was there anyone in the role aside from the Angela, initially. Without leadership, direction or support from the supervisor or senior management, the response was to take on all tasks including but not limited to business analysis of functional requirements for the project or release (as the team was split into projects and release teams), testing and verification of the project or release deliverable (solution package or bundle), documentation creation, and support of internal and external customers for projects and releases. There was a lot to do causing continuous overwork in the office and at home in a home office for the first year. Some definition of responsibilities did not occur until the change initiative was in year two of the transformation. Angela, who did not acknowledge depression, was thrust into a major change effort without direction or support from her employer. It was a "learn as you go" and "more information to be provided" experience. According to Angela, it took at least one year to get some clarity about the new role and its associated responsibilities. Under such circumstances, the change in direction took a toll on the individual—personally and professionally. Angela stated, "I was upset. I was feeling down because I didn't know which direction to go or what my responsibilities were."

Lei, as a contractor taking on multiple roles (technical lead and Acting CTO), working across agencies as a change agent and spokesperson, performing human capital development and management responsibilities for a growing team; while completing

hands on design and development for the revolutionary change, as the technical guru, was overwhelmed by the tasking and support that had to be given to internal project resources and external vendors and agencies. Lei had to be on the go, constantly promoting the change effort and ensuring tasks were completed in the right way and in a timely manner. Lei was constantly on and doing something to move the initiative forward. Lei acknowledged feeling depressed during the course of a revolutionary change event at his firm. Responsible for leading the effort, he had to provide technical expertise and leadership across teams and agencies with limited support. The support or aid that was given took the form of sponsorship by the internal client in dealing with political issues experienced across agencies. Lei stated, "Initially, I was somehow depressed after [so] much pressure really [quite often]. After I made progress, I really felt good as [there was] acceptance of [the new] culture."

Study Finding 6: Ending, Losing, Letting Go / Bridges Transition Model Phase 1

The first phase in Bridges transition model (Ending, Losing, and Letting Go) was evident during review of the Depression theme that emerged from the data. The observed feelings were frustration, stress, and anxiety. All eight participants experienced one or many of the listed phase 1 Transition feelings (frustration, stress and anxiety) as observed by the researcher in the data analysis stage of this study.

It is significant to note that several participants used the term, anxiety, in lieu of the term depressed/depression. Anxiety is defined as "a feeling of worry, nervousness, or unease about something with an uncertain outcome" (Oxford University Press, n.d.). These participants cited anxiety as a feeling they had experienced during past and present change events, pointing to situations that induced ongoing stress and cycles of loss during

major, revolutionary transition efforts in the IT workplace. Cara did an excellent job of expressing what it felt like to act as a change agent with expanded responsibilities beyond those initially imposed without support and feeling anxiety while interviewing staff and answering their concerns about why the change initiative was necessary and how it would benefit them. Cara stated:

> The hardest part of the project was convincing people of the Why? Fears and anxiety over their job, why do I have to learn something new? And why this solution when we've always done it this way? We have tried this before; how is this going to be better? There was a lot of doubt. We've seen this before. It's not going to work from the get-go. Of course, and I was new to the organization, so you're the change agent. You're marked the enemy right away. I felt like I was being put in a tough spot, and you have explicit instructions to get everything fully migrated at some set cut-over by end of the year. You have end-users, developers, and a lot of anxieties. You don't know how to do it. Then you also had to work with a vendor to do the migration, so there was a lot of resentment. A lot of unknown; a lot of anxiety, "What's in it for me," none of that was clear. I'm currently going through a major transformation shift. Now the entire organization structure is literally being flipped over, totally changing how we do business and trying to make a move to a new tool approach and align our service delivery in boatloads. Currently going through that—a lot of anxiety, a lot of unknowns, and the messaging keeps changing every other day. That's currently what I'm going through.

In addition to anxiety, stress was a response associated with feelings of depression, or actually communicated in lieu of depression. Stress is defined as "a state of mental or emotional strain or tension resulting from adverse or demanding circumstances" (Oxford University Press, n.d.). Several research participants cited stress as the result of a lack of understanding on the parts of both leadership and customers regarding what needed to be accomplished in what time frame and with limited resources to support the effort. Overall, the lack of a clearly defined role and its associated responsibilities, along with not having sufficient amounts and types of resources to support the major change effort, led to overwork and a generally stressful work

environment. The following interview excerpt highlights Angela's increasing sense of stress over the company's lack of direction and the limited information initially provided about her new responsibilities specific to a new project initiative.

> The major change was a project initiative, but it is called a project because it was initiated when they actually split our team up into two separate teams for releases and project work. I was very, I guess you would say, stressed about it because it was new to me, and very little details were provided on how it would be implemented.

As Angela described the ongoing implementation of the project initiative, she indicated a sense of improvement—over time—while still acknowledging the project's very stressful beginning stages. In particular, Angela emphasized the need for clarity surrounding role definition and changing responsibilities; in essence, describing how the lack of such essential information, along with the lack of consistency in management, prolongs the length of time needed to accomplish the project. Angela expressed these thoughts in the following interview excerpt:

> When it started up, it was very rough, and it was just very stressful for me. But as it went along—it's still a work in progress to be honest—but as it's been going along, it has become better. They're more defining what the roles are. But it's been a long process because we changed so many managers. It's still a longer process than was necessary, so because you have new people coming on, and they don't understand the process. It's taking a lot longer to actually work the way it's supposed to. When you're in the transition phase, just having a role clearly defined would be helpful. I think you asked that question. Because my role wasn't clearly defined, it created a lot of confusion and stress. Just making sure that everything is defined before you go to your transitional phase, or before you go in the project, helps the entire team.

Some of the study participants shared how the stress associated with longer work hours and heavier responsibilities impacted their personal lives. As revealed in the next two interview excerpts, Deepak and Lei spoke to the demands of work changes in conjunction with the quality of their personal lives. Deepak stated there was not enough

home or family time during the major change initiative. There were long work days in the office and then more research and planning at home after work. Deepak could be called any time, day or night, to support vendors who were a part of the change initiative in trouble shooting and resolving issues found with the infrastructure, database or solution. So work did not end when Deepak left the office, it ended once the project was done. Deepak's spouse supported him in the work ethic but did point out that there was a lack of rest/sleep and that he was constantly on the go. There was little to no work-life balance because it was all about getting the project done – successfully – as stated here by Deepak:

> I would say there was a little bit of stress because of my personal life that I did not like. Since I was putting in a lot of extra hours at work, and I just could not get enough time at home…The way we handled it was pretty much to work 24/7. We had teams that were running almost all day and night.

Lei, although considered the guru, had to determine the path from the current solution (manual price submissions via the postal system) to the new solution (automated pricing via a Web interface). This required extra hours because work during the day in the office was to provide direction and input to staff while serving as the cross agency liaison and change agent, vendor point of contact, and technical lead. At night, after work, sub-tasks in support of the change project were planned through research of the "as is" versus "to be" states of the solution architecture. Cross walks of the current and future states required determining how each component of the systems and software could be moved by understanding the data, the schedule and the project and vendor resources. Pre-planning at home supplemented team planning at work. There were not enough hours in the day to support all that needed to be done in a work day. Additionally, Lei originally went in to supervise the effort and ended up also assisting with completing design and

development in support of the change initiative which required additional time beyond normal work hours. Lei stated, “At that time, it put a lot of stress on me. I had to do work eight hours a day and after work, I would go and do research. So, that was a lot of more work that I hadn’t done previously.”

Study Finding 7: The Neutral Zone / Bridges’ Phase 2

Acceptance, as it relates to the Bridges transition model, is the stage of transition that occurs when an individual begins to think of things in a new way and prepares for a new way of doing things. Per data analysis using, Bridges definition of Acceptance occurred for only one study participant (Deepak). Deepak began thinking of things in a new way at the end of the change initiative, while determining new processes and procedures and documenting the way forward as part of the cleanup effort involved with a very chaotic 15-month period. Because the change required ongoing development and solution testing, practices and procedures were handled in an ad hoc manner not adhering to normal solution development life cycle practices, but once Deepak had time to breath, he was able to move forward and move things toward a new order which included following policy, processes and procedures. Deepak was mentally and emotionally ready to move forward.

Study Finding 8: The New Beginning / Bridges Transition Model Phase 3

Excitement, Happiness and Confidence are feelings experienced during phase 3 of the Bridges transition model. These feelings were experienced by four study participants, Cara, Donna, Gina and Vishal. All four were excited and happy prior to initiation of the change initiative and this does not follow the Bridges transition phases in the order represented. Since the experience of this particular feeling occurred prior to the initiation

of change, the researcher has termed it *Pre-Change* and has inserted it prior to the initial Transition phase – Ending, Losing, Letting Go. This experience of excitement or anticipation prior to the start of a change initiative and then a change in feelings as change begins has been described in the Hype Cycle in the Trough of Disillusionment stage (Finn & Raskino, 2008). The Hype Cycle is described as when a new innovation is introduced, excitement builds and organizations jump on the bandwagon to incorporate new technologies, thus causing the change acceptance curve to slope up. The Trough of Disillusionment occurs as negative feelings occur (Kearney, 2013) and the change curve begins to slope down as issues are found and multiple iterations of the new innovation are introduced to resolve problems. The Trough of Disillusionment may be used as the basis for a precursor to the first phase of the Bridges transition model as it expresses how technical staff experienced transition as associated with the initiation of change.

In addition to excitement and happiness, Confidence was experienced by two study participants (Donna and Vishal) after they were able to reach individual goals associated with a revolutionary change effort. Both felt they had accomplished a great deal and that their work was above average. Because tasking was difficult and they were each able to provide great support for the change effort, Donna and Vishal felt confident that they could accomplish a lot more. Donna went on to retire and extend (fully start) a new business, and Vishal moved on to another, new and different, project/change initiative.

Study Finding 9: Change Link: Outcome Successful

An additional code emerged from the data, *Success*. Success was the code associated with completion of the final stage of the change initiative, regardless of

whether the overall change effort was considered a good or bad experience by the research participant. The additional code was not included in the initial list of codes but was emerged during data analysis as it mapped to a consistent theme across all eight study participants. Success was surrender or resignation that the change event had reached some form of completion; Success equated to completion.

Summary

Findings from the data analysis indicated that the information technology workers who participated in this study experienced emotions/reactions associated with the stages of grief as represented in the Kübler-Ross grief construct and Bridges transition model during transition processes directly related to major, revolutionary change events in the workplace. Findings also showed that IT workers' experiences of the stages of grief spanned changing work roles, prior work experiences, and types of technology. Some of the participants experienced all stages of grief, while others appeared to be stuck in certain phases for extended periods of time—or repeated stages—depending on the length and success of the change event. While any change event that reached some form of completion—known as an end state—was considered successful, there was no evidence supporting the goodness or positive improvement provided by the change.

In Chapter 5, the researcher restates the study's limitations; addresses transferability; discusses general, applicable interpretations of the study findings; provides research conclusions; and offers recommendations for future research on the impacts of change and transition specific to individuals and teams in the IT work environment.

Chapter 5: Interpretations, Conclusions, and Recommendations

This qualitative research study served to develop a better understanding of the effects of change on information technology workers, as individuals and members of teams, who were charged with supporting both internal change efforts (mandated by the firm) and the experiences of end users in adapting to the modified or new system. Typically, change efforts within the field of information technology target systems and solutions development, verification, database administration, access, and technical and customer support (Chaudry et al., 2006). Specifically, the researcher studied the effects of change and, in particular, the dynamics of personal transition processes within two selected information technology work environments: (a) a non-profit Health Information Technology (HIT) firm and (b) two IT government contracting firms with staff serving on one contract (project) within a federal agency. Across the two environments, the researcher confirmed eight study subjects, four from the HIT firm and four from the federal IT (contract) project. As to the design of this qualitative study, the researcher targeted a more unique approach by culling data specific to individual IT workers within these two work environments; in other words, data pertaining to IT contracted staff in contrast to data pertaining to HIT staff. In taking this approach, the researcher (as an experienced IT specialist) recognized that the provision of solutions and customer support would be directed toward two different perspectives or areas of priority, based on the firm type: (a) infrastructure and solutions support (IT) and (b) data management and insurer support (HIT).

This chapter is organized according to the following sections: (a) a brief review of the purpose and significance of the study; (b) an overview of the findings, as reported in

Chapter 4, based on the study's conceptual framework (Kübler-Ross stages of loss, with references to the Bridges transition model); (c) an interpretive analysis of the study findings, including analyses within and across groups of study participants, with respect to the research question; (d) a discussion of the study's limitations as experienced and noted by the researcher throughout the process; and (e) the researcher's recommendations for future research specific to change and transition issues in the IT work environment, speaking to both theory and practice.

Purpose and Significance of Study

The purpose of this research was to explore and potentially deepen our understandings of the transition process—inherent to change events in IT work environments—as this process relates to the experiences of individuals/IT teams under study. Clearly, the study purpose underscored the research question: *How are the phases of transition experienced by individuals within information technology teams during a major change effort?* In turn, and to address this question, the researcher used the qualitative interview as the primary data collection instrument; one that would encourage participant accounts/descriptions of the dynamics involved in their change efforts (implementation and support activities), including working with people, processes, and systems. In turn, the researcher aligned study findings directly with the Kübler-Ross grief construct and included those findings related to the Bridges transition model.

Change events that occur within technology-driven organizations position IT workers as front-line staff charged with the responsibility of dealing with both people and systems in order to facilitate the mandated change and move the organization forward. Thus, tasked with handling multiple areas of technological concern and interacting with a

variety of people, IT teams face intensified demands when implementing and supporting change while, at the same time, they are transitioning through the change event themselves. Therefore, the findings of this research study are potentially significant to administrators, IT teams (practitioners), and scholars because they offer empirical evidence regarding the actual lived experiences of individuals who have navigated change and transition in the IT environment. On this point, the findings of this study might offer insights into the following areas: (a) how to more effectively introduce and prepare workers for change in the workplace (administrators), (b) how to navigate the transition process in terms of mandating, promoting, and supporting the change effort (IT teams/practitioners), and (c) how to extend scholarship and promote advanced research in support of the technology field.

This research contributes to theory by providing additional and specific data regarding how individual IT team members experience transition as observed through the Kübler-Ross grief construct and the Bridges transition models as theoretical lenses and contributes to practice by providing data/information on how individuals within IT teams may best be supported by leadership during revolutionary change. Additionally, this research study provides additional gaps that need to be further investigated/researched/studied to expand and better define the experience of individuals within IT teams participating in change. The experience of the IT team member and the success and on-time delivery of the change initiative go hand-in-hand.

Overview of Study Findings

In the following section, the researcher interprets the relationships between the codes and clusters within each theme and provides details on participants' individual experiences and the impacts of these experiences on the change event and the individual her/himself. Overall, the purpose of this stage of analysis is to make meaning of the findings in relation to the study's research question, the literature review (relevant theories and studies), and the conceptual framework. On this last point, the conceptual framework takes center stage as the focal organizing feature and contextual basis for this analysis. Essentially, by making meaning of this qualitative study's emergent patterns and themes, the researcher aims to provide insights into the problem, address any potential inconsistencies uncovered during the study, and offer reflections upon both the theoretical and practical implications of the findings as they inform the human aspects of change and transition in the IT workplace.

Analysis/Interpretation of Study Findings

In this analysis, the researcher organizes discussions within sections based on the ordering of the Kübler-Ross grief construct, also indicating the corresponding thematic study finding as categorized in Chapter 4—based on the prevalence (or frequency) of data responses pointing to specific data points. To reiterate, the following analysis of findings is grounded within the study's conceptual framework prioritizing the grief construct and those feelings associated with the phases of transition as represented in the Bridges transition model.

Kübler-Ross Stage 1: Denial and Isolation / Study Finding 4: Isolation

Study participants did not experience the first stage of the Kübler-Ross grief construct, Denial and Isolation, in combination as presented in the original construct. While two participants experienced Isolation, none experienced Denial regarding the change event. They expressed feelings of Isolation relative to initiating a new role (with which she/he was unfamiliar), or when acting as part of a team in which the individual participant held a role that was separate from other team members; thus, not having direct support or guidance from peers. In addition, participants identified the experience of Isolation when there was lack of support by leadership and management and/or when there was a perceived lack of direction regarding how to operate either in the new role or in the new context of doing business. According to many of these study participants, feelings of isolation resulted in the individual seeking mentorship from a resource who may not have held the same role, but who could act as an advocate and provide some direction on how assistance might be found. For some research participants, isolation was experienced as an ongoing phenomenon, but one that had been accepted as inherent (thus unavoidable) to the initial and follow-up change initiatives. Based on their responses, the researcher suggests that Isolation impacted the individual's ability to do his/her job—delivery of services or solutions on time—and the ability to provide support for internal and external customers. As explained in Chapter 1: Introduction and Chapter 3: Methods, the term "internal customers" refers to the internal teams (within the organization) requiring input or aid from the individual charged with meeting change objectives. In contrast, "external customers" include corporate or agency oversight committees and

consumers or end users of the services or products provided by the organization.

Kübler-Ross Stage 2: Anger / Study Finding 1: Anger

The majority (seven) of the study participants communicated that they had experienced the second stage of the grief construct, Anger, during significant change events at work. As represented in the data, participants described feelings of anger in response to limited enterprise/agency support during navigation of the change experience specific to their new or expanded roles. In particular, limited support strongly correlated to lack of communication of key information from leaders/administrators that would seem necessary for the successful completion of the change event. More specifically, participants cited limited to no communication from senior leadership on the direction, issues, and concerns for the change initiative as a primary reason underlying their experiences of anger. Overall, limited support encompassed the following situations: (a) insufficient training to aid in completion of job responsibilities, (b) lack of additional resources to provide complete or expanded coverage to internal customers (internal connected teams) and external end users or consumers, and (c) insufficient training on new tools and processes in support of the change event. Lack of support and communication and the response (Anger) provides a response to the research question by showing the cause/causes for a specific experience/effect within the transition process and informs administrators of how the concern may be addressed. Notably, the Kübler-Ross stage of Anger, positioned as second in the change life cycle of the grief construct, aligns with the study's theme of Anger as the most frequently experienced feeling reported by study participants. Specific to the organization, the impact of employee Anger would involve the following issues and scenarios: (a) varying levels of employee

satisfaction or lack of it, (b) disruption in tasking, and (c) the associated loss of momentum toward completion of a change project.

Individuals within both teams (IT and HIT) experienced Anger. All four HIT team members experienced Anger while three IT team members experienced Anger. To look at the data in a different manner, all the female participants experienced Anger and two out of three of the males experienced Anger. The males that experienced anger released anger stating that they moved on from episodes of anger to negotiation (as an action). The female IT participant (Priya) experienced anger off and on throughout the project – moving to negotiation (as an action) and acceptance; while all of the HIT participants continued to experience Anger, cyclically, throughout the remaining phases of the change initiative.

Based on the interview data, the researcher interpreted the primary impact of the experience of anger as desensitization of the individual IT worker caught up in the change event. In other words, the individual eventually accepted the anger and/or moved past the anger in order to accomplish the directives put forth by the organization. Recognizing that her/his expression of anger could impact the functionality of the enterprise and the project at hand, the individual had to acclimate to the feeling of anger—then either suppress or move beyond it—in order to complete tasking and (implicitly) retain her/his position within the organization. Generally speaking, the emotional transition from feelings of anger to desensitization can sometimes prolong the activity, potentially affecting others within the enterprise as the individual works through her/his angry feelings and continues to do the required work. An example of anger as expressed by Angela:

> Anger that the whole project will go forward and it wasn't clearly defined to everyone…because I felt like there was a lot on me that I was supposed to get done because it wasn't clearly communicated…It got better after about a year when they began to define the role and communicate a little better.

Long term anger impacts the IT worker on a personal level, often times affecting morale and interpersonal communications with co-workers and with their families. Anger does not go away quickly or easily even if a resolution is put in place to resolve the issues that pushed the IT worker to anger. Anger affects the IT worker in current change initiative and can move to future change initiatives as the bad taste from the past change event stays with the IT worker. While IT workers learn from past change projects, how quickly she/he moves on from a negative experience is based on the individual and whether other change initiatives also caused feelings of anger. Anger may have stayed with the IT worker for some time during the change initiative. It did not appear to affect getting work done although some tasks may have taken longer due to other demands on the IT workers time or because no direction was provided on how to complete the task - and the IT worker had to figure it out while doing the work. Delays in completing tasks, if they occurred, were normally not due to anger but due to other circumstances such as: (a) lack of training or resources to support the effort, (b) requests from customers for assistance on an existing product solution, or (c) lack of planning and support by supervisory or leadership staff within the organization or agency. The long-term impact of desensitization on the IT worker was a desire to escape or move to a different project, team or company. For one health information technology (HIT) worker, the impact of built up anger and frustration was early retirement while the impact for one IT worker was to move to another project and not to help stabilize the agency once the revolutionary change was complete. As Anger may also be experienced in phase one of the Bridges

transition model, the IT worker is processing the second stage of loss associated with the Kübler-Ross grief construct while moving through the first phase of transition (Ending, Losing, Letting Go).

Kübler-Ross Stage 3: Bargaining / Study Finding 2: Bargaining, Negotiation

Representing the third stage of the grief construct, the theme of Bargaining and Negotiation emerged from the data as a stage experienced by four of the study participants. Those who addressed this point in their interviews experienced bargaining in the form of negotiating when a scheduled event or task could not be completed, as initially planned, in a timely manner. Bargaining was also a part of the process when a particular objective was considered detrimental to completion of the project within designated timelines. Most times study participants were successful in their attempts at bargaining in some form. Bargaining was considered successful when: (a) the new time requested to complete a change initiative task was accepted by internal and external customers and management/senior leadership, (b) an interim solution to allow the project to move forward was accepted instead of the full task that may have taken more time pushing out the schedule, or (c) a specific task or component of a project was removed or delayed to a future release of the product or solution. Bargaining success also included acceptance of the original/initial technical infrastructure plan instead of a new plan to accomplish the change. As Lei stated, "The CIO, the CFO and the director, they all had different views [on] how to move forward and I needed to convince them and compromise and to have some intermediate approach and to be able to [deliver] result[s]." Moreover, the practice of bargaining was often an ongoing dynamic according to participants, sometimes occurring through the end of the project or initiative.

The researcher posits that bargaining affects the individual IT worker because it can be a continuous process that often requires tradeoffs; that is, if one task could not be completed in full, the individual would then have to replace it with another task in order to mitigate that situation. Or, if a task could not be completed in the way expected by leadership, a workaround to allow movement forward would need to be negotiated. For the IT worker, bargaining is a way of life; a way to get the job done. It is ongoing, never ending. It occurs in response to not being given enough time or resources to complete the tasks from change project initiation to project end. It wares on the IT worker but quickly becomes a standard operating procedure that is expected regardless of change initiative schedule, because there is some task or means of completing task that is not the most effective or best means to complete a task thus becoming a hindrance requiring a need for negotiation. As Donna stated,

> Bargaining that is an ongoing thing, bargaining. When we need two weeks to get this done, [and we're told] it's going to be – maybe – five days. Just 'Okay fine - Well as long as you can get it to me here then I could get this done here.'

In contrast, the primary impact of Bargaining/Negotiation to the organization involves the planning and rescheduling of time needed to meet the organization's objectives. As such, delays in follow on or connected work that was scheduled to occur proceeding the change initiative can frequently require immediate, altered actions or delays in delivery of the desired service or solution; thus, potentially impacting an environment (infrastructure), a component of a product, the whole solution or support for existing or new systems, and solution functionality. For the IT worker, bargaining/negotiation often meant additional work/tasks and additional time contributing to the overall change effort; extra hours. On those occasions when bargaining/negotiation

did not work for Donna, there was a feeling of not being heard or understood, and being overwhelmed with tasks. Interviewees felt that they did not matter in the scheme of things. Their experience and expertise was necessary but they had no say in how they were used, or in some cases - unused. Sometimes it was just about clearing the noises, moving forward and getting it done so the IT worker could move on to the next project or product release. As Cara stated, "My pitch was to target the loudest noises and critics, who's making the most noise? Work on getting them onboard in a phased approach."

Kübler-Ross Stage 4: Depression / Study Finding 4: Depression, Frustration, Anxiety, and Stress

Depression is the fourth stage in the Kübler-Ross grief construct and Frustration, Anxiety and Stress are experienced during the second stage of the Bridges transition model (The Neutral Zone/The In-Between). Based on the interview data, it represents the stage least acknowledged by study participants as being experienced during a revolutionary change directive. For these individuals, depression occurred when she or he was overwhelmed with responsibility and tasks associated with the change event. Those in lead roles were most affected. In lieu of using the word "depression," participants stated that they experienced feeling anxious, frustrated, or stressed. Only two participants, Angela and Lei, experienced feeling low or depressed. Angela stated there was no depression, just feeling "low" or "down." Overall, their feelings of depression, frustration, anxiety, and stress lasted until there was a major shift in tasks or activities via the provision of additional help or support, more or better communication, as well as when there was evidence of the initiative's movement in a positive direction. On this third point, positive movement meant that these individuals were able to see that some

victory had been won or a major task was completed within the change event.

Specific to the impact of such debilitating feelings on the individual IT worker, this particular stage of loss—aligned with its thematic study finding—represents a decidedly personal affect, involving both mental/emotional (worry, anxiety) and physical well-being (loss of appetite and isolation). Depression appeared to have a negative connotation although some of the feelings that were expressed are feelings associated with being depressed, or feelings that one feels while being depressed. Anxiety and Stress are associated with being depressed and have been associated with causing depression. Two participants spoke of being anxious or having anxiety when they felt overwhelmed and without direction. They experienced lack of motivation although they kept pushing forward and working hard. They felt isolated as if there was no one who understood what they were experiencing or how they felt. They experienced physical signs of communicating only when necessary, declining appetites and loss of weight, and continuous worry about how to proceed and what could be done to alleviate the feeling and roadblocks at work. There was also (two) reports of loss of sleep. Where depression is an emotional feeling that shows signs of the individual IT worker giving in or giving up, frustration normally occurred as the IT worker was still fighting to be heard and understood and the physical impacts caused by depression were not prevalent. Those participants who felt frustration were most likely still angry and still negotiating/bargaining, while those who were depressed were not angry nor were they negotiating. This made those who experienced depression stand out in comparison to those who were frustrated. There were two participants who experienced depression, one from the IT firm and one from the HIT firm. Both participants who experienced

depression were senior staff with more than 20+ years of experience, one male and the other female, one from the US and one from Asia. While there are some differences in their experiences, there are more similarities in their experiences of depression than not. In turn, the researcher posits that the impact to the organization can be understood as a lack of employee response to organizational demands and/or slowed response to completion of tasking as the individual works through the experience of depressive or anxiety-based emotions.

Kübler-Ross Stage 5: Acceptance / Study Finding 3: Acceptance

Acceptance is the fifth and final stage of the grief construct, and it was experienced by all participants. The data shows that the participants understood that there was an expectation on the part of the organization that the mandated change event would be accepted by IT workers. Simply stated, the order for change was handed down by the organization's leaders, and employees were expected to conform. Even when certain participants communicated that they may not have agreed with the change initiative or how it was to be implemented, they implicitly understood and ultimately accepted the fact that they were expected to complete assignments and successfully implement the new practice, solution or service. Per Donna, "So, yes, there was bargaining, there was acceptance and a little anger in there."

Based on the data specifically pertaining to participants' experiences with feelings of acceptance during a change event, the researcher submits that although acceptance is not an organic part of the transition process, it can be a forced expectation. Acceptance was expected by leadership and/or the contracting firm. As a contractor, acceptance was an authentic response as the contractor was entering the project knowing a major change

would occur and she/he was expected to engage in tasking in support of the change event; whereas with employee staff, acceptance was forced as the employee may or may not have say in participating in the change initiative and historically may have had some say in how a change initiative was completed. In other words, the IT worker's acceptance and compliance with the implementation of a change event implies a certain degree of job security as opposed to an employee's refusal to accept or comply with a change, which could result in job loss or demotion or being looked over for a promotion. However, the researcher further suggests that the emotional impact of forced acceptance (acquiescence) to the individual employee is more subtle and can be intrinsically damaging in terms of swallowing or hiding feelings, as opposed to allowing them to occur in a holistic manner. On this view, if acceptance can be equated with acquiescence or capitulation, damage to the individual's confidence, self-esteem, and sense of community in the workplace can be especially significant—potentially moving from employee dissatisfaction, to resentment, to workplace dysfunction in extreme cases. In general, the impact of this stage of the grief construct to the organization has to do with managing temporarily unhappy employees, while also maintaining optimal levels of functionality and service for both internal and external customers.

This research describes how individuals within two information technology teams – one Information Technology (IT) team and one Health Information Technology (HIT) team – experienced transition during a revolutionary or major change effort by walking through a defined individual and team experience from beginning to end – with the guidance of the researcher to answer the research question "*How are the phases of transition experienced by individuals within information technology teams during a*

major change effort? A qualitative, semi-structured interview process provided each participant with a safe and open environment to share how she or he felt—those feelings experienced—and how the change and participation in completion of the change initiative impacted or affected her/him; and how the team added context to the experience. Each participant provided a description of her/his role and the associated responsibilities, a description of the change initiative, the length of the change initiative, who was impacted by the change initiative, and the personal experience of completing assigned tasking towards the change initiative while providing support for other team members, external business and technical teams and external customers and consumers. The researcher asked for descriptions of each the listed experiences during the course of the change event at initiation, during the course of the change initiative and the end/after completion of the change initiative.

Findings show that most (seven out of eight) research participants acknowledged experiencing at least some of the stages of change as provided in the Kübler-Ross grief construct; the researcher observed (in the data) that some of the stages of grief were experienced by all research participants. This can be said for the phases of the Bridges transition model as well. Data showed that not all research participants experienced all stages of loss as represented by the Kübler-Ross grief construct nor all phases of transition as represented in Bridges transition model. Per Kübler-Ross, (1969), not all stages of loss are experienced by all people nor are they experienced linearly/sequentially; stages of loss may be experienced cyclical and/or revisited.

In answering the research question, Denial and Isolation were experienced by four of eight research participants (one IT team member and three HIT team members); Anger

was experienced by seven of eight research participants (three IT team members and all four HIT team members); Bargaining was experienced by four of eight research participants (two IT team members and two HIT team members); Depression was experienced by two of eight research participants (one from the IT team and one from the HIT team); and Acceptance was experienced by seven study participants.

Responses to or feelings associated with phase 3 of the Bridges transition model, as experienced by research participants, were Frustration, Stress and Anxiety. Frustration was experienced by three (HIT) of eight participants; Stress was experienced by all research participants and Anxiety was experienced by two (HIT) research participants. Research participants experienced some feelings associated with the Bridges transition model while moving through the stages of loss as represented in the Kübler-Ross grief construct. The Bridges transition model added context to the Kübler-Ross lens.

In this study, each of the stages of the Kübler-Ross grief construct played an important part of the overall transition process for individual members of IT teams working on revolutionary change initiatives. Certain study participants experienced stages of grief more often and more deeply than others. This phenomenon was not limited to worker hierarchies. For example, while there could be an assumption that senior staff or contracting staff would be less likely to experience the stages of grief due to their tenure or management roles, this was not found to be the case. All participants, ranging from mid-level to lead testing staff and from senior level solution architect to acting chief technology officer experienced the stages of grief while transitioning through a major change event. At the same time, some (seven research participants) recognized the stages of loss and grief, and some (one research participant) did not. The one research

participant, Vishal, did not acknowledge experiencing any of the stages of loss associated with the grief construct, initially. When the researcher pointed out terms used to describe the experience and when they occurred during the change initiative, Vishal recognized that he did experience some of the stages of grief (bargaining and acceptance) and transition (stress and anxiety). Overall, the preponderance of the data speaks to how those who did not recognize their personal experiences of grief actually, in fact, experienced it. Research participants achieved a new sense of self knowledge and enlightenment through the study process. Talking through the change event was deemed a form of therapy. Participants were able to tell their stories and know that they were heard and that there experiences were recognized by someone. As to practical applications, the experiences recorded from study participants' interviews and the findings that emerged from them could potentially provide input and direction to companies as they consider best practices for implementing revolutionary changes to their businesses.

Study Limitations

This qualitative study was limited to eight individuals within two IT teams (i.e., one Health Information Technology (HIT) team and one IT team) in transition, situated in work settings where they collectively performed software/solution development/engineering, solution testing, database administration, and customer and technical support As a qualitative study, findings are limited in that they cannot be generalized to all situations of workplace change and transition, but they can transfer in some cases. To clarify, the term "transferability" signifies the degree to which the findings of this inquiry can apply, or transfer, beyond the bounds of the project to another site where relatable issues and processes are at play. Simply stated, transferability is the

ability to apply study findings to similar contexts and/or settings. Thus, while research findings are not generalizable to another situation, they could transfer in terms of being useful/applicable (to some degree) to another scenario or setting in which similar contexts are at play. In other words, findings from this study should not be assumed to be generalizable to non-IT/HIT organizations whose members are undergoing change and the associated psychological transition experiences.

Based on her experience and knowledge of the IT work environment, the researcher was aware of potential limitations regarding her ability to study the actions and reactions of study participants when responding to interview questions For example, as individuals within a team, many of the participants were disbursed across locations and would necessarily have to participate via audio interviews. Consequently, non-visual remote participation would somewhat limit the researcher's observations of non-verbal cues/body language from those individuals limited to an audio format during the data collection process. To address this concern, the researcher requested pre-candidacy forms and face-to-face meetings with each study participant in advance of the interviews in order to better understand and document characteristics of each individual participant. Overall, the pre-candidacy forms supplemented the interview data, and all information shared by study participants was based on personal experience and opinion. Ultimately, it turned out that while some of the eight participants initially expressed comfort with the idea of face-to-face interviews, the majority of participants did not. Therefore, the researcher conducted audio interviews only—for all participants. As a study limitation, there was little to no impact to study findings because interviews were audio only. Through the pre-candidacy forms, and discussions prior to interviews individual speech

patterns and reactions were observed. Additionally, thick, rich descriptions of the transition process through the change event provided the information necessary in support of the research.

In addition, the researcher determined that participants' knowledge of the researcher did not bias the data collection and, thus, did not present as a limitation. From the standpoint of researcher subjectivity, prior involvement with the original networking contacts took place years in the past. Moreover, the researcher severed professional ties with the organizations involved in the study more than a year ago for the IT group and more than four years ago for the HIT group. In addition, trustworthiness measures, as outlined in Chapter 3, were applied to ensure that bias was not an issue. For example, research participants were informed, via the GWU IRB consent form that (a) they could rescind participation in the study at any time, (b) collected data would be de-identified to not include information linking to the specific participant, and (c) the complete, transcribed interview would be provided for review to each participant (member checking). The trustworthiness measure of member checking allowed research participants to feel confident in the information they shared. Further, this measure allowed them to add clarity to interview responses where there may have been questions as to context or the use of certain terms in a free-flowing conversational interview. As a result of member checking, the researcher made minor changes in transcripts from interviews where she deemed such changes to be appropriate. Member checking further informed the data collected. Finally, member checking is a valuable tool to utilize in qualitative research because it promotes participants' sense of confidence in the data

collected and validates their contributions to the process. In turn, member checking served to support the trustworthiness of the researcher and the study itself.

Recommendations for Future Research

Based on the findings yielded by this study, the researcher offers six recommendations intended to address the following concerns: (a) how to better understand and extend knowledge on the experiences of IT staff members/teams during major change events; (b) how to expand awareness and knowledge of IT staff-based change issues among management and leadership so that they might better support staff in moving through change and transition within the organization; (c) how IT staff might better transition through change; and (d) the use of pre-risk governance for IT staff (undergoing transition due to change). Additionally, the researcher proffers the following recommendations to address concerns and/or gaps in the theories used as the lens (the Kübler-Ross grief construct) and focus (the Bridges transition model) for this study: (e) determine if and how the Kübler-Ross grief construct might be expanded to cover those "fuzzy" responses to change that occur between the stages of loss, and (f) extend Bridges' theory to include a *Pre-Transition* phase to accommodate for what is experienced prior to the initiation of change.

Recommendation 1: Extend Knowledge on IT Staff

As discussed in the review of the literature in Chapter 2, there is a lack of information on how leadership and management staff in IT and HIT companies prepare resources for and support IT staff members and teams through revolutionary change events. Therefore, the researcher recommends that this particular area of IT research be expanded in order to acknowledge, validate, and normalize the transition experiences of

IT workers as a common phenomenon across the industry. By enlarging and adding credibility to this currently understudied area, new research could provide valuable information and insights that would support truly successful change initiatives for both human resources and the enterprises in which they work.

Recommendation 2: Enterprise Support for IT Staff

Per researcher observations, the participant descriptions (and data), for those from China the expectation is to do what is necessary and beyond; for those from India, the expectation is to work together and help one another to the advantage of the team—and normally within the culture; and for other cultures there is a variation of expression based on the individual. Per Lei, "I would do whatever was necessary for the success of the project." Per Deepak, I worked across roles and helped my team members although I was the lead." As an extension of recognizing and addressing the reality of change and transition issues for IT workers, findings indicated the need to conduct future research specific to how companies might best support the skills and training necessary for those individuals and IT teams directly responsible for supporting major change efforts. In other words, study participants collectively communicated the point of view that, as human resources, they are expected to have and/or be ready to apply the knowledge and expertise necessary to implement the mandated change. However, they maintained that they are, typically, not given the training or additional education needed to do so effectively and within the timelines associated with the change event. In other words, they indicated a "learn on your own" mentality that was very apparent in the data collected from HIT staff specifically. To close the gap and respond to issues communicated during this research study, organizations should (a) include IT staff in

decision making and planning as they are the experts in their fields and leadership depends on IT staff to determine how change will occur and how to best support change initiatives: (b) provide ongoing training to extend IT workers knowledge so they can complete tasking in support of change based on feedback from the IT worker on what training and education is needed; and (c) communicate the need/reason for the change and the overall impact to the enterprise often and simply to all staff concerned with the change event or initiative to ensure there is understanding and buy in from those involved - possibly aiding in keeping change initiative/event attributes (e.g., schedule, budget) in control. These three suggestions will begin to remedy the concerns shared by study participants in interviews and observed through analysis of data by the researcher.

Recommendation 3: IT Staff Vocalization/Response to Change

To better transition through change, IT workers must be vocal about what is necessary in order to support current and future change. Vocalization must be consistent and handled in multiple communication streams, verbally/orally and in writing. While IT staff is responsible for leading change as mandated by leadership and management, they must also prepare for future demands brought about in support of new company direction and updating infrastructure and solutions. Some research participants shared what they needed to support the change initiative while others did not express what was needed but did express what the problems were. One approach to getting the necessary support for change and the associated transition effort is to be clear about what is needed (training, better communication, additional resources, more experienced resources, etc.) and to map needs to what is required of the individual during change – in ongoing communications.

Recommendation 4: Pre-Risk Governance

The use of pre-risk governance in the information technology arena is to plan for future change initiatives by determining possible risks to the success and on-time delivery of a solution, product or service by listing the concerns/risks and possible mitigation responses prior to the start of the change as part of the project/product/program management effort. Risks are then presented to involved technical staff and stakeholders (those who benefit from and/or consume the change). This allows for resolutions or responses to any risks prior to change initiation and continuous tracking of risk resolutions until they are complete and risks are mitigated. The researcher recommends that leadership/management and IT staff work together to utilize a pre-risk governance process to determine and address the needs of the IT organization and associated staff members prior to the start of change.

Recommendation 5: Kübler-Ross Grief Construct Phase Fuzziness

The Kübler-Ross grief construct provides stages of loss associated with transition once it has been determined that a change is coming. The stages of loss are (a) denial and isolation, (b) anger, (c) bargaining, (d) depression, and (e) acceptance. The stages of loss may occur cyclically, simultaneously and in a non-linear fashion. As the stages of loss/transition may be non-linear in nature, there may be gaps between phases where the experience is fuzzy and may overlap. This fuzziness needs further investigation as it applies to IT staff. As Kübler-Ross has been expanded and extended in multiple applications in response to the experiences of nursing staff it would be useful to do the same for IT staff in order to get a better representation of the stages of loss/transition during change. While studying nursing staff, Perlman and Takacs (1990) expanded the

Kübler-Ross grief construct to 10 stages as follows: 1. equilibrium, 2. denial, 3. anger, 4. bargaining, 5. chaos, 6. depression, 7. resignation, 8. openness, 9. readiness, and 10. Reemergence" (p. 33). This may be used as a starting point to determine if IT staff have a transition experience similar to that represented for nursing staff using Kübler-Ross.

Recommendation 6: Pre-Transition Phenomenon

There is a *Pre-Transition* phenomenon that was teased out of the data where IT staff were happy and excited to see change coming prior to the initiation of the change event. Per data from this study, the feelings associated with the *Pre-Transition* phase of change are represented in Bridges' Transition phase 3 (The New Beginning) but occurred prior to phase 1 (Ending, Losing, Letting Go). To more fully express the feelings associated with transition as they relate to IT staff and provide additional awareness regarding this yet defined phase, further investigation should be done to explore the phenomenon and possibly expand Bridges' theory to accommodate for the experience prior to change initiation. Current Bridges' Transition phases are as follows:

1. Letting go of the old ways;
2. Going through an in-between time when the old is gone, but the new isn't fully operational; and
3. Coming out of the transition and making a new beginning.

With the addition of the new *Pre-Transition* phase, the Bridges transition model would be represented as follows:

1. Preparing for highly anticipated change;
2. Letting go of the old ways;

3. Going through an in-between time when the old is gone, but the new isn't fully operational; and
4. Coming out of the transition and making a new beginning.

It may be that the feelings experienced from the additional *Pre-Transition* phase that was teased out of the data is a closeout for/a remnant of a previous change effort and thus it truly is the Bridges transition model phase 3 (The New Beginning) but without further, more extensive study, the researcher cannot pinpoint how it was initiated. Additional research is warranted in response to this data.

While numerous studies have been planned and conducted to explore and better understand the "people" component of change and transition in different work settings, such studies have been more prominent in arenas such as education (Clapper, 1991; Kearney & Hyle, 2003; Triolo, Allgier, & Schwartz, 1995) and medical facilities and agencies (Humphrey, 1997; Jeffreys, 1995; Massey, 1991, 1992; Perlman & Takacs, 1990; Schoolfield & Orduna, 1994). However, there has not been a concentrated effort to study those individuals and teams in the information technology realm who are responsible for building and delivering infrastructure and solutions and services across industries, especially in terms of how their emotional states are impacted by the demands of the IT workplace change event. Yeuk Mui (2001) noted that front line service, defined as call center and help desk support, is under-researched and the studies of groups who support change is normally conducted to gain insight into the impact on those who use the systems or the services offered. This is still a gap 16 years later. There appears to be an understanding that IT workers are there to complete and support change and thus are not a variable in the change process. The researcher believes the reverse is true, that IT

workers are a variable in change initiatives and thus should be considered during major change efforts. To address these gaps in current research, the researcher offers recommendations based on the conviction that studies of this nature would provide additional practical and scholarly data in support of change and transition at the individual level. Moreover, they hold the potential of providing a wealth of information that could, both directly and indirectly, support many of the industries supported by IT staff in 21st century, technology-driven work environments.

This research study answered the research question *"How are the phases of transition experienced by individuals within information technology teams during a major change effort?"* and supported that the Kübler-Ross grief construct stages of loss are experienced by IT workers, as are the phase of the Bridges transition model, during revolutionary change initiatives. Information Technology workers, regardless of (a) role, (b) technology discipline, (c) responsibilities, (d) age, or (e) expertise, experience some if not all stages of loss and transition. The experience of IT staff during transition may not be linear, occurs in cycles and may be repeated from one project or major initiative to another. There is still work to be done to better understand the experience of those IT workers who must support change initiatives while going through the transition process themselves. This research opened the door to a better understanding of this little researched group but there is still much to learn for administrators/practitioners and scholars/theorists.

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Appendices

Appendix A: A Priori Coding

First Level coding categories/themes are based on the emotions that may be experienced by participants in the research study.

[Saldaña, J. (2013). *The Coding Manual for Qualitative Researchers*. Thousand Oaks, CA: Sage Publications, Inc.]

Category: Kübler-Ross feelings of Loss

- Denial and Isolation
    - This will not happen; It will go away
    - I'll do my own thing
- Anger (This is ridiculous; I am upset/mad)
- Bargaining (If I do "A" perhaps "B" will not happen, where B equals the change)
- Depression (There is nothing I can do; why am I here?)
- Acceptance (It is what it is; I might as well go with the flow)

Category: Bridges' Transition feelings

- Denial
    - This will not happen; It will go away
    - I'll do my own thing
- Shock (surprise, terror, horror, or disgust)
- Anger (This is ridiculous; I am upset/mad)
- Frustration/Stress (a deep chronic sense or state of insecurity and dissatisfaction)/(a state of mental tension and worry; strong feelings of worry or anxiety)
- Ambivalence (not sure how to feel or respond; continual fluctuation; uncertainty)
- Skepticism (attitude of doubt)
- Acceptance (It is what it is; I might as well go with the flow)
- Importance (realization of value or significance)
- Hope (confidence or assurance in the possibility)
- Enthusiasm (strong excitement)

Category: Miscellaneous feelings (Change Links)

- Powerlessness (unable to do something or to stop something)
- Social Isolation (I'll do my own thing)

- Shock (surprise, terror, horror, or disgust)
- Betrayal (failure or dissertation)
- Humiliation (ashamed or foolish)
- Shame (guilt, regret, or sadness)

Category: Response to feelings

- Resistance – opposition, disabling, road blocks, slow No/do nothing; refusal to accept
- Ambivalence – not sure how to feel or respond; continual fluctuation; uncertainty
- Acceptance – (It is what it is; I might as well go with it)

Category: Mental State

- Paradox
    - This is both right and wrong
    - This is the best thing to happen but the worst to occur

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