Information Technology Integration in a Postmerger Environment

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In this qualitative phenomenological study, we explore information technology integration in a postmerger environment from the perspective of midlevel and first-line managers. Interviews were conducted with 14 participants to identify factors affecting IT integration. The process school, which blends the strategic and organizational schools of thought, formed the basis of our study. Participants' perception of loss emerged as a central theme; participants perceived the merger in terms of loss similar to the loss of a family member. The results of this study provide guidance that enables managers to mitigate negative issues and increase the possibility of a successful merger.

INTRODUCTION

The integration of information technology (IT) systems can be the difference between postmerger success and failure (Banal-Estañol & Seldeslachts, 2011; Carlsson, Henningsson, Hrastinski, & Keller, 2011; Heimeriks, Schijven, & Gates, 2012). Integrating IT systems is potentially one of the most complex and expensive integration processes after an acquisition (Alaranta & Henningsson, 2008; Dao, 2010; Heimeriks et al., 2012). Mergers and acquisitions (M&A) have historically experienced poor return on investment and high failure rates (Carlsson et al., 2011). Prior research indicates that poorly executed postmerger or postacquisition integration efforts are detrimental to the success of the merger (Alaranta & Henningsson, 2008; Anderson, 2012). Consequently, understanding uncertainty and preparing for the entropy phenomenon in postmerger integration increases the probability of success.

The purpose of this study is to help decision makers, such as board of directors and CEOs, prepare for potential barriers in the integration of IT systems during the postmerger implementation process. This study identifies specific issues that form obstacles in the integration process. We conducted a phenomenological study by exploring the perceptions and lived experiences of midlevel and first-line managers in a manufacturing business environment when integrating information technology systems. Among the major descriptors, participants' perception of loss emerged as a central theme; 86% of

participants related the event similar to the loss of a family member. This study provides guidance that enables managers to anticipate problems and develop strategies to increase the probability of a successful merger outcome.

The remainder of the paper is organized as follows. The next section describes the relevant literature. Next, we present the research question and methodology used in this paper. The data analyses and results are reported in the following section. The final section contains conclusion and limitations.

LITERATURE REVIEW

We frame the study using the process school theory, which includes strategic and organizational behavior concepts focusing on integration as the main factor in the success or failure of a merger, or acquisition (Finkelstein & Cooper, 2010). Integration is usually not the primary focus when organizations decide to embark on an M&A strategy (Alaranta & Henningsson, 2008; Anderson, 2012). However, integration issues create long-term performance issues (Francis & Shapiro, 2012; Maiga & Jacobs, 2009), higher customer attrition, loss of skilled employees, slowdown of introduction of new products, loss of momentum in quality programs, higher operating costs, inability to fill key capability positions, and a reduction in brand identity (Fubini, Price, & Zollo, 2007). Some causes of integration issues include weak leadership, lack of planning, poor communication, insufficient resources, and vague process definitions (Fish, 2007; Fubini et al., 2007; Zeffane, Tipu, & Ryan, 2011). Alaranta and Henningsson (2008) stated the success or failure of achieving good post deal performance depends on the integration. The level of employee trust in the company's leaders is a crucial factor in the success of the integration effort (Ellis, Reus, & Lamont, 2009; Li, 2008; Van Wart, 2012).

IT is a function that should be normalized in order to support the strategy of the blended organization. The complexity and cost of integrating IT functions can be devastating to achieving long-term value (Dao, 2010). The integration of two or more merging organizations' IT functions can be one of its greatest assets or one of its worst nightmares (Dao, 2010). Systems integration for business strategy has the potential to make or break balance sheets (Dao, 2010). Cording, Christmann, and King (2008) analyzed the success rates of M&As and the role of information systems technology in the merger process. The analysis indicated that information systems technology can be used to improve the chances of a successful merger. Cording et al. (2008) confirmed a correlation between information systems technology performance and the achievement of company goals. One of the performance factors identified was the speed of integration. Fish (2007) identified five interrelated integration factors that affect the success of a merger: leadership, communication, organizational culture, people, and strategy.

Leadership. Leaders use M&As to achieve an organization's strategic and financial goals (Marks, 2007). However, they do not always recognize the difficulty of integrating the newly acquired organization. There is a tendency for leaders to underestimate the effort required to plan for the integration effort, especially the attention to the human element (Benton & Austin, 2010). Failure to recognize the need for a well thought out integration results in distractions, which affects organizational efficiency (Benton & Austin, 2010; Saunders, Altinay, & Riordan, 2009; Summers, Humphrey, & Ferris, 2012).

Communication. Timely and sufficient communication of information is vital to a successful M&A (Clayton, 2010). Management may overlook communicating information that could change employees' jobs (Clayton, 2010). When news about an M&A appears, employee emotions range from fear and confusion to acceptance and excitement (Balle, 2008; Clark, Gioia, Ketchen, & Thomas, 2010). Clark et al. (2010) stated early communication that is honest, direct, and include a detailed rational assessment of the challenges and opportunities the integration process offers reduces the fear factor that misunderstandings and rumors create. Marks and Mirvis (2011) emphasized that effective and timely two-way communication along with staff involvement is critical. Staff involvement in the decision-making process decreases the level of resistance to change and effective communication increased staff's ability to adopt a new culture and reduce stress levels (Clayton, 2010; Marks & Mirvis, 2012).

Culture. M&As have steadily increased over the past 20 years (Alaranta & Henningsson, 2008). Unresolved cultural distance is a reason for merger failure (Baughn, 2009; Marks & Mirvis, 2011, 2012). Allen (2012) stated that although technical integrations are difficult, the integration of organizational culture and the reaction of the human element in postmerger integration are even more difficult. Integration of distinct corporate cultures requires the alignment of goals and strategies (Alaranta & Henningsson, 2008). Baughn (2009) examined the correlation between corporate culture and the perceived success of organizational mergers. Weber, Belkin, and Tarba (2011) stated that difference in organizational cultures inhibits productive communication between members of the two organizations. Baughn (2009) concluded that organizations with similar cultures were more likely to have a successful merger. Culture clash is one of the most common causes for an M&A to fail to realize its full potential or achieve expected results (Badrtalei & Bates, 2007; Green & Colton, 2012; Marks & Mirvis, 2012).

People. Employees' interpretation of the impact on their organizational identity could encourage or obstruct their acceptance of the changes needed to perform acquisition integration (Chreim, 2007). One of the key reasons for a merger's failure is the lack of consideration of the human element (Giessner, Ullrich, & van Dick, 2011). Chreim (2007) stated that employees look for organizations that provide growth opportunities and may view the merger as an impediment to career growth. Guerrero (2008) reiterated the importance of focusing on all aspects of the M&A process, including the human element. Often, the single most significant obstacle in integration efforts was the failure to obtain employee commitment (Briscoe & Tsai, 2011; Giessner et al., 2011; Shin, Taylor, & Seo, 2012). A common concern of employees during an M&A was security in terms of loss of jobs or closure of facilities (Khalid & Rehman, 2011). Jetten and Hutchison (2011) stated that a break in continuity, such as an M&A, negatively affected people both individually and as a collective by increasing resistance to change. Summers et al. (2012) revealed a flux in coordination when core personnel changes are made, which led to a loss of communication.

Strategy. Some analysts advocated the integration of business functions and creation of common strategies as a means to create value (Ahern & Weston, 2007; Alaranta & Henningsson, 2008). Inconsistencies in corporate strategy is a precursor of failure (Fish, 2007; Fubini et al., 2007). Thus, Cording et al. (2008) stated that integrated strategy development should occur well in advance of the actual merger.

RESEARCH QUESTIONS

The central research question for this phenomenological study was:
What factors affect IT integration in a postmerger and postacquisition environment?
To achieve a deeper understanding of the phenomenon, we added two additional research subquestions. The subquestions relate to how IT integration can be framed within the definition of entropy, which is a measure of disorder in a closed but changing system (Michaelides, 2008).
1. What is the relationship between entropy and the five postmerger and postacquisition integration factors (leadership, communication, organizational culture, people, and strategy)?
2. What entropic relationships exist among postmerger and postacquisition integration factors?

SAMPLE SELECTION AND METHODOLOGY

Participants for this study were selected from IT departments in U.S. manufacturing organizations that have completed the integration process of information systems after an M&A within the past 5 years and that employ more than 500 employees. Four manufacturing organizations were selected. From this number, there were 340 first-line and mid-level managers, of which 102 managers worked in information technology. We reduced these 120 managers to 35 who were with the most significant interface with information systems. Of these 35 potential participants, 14 individuals, who met the requirements for participation in the study, were selected as primary participants. Our sample was large enough to assure that the number of participants was large enough to provide information up to the saturation point without

becoming redundant (Green, Chung-Chin, & Larsen, 2010). We used an interview instrument (see Appendix), consisting of open-ended questions to collect data from the employees selected. The interviews were conducted face to face when possible. If a face-to-face meeting could not be arranged, the interview was conducted via telephone.

DATA ANALYSIS AND RESULTS

Interview questions 1 and 2 centered on eliciting participants lived experiences to the research question, "What factors affect IT integration in a postmerger and postacquisition environment?" The participants' perceptions in postmerger and acquisition integrations ran the gamut of negative feelings, negative reactions, and negative working environments. The answers to the questions were explored by using a word frequency query. The list was reduced to include only the words that were entropy descriptors. The participants whose interview answers included each of these descriptors were then identified. The number of times the participants used the descriptors was not used as a basis for identification of major entropy descriptors; instead the participants' use of a descriptor was counted only once. Once the number of participants who used each of the words identified was tallied, any descriptor which was used by four or more participants was considered a major entropy descriptor. Any descriptor which was used by fewer than three was considered a minor entropy descriptor. The descriptors were classified into three entropy descriptor categories including feeling, reaction, and environment.

All participants' responses contained at least 1 descriptor in each entropy descriptor category. Twelve participants (86%) perceived entropy in terms of loss.

Anger. Anger was a major entropy descriptor for 50% of participants. Participants felt angry when they perceived they were not taken seriously or felt their leaders had betrayed them. Feelings of anger were not limited to the members of the acquired organization.

Arrogance. Arrogance was a major entropy descriptor for 42.9% of participants. The main concern of participants was the arrogant manner in which the members of the acquiring company interacted with people from the acquired company. However, not all postacquisition integrations perceived originated from the acquiring company. One participant commented on the arrogance of the acquired company in terms of its effect on the merged organization.

Chaos. Chaos was a major entropy descriptor for 28.6% of participants. The primary perception by participants was that chaos was a direct result of poor leadership during the system integration effort.

Clash. Clash was a major entropy descriptor for 42.9% of participants. Clash was perceived as a result of differing organizational cultures and the inability for either side to embrace change.

Complaining. Complaining was a major entropy descriptor for 35.7% of participants. Participants felt the main reason for the constant complaining was it served as a means for getting one's own way despite the fact that it may not be the most beneficial way for the company.

Conflict. Conflict was a major entropy descriptor for 28.6% of participants. Participants perceived conflict as a result of dissimilar cultures, management styles, and personalities.

Confusion. Confusion was a major entropy descriptor for 35.7% of participants. Participants' perception of confusion was a result of communication discrepancies, the lack of timely, honest communication by leadership, and the short integration timeline.

Difficult. Difficult was a major entropy descriptor for 78.6% of participants. Participants' perception of difficult centered on the inability of the leadership to make a decision and stand behind that decision, and dealing with people who are not team players.

Distrust. Distrust was a major entropy descriptor for 50% of participants. Participants' perception of distrust centered upon having to work with people from the other organization. People become distrustful of new people, especially when they are nervous about possibly losing their jobs to these same people.

Egotism. Egotism was a major entropy descriptor for 50% of participants. Participants' perception of egotism was based on the actions of people from both sides of the acquisition.

Fear. Fear was a major entropy descriptor for 50% of participants. Participants' perception of fear centered upon the fear of losing their jobs and security.

Fighting. Fighting was a major entropy descriptor for 42.9% of participants. Participants' perception of fighting was based on the actions of company leaders' in-fighting and attempts to provide themselves a position in the integrated organization, as well as preserve the systems and policies for which they felt ownership.

Friction. Friction was a major entropy descriptor for 42.9% of participants. Participants' perception of friction was based on interaction with personnel from the other company during the integration decision making process and while trying to work together to accomplish the day-to-day tasks required to keep the company running.

Frustration. Frustration was a major entropy descriptor for 64.3% of participants. Participants' perception of frustration was a result of the length of time it took to get anything accomplished and the unwillingness of some people to accept any kind of change.

Hurt. Hurt was a major entropy descriptor for 35.7% of participants. Participants' perception of hurt focused on two distinct aspects: (a) hurt feelings, and (b) hurting the company.

Loss. Loss was a major entropy descriptor for 85.7% of participants. Participants' perception of loss emerged as a central theme resulting from post integration loss of coworkers, friends, family, home, and systems in which they took ownership and pride.

Misunderstood. Misunderstood was a major entropy descriptor for 28.6% of participants. Participants' perception of misunderstood focused on the loss of productivity resulting from misunderstandings either real or bogus.

Painful. Painful was a major entropy descriptor for 57.1% of participants. Participants' perception of painful was expressed in both physical and mental pain.

Pressure. Pressure was a major entropy descriptor for 50% of participants. Participants' perception of pressure resulted from their sense of achieving outcomes despite the numerous roadblocks that they faced.

Resentment. Resentment was a major entropy descriptor for 28.6% of participants. Participants' perception of resentment was that it resulted from the reaction of people who felt that they should have kept their jobs.

Resistance. Resistance was a major entropy descriptor for 50% of participants. Participants' perception of resistance was focused on reactions from the personnel of the acquired company.

Shock. Shock was a major entropy descriptor for 28.6% of participants. Participants' perception of shock was the unexpected announcement that the acquiring company would be moving to the acquired company's ERP system followed by terminations and relocation of employees from the acquiring company.

Strained. Strained was a major entropy descriptor for 28.6% of participants. Participants' perception of strained centered on relationships between people of the acquiring and acquired organizations.

Stressful. Stressful was a major entropy descriptor for nine participants. Participants' perception of stressful centered on the state of the environment in which they had to work. So much needed to be done, but there was chaos, which resulted in increasing stress levels.

Suffering. Suffering was a major entropy descriptor for 35.7% of participants. Participants perception of suffering was that it is a side-effect of loss of talent, pressure, and the disconnect between employees and company leaders.

Tough. Tough was a major entropy descriptor for 5 participants. Participants' perception of tough resulted from difficulty in the relationships between people from the two sides of the integration, and the work environment they created.

Troubling. Troubling was a major entropy descriptor for 28.6% of participants. Participants' perception of troubling grew out of not understanding or being able to rationalize the actions of leadership.

Turmoil. Turmoil was a major entropy descriptor for 28.6% of participants. Participants' perception of turmoil was described the environment in which they worked during the integration process.

Uncooperative. Uncooperative was a major entropy descriptor for 35.7% of participants. Participants' perception of uncooperative resulted from interaction with people from one particular acquisition.

Unknown. Unknown was a major entropy descriptor for 28.6% of participants. Participants' perception of the unknown focuses on the people's fear of the unknown and their ability to plan correctly when the process is unknown.

Waste. Waste was a major entropy descriptor for 42.9% of participants. Participants' perception of waste centered upon wasted effort by employees, and the resulting unproductive efforts by all involved.

Worry. Worry was a major entropy descriptor for 28.6% of participants. Participants' perception of worry was closely associated with the loss of employment after the integration.

Research Subquestion 1

Interview questions 11, 12, and 13 centered on eliciting participants' lived experiences concerning the research subquestion: What is the relationship between entropy and the five postmerger and postacquisition integration factors? All 14 participants responded to the interview questions. The factor interviewees perceived as having most increased the entropy phenomenon was communication (35.7%), especially the lack of honest, timely communication, followed by leadership (28.6%). The factor the interviewees perceived as the one that most decreased the entropy phenomenon was leadership (57.1%), followed by communication (28.6%).

The factor the interviewees perceived as the one which most inhibited the entropy phenomenon was leadership (42.9%).

Communication factors findings. Interview question 3 focused on the interviewees' perception of the relationship between communication and entropy. All 14 participants (100%) experienced entropy as a result of communication. The participants' responses were grouped into four themes: (a) two-way communication, (b) quality of communication, (c) lack of communication, and (d) honest, timely communication.

Two-way communication was a concern for 28.6% of participants. The effects of not having two-way communication resulted in distrust, misunderstandings, and suspicion on the part of the employees that feel they have no voice in the process.

Quality of communication was a concern for 42.9% of participants. Incomplete or inaccurate communication became a source of anxiety, frustration, and a sense of abandonment by the leadership of the company. There existed a perception that some managers were withholding information because of control issues. The perception was that IT personnel was usually the last to know about any initiative, that meetings were held without an IT presence, and decisions were made and communicated to IT personnel when it was too late to take appropriate action to ensure that the company's infrastructure would support current and future endeavors.

Lack of communication was a concern for 35.7% of participants. Participants experienced a lack of communication, which resulted in stalling initiatives and a reduction in synergies. Decisions were being made that affected all locations without any input from anyone from the locations. Participant 1 stated, "the lack of communication was staggering and debilitating."

Honest, timely communication was a concern for 28.6% of participants (. Participants described the communication during integration as cryptic, confusing, and at times suppressed altogether. Some experienced delayed or dishonest commutation resulting from some company members' private agendas.

Leadership factor findings. Interview question 5 focused on the interviewee's perception of the relationship between leadership and entropy. Thirteen of the participants (92.9%) experienced entropy as a result of leadership. One participant (7.1%) was neutral as a result of being shielded by their manager. The participants' responses were grouped into 5 themes: (a) engagement and commitment, (b) vision, (c) flexibility, (d) accountability, and (e) communication.

Engagement and commitment was a concern for 28.6% of participants. Participants experienced the perception that the integration effort was not fully supported by the senior members of the organization during the integration. They also perceived senior leaders were not fully engaged and committed to the integration process and the decisions they had made, and when they got push back from the acquired company, they just let them have their way rather than deal with the problems. Vision was a concern for 21.4% of participants. The participants perceived that the acquiring company lacked a well-defined vision

and a well thought-out roadmap to enable achieving the vision. Instead, the perception was the leaders were arrogant and unwilling to listen to any ideas from members of the acquired company; this perception was shared by some of the members of the acquiring company.

Flexibility was a concern for 14.3 % of participants. The participants' perception was that the acquiring company's leaders were unable to take advantages of opportunities due to the rigidness of their leadership style. At a time when the company leaders needed the flexibility to become change masters, they held on to their old ways.

Accountability was a concern for 14.3% of participants. The participants' experiences demonstrated that leaders of the company were not held accountable for their actions. In some cases, the leadership pushed the decision making down to the people who reported to them so that if something went wrong it would not be their fault; they would just fire the person who was forced to make a decision. Participants also perceived that some leaders were not fully committed to the company and they were preparing for their next employment opportunity.

Communication was a concern for 42.9% of participants. Participants perceived a lack of clear communication from leadership. The perception was that the leadership team does a poor job of communicating the overall company vision and the type or organizational culture they envision for the merged company. In the instance of one acquisition, the lack of communication resulted in the acquired company still operating on its own ERP system and a loss of any synergy that could have been achieved.

Organizational culture factor findings. Interview question 4 focused on the interviewee's perception of the relationship between organizational culture and entropy. All 14 participants (100%) experienced entropy as a result of organizational culture. The participants' responses were grouped into four themes: (a) public vs. private, (b) old school culture, (c) resistance to change, and (d) cultural pride.

Public vs. private was a concern for 71.4% of participants. Participants perceived the clash of publically owned acquiring company and privately owned acquired company as one of the hardest cultural difference with which to contend. Participant 10 stated, "As we have seen, although we are in the same type of business, the culture differs greatly from organization to organization. Especially when it's a privately held organization and the other is a publically held organization."

Old school culture was a concern for 28.6% of participants. Participants' perception of the acquiring company's culture was that it was a very old school, chain of command culture. In addition, the culture was riddled with red tape that stifled creativity and collaboration. Resistance to change was a concern for 35.7% of participants. Participants' perception of resistance to change came from the acquired company's employees not embracing the practices and policies of the acquiring company. In addition, after the decision was made to migrate the acquiring company to the acquired company's system platform, the resistance was two-sided.

Cultural pride was a concern for 28.6% of participants. Participants' perception of cultural pride resulted from being told that they needed to move off the system that they had expended time and effort building; they were proud of the system they had created and the culture they had built for their organization. The two organizations had been rivals for many years and it seemed almost impossible to suddenly think of them as part of their team.

People factor findings. Interview question 6 focused on the interviewee's perception of the relationship between people and entropy. All 14 participants (100%) perceived people as a contributor to entropy. The participants' responses were grouped into six themes: (a) attitude and conflict, (b) buy-in, (c) empowerment, (d) leadership, (e) trust, and (f) resistance to change.

Attitude and conflict were concerns for 35.7% of participants. Participants' perception of attitude and conflict was based on strained relationships between the acquiring and the acquired personnel, the differing cultures, personality conflicts, and people on both sides of the acquisition who had not bought in to the integration changes. Buy-in was a concern for 14.3% of participants. Participants' perceived a lack of buy-in from individuals from both sides of the acquisition. One problem was the feeling from members of the acquired company that the leaders from the acquiring company could not be trusted and that every change had to be scrutinized to determine if they were up to something. Empowerment was a concern for 21.4% of participants. Participants perceived the employees from the acquired company from one

acquisition were just not adequately intelligent because they did not have the corporate image that was expected of them. As a consequence, the participants felt the people from the acquired company were not empowered to perform to the best of their ability; they felt their input was neither needed nor appreciated. Leadership was a concern for 28.6% of participants. Participants from the acquiring company perceived a lack of support and appreciation from their leaders. They felt they had been betrayed when the decision was made to move the corporate offices. Participants from both sides of the acquisition perceived a lack of leadership ability to promote a combined organizational culture; instead they turned a blind eye to the in-fighting and posturing that was killing productivity. Trust was a concern for 28.6% of participants. Participants described the issue of trust in terms of not trusting the members of the acquiring company due to the potential loss of their jobs. During the integration process, new people were added to the organization; the participants tended to distrust until proven trustworthy rather than trust until proven otherwise. Resistance to change was a concern for 14.3% of participants. Participants on both side of the acquisition experienced resistance to change. The acquired organization's employees resisted the change imposed on their processes and procedures, and the acquiring organization's employees resisted because they were being forced to give up their system and platform to migrate to the acquired organization's system.

Strategy factor findings. Interview question 7 focused on the interviewee's perception of the relationship between strategy and entropy. All 14 participants (100%) perceived strategy as a contributor to entropy. The participants' responses were grouped into five themes: (a) lack of a comprehensive strategy, (b) vision, (c) unrealistic expectations, (d) synergy, and (e) commitment to strategy.

Lack of a comprehensive strategy was a concern for 6 participants (42.9%). There was a perception by many participants on both sides of the acquisition that leadership did not actually have a long term as well as a short-term strategy. Vision was a concern for 28.6% of participants. Participants' perception of a lack of vision was driven partially by the old school mentality in addition to having leaders who had never been exposed to alternate methods for achieving the end goal of the company. In addition, there was a perception that the leaders had not given enough time during the discovery period to actually know how difficult it would be to integrate the two organizations. There was a general perception that none of the leaders actually had a good understanding of the big picture.

Unrealistic expectations were a concern for 2 participants (14.3%). Participants' perception of the integration process timeline was that it was too aggressive considering the complexity of the project. The time period in which one of the integration efforts was done was during a time of federal regulation changes and new product launches.

Synergy was a concern for 2 participants (14.3%). Participants experienced a great deal of expectation from upper management for huge synergies without having a plan to leverage synergies. Participants felt that the synergies that could have been leveraged were not; especially any type of synergies from the second acquisition.

Research Subquestion 2

Interview questions 3, 4, 5, 6, 7, and 8 centered on eliciting participants' lived experiences concerning the research subquestion 2: What entropic relationships exist among postmerger and postacquisition integration factors? All 14 participants responded to the interview questions. All participants perceived the 5 entropy factors of communication, leadership, organizational culture, people, and strategy to be interrelated. The consensus was that leadership would be the driving force behind the other factors. Leadership establishes the organizational culture, sets the strategy, determines the level of communication, and sets policies that guide the hiring of the company's workforce.

Participants' perceptions of *communication* and entropy were grouped into 4 categories: (a) two-way communication, (b) quality of communication, (c) lack of communication, and (d) honest, timely communication. Two-way communication was a concern for 14.3% of participants. The effects of not having two-way communication resulted in distrust, misunderstandings, and suspicion on the part of the employees that feel they have no voice in the process. Quality of communication was a concern for 42.9% of participants. Incomplete or inaccurate communication became a source of anxiety, frustration, and a

sense of abandonment by the leadership of the company. There existed a perception that some managers were withholding information because of control issues. The perception was that IT was usually the last to know about any initiative; meetings were held without an IT presence, and decisions were made, and IT found out when it was too late to take appropriate action to ensure the company's infrastructure would support current and future endeavors. Lack of communication was a concern for 35.7 % of participants. Participants experienced a lack of communication, which resulted in stalling initiatives and a reduction in synergies. Decisions were being made that affected all locations without any input from anyone from the locations. Honest, timely communication was a concern for 28.6% of participants. Participants described the communication during integration as cryptic, confusing, and at times suppressed altogether. Some experienced delayed or dishonest commutation resulting from some company members' private agendas.

Participants' perception of *leadership* and entropy was grouped into 5 categories: (a) engagement and commitment, (b) vision, (c) flexibility, (d) accountability, and (e) communication. Engagement and commitment was a concern for 28.6% of participants. Participants experienced the perception that the integration effort was not fully supported by the senior members of the organization during the integration. There was also the perception that senior leaders were not fully engaged and committed to the integration process and the decisions they had made, and when they got push-back from the acquired company, they just let them have their way rather than deal with the problems. Vision was a concern for 3 participants (21.4%). The participant's perceived that the acquiring company lacked a well-defined vision and a well thought-out roadmap to make that vision achievable. Instead, the perception was the leaders were arrogant and unwilling to listen to any ideas from members of the acquired company; this perception was shared by some of the members of the acquiring company. Flexibility was a concern for 2 participants (14.3%). The participants' perception was that the acquiring company's leaders were unable to take advantages of opportunities due to the rigidness of their leadership style. At a time when the companies needed the flexibility to become change masters, they held on to their old ways. Accountability was a concern for 14.3% of participants. The participants' lived experiences were that the leadership of the company was not held accountable for its actions. In some cases, the leadership pushed the decision making down to the people who reported to them so if something went wrong it would not be their fault, they would just fire the guy who was forced to make a decision. Participants also perceived that some leaders were not fully committed to the company and they were preparing for their next employment opportunity. Communication was a concern for 42.9% of participants. Participants perceived a lack of communication from leadership. In the instance of one acquisition, the lack of communication resulted in the acquired company still operating on their own ERP system and the loss of any synergy that could have been achieved.

Participants' perception of *organizational culture* and entropy was grouped into four categories: (a) public v. private, (b) old school culture, (c) resistance to change, and (d) cultural pride. Public v. private was a concern for 71.4% of participants. Participants perceived the clash of publically owned acquiring company and privately owned acquired company as one of the hardest cultural difference with which to contend. Old school culture was a concern for 28.6% of participants. Participants' perception of the acquiring company's culture was that it was a very old school, chain of command culture. In addition, the culture was riddled with red tape that stifled creativity and collaboration. Resistance to change was a concern for 35.7% of participants. Participants' perception of resistance to change came from the acquired company's employees not embracing the practices and policies of the acquiring company. In addition, after the decision was made to migrate to the acquired company's system platform, the resistance was two-sided. Cultural pride was a concern for 28.6% of participants. Participants' perception of cultural pride resulted from being told they needed to move off the system they had expended so much time and effort building; they were proud of the system they had created and the culture they had built for their organization. The two organizations had been rivals for many years and it seemed almost impossible to suddenly think of them as part of their team.

Participants' perception of *people* and entropy was grouped into six categories: (a) attitude and conflict, (b) buy-in, (c) empowerment, (d) leadership, (e) trust, and (f) resistance to change. Attitude and conflict was a concern for 35.7% of participants. Participants' perception of attitude and conflict was

based on strained relationships between the acquiring and the acquired personnel, the differing cultures, personality conflicts, and people on both sides of the acquisition who had not bought-in to the integration changes. Buy-in was a concern for 14.3% of participants. Participants' perceived a lack of buy-in from individuals from both sides of the acquisition. One problem was the feeling from members of the acquired company that the leaders from the acquired company could not be trusted and that every change had to be scrutinized to determine if they were up to something. Empowerment was a concern for 21.4% of participants. Participants perceived the employees from the acquired company from one acquisition were just not that bright because they did not have the corporate image that was expected of them. As a consequence, the participants felt that the people from the acquired company were not empowered to perform to the best of their ability; they felt their input was neither needed nor appreciated. Leadership was a concern for 28.6% of participants. Participants from the acquiring company perceived a lack of support and appreciation from their leaders. They felt they had been betrayed when the decision was made to move the corporate offices. Participants from both sides of the acquisition perceived a lack of leadership ability to promote a combined organizational culture; instead they turned a blind eye to the in-fighting and posturing that was killing productivity. Trust was a concern for 28.6% of participants. Participants described the issue of trust in terms of not trusting the members of the acquiring company due to the potential loss of their jobs. During the integration process, new people were added to the organization; the participants tended to distrust until proven trustworthy rather than trust until proven otherwise. Resistance to change was a concern for 14.3% of participants. Participants on both side of the acquisition experienced resistance to change. The acquired organization's employees resisted the change imposed on their processes and procedures, and the acquiring organization's employees resisted because they were being forced to give up their system and platform to migrate to the acquired organization's system.

Participants' perception of *strategy* and entropy was grouped into five categories:(a) lack of a comprehensive strategy, (b) vision, (c) unrealistic expectations, (d) synergy, and (e) commitment to strategy. Lack of a comprehensive strategy was a concern for 42.9% of participants. There was a perception by many participants on both sides of the acquisition that leadership did not actually have a long-term as well as a short-term strategy. Vision was a concern for 28.6% of participants. Participants' perception of a lack of vision was driven partially by the old school mentality in addition to having leaders who have never been exposed to alternate methods for achieving the end goal of the company. In addition, there was a perception that the leaders had not given enough time during the discovery period to actually know how difficult it would be to integrate the two organizations. There was a general perception that none of the leaders actually had a good understanding of the big picture.

Unrealistic expectations were a concern for 14.3% of participants. Participants' perception of the integration process timeline was that it was too aggressive considering the complexity of the project. The time period in which one integration was done was a time when federal regulation changes had to be met and new product launches. Synergy was a concern for 14.3% of participants. Participants experienced a great deal of expectation from upper management for huge synergies without having a plan to leverage synergies. Participants felt that the synergies that could have been leveraged were not; especially any type of synergies from the second acquisition. Commitment to strategy was a concern for 14.3% of participants. Participants perceived an inability for leaders to commit to their strategy. Participants experienced a lack of commitment by leaders to make the tough call when necessary and achieve all of the synergies that had been alluded to their stakeholders.

CONCLUSION AND FUTURE STUDIES

The results of this study expand our understanding of change management applicable to postmerger and postacquisition information technology integration. The goal was to identify, understand, and reduce disruption and disorder between the leadership, middle management, and key employees during postmerger and postacquisition integration of information technology solutions. The study results reveal areas in which management can make advance planning strategies to promote minimal entropy and

maximize productivity during the integration of postmerger and postacquisition information technology integration. Our research suggests that entropy factors interrelate. The results support the process school theory. Therefore, a change in one entropy factor was likely to affect other entropy factors. The primary recommendation from this study is the creation of a merger team, prior to commencement of merger activities, which will be responsible for creating a comprehensive merger plan.

The number and variety of factors identified during this research suggests that additional research in different business settings would add significantly to the body of knowledge and increase understanding of the entropy factor in the merger process. Added knowledge about the extent of entropy and the effects on mergers outcomes may increase the chances for achieving the desired results.

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APPENDIX – INTERVIEW QUESTIONS

1. Please describe how you would characterize the nature of entropy during postmerger and postacquisition integration.
2. What specific experiences drive your views of entropy during postmerger and postacquisition integration? Please provide examples.
3. What is the relationship between communication and entropy during postmerger and postacquisition integration? Please provide examples.
4. What is the relationship between organizational culture and entropy during postmerger and postacquisition integration? Please provide examples.
5. What is the relationship between leadership and entropy during postmerger and postacquisition integration? Please provide examples.
6. What is the relationship between people and entropy during postmerger and postacquisition integration? Please provide examples.
7. What is the relationship between strategy and entropy during postmerger and postacquisition integration? Please provide examples.
8. When considering communication, organizational culture, leadership, people, and strategy, how would you describe the relationship among these factors in terms of entropy during postmerger and postacquisition integration? Why?
9. How would you characterize different states or levels of entropy during postmerger and postacquisition integration?
10. What specific experiences drive your views of states or levels of entropy during postmerger and postacquisition integration? Please provide examples.
11. When considering communication, organizational culture, leadership, people, and strategy, which of these factors contributes the most to increasing entropy during postmerger and postacquisition integration? Why?
12. When considering communication, organizational culture, leadership, people, and strategy, which of these factors contributes the most to decreasing entropy during postmerger and postacquisition integration? Why?
13. When considering communication, organizational culture, leadership, people, and strategy, which of these factors contributes the most to inhibiting entropy during postmerger and postacquisition integration? Why?
14. How would you describe the negative impacts of entropy during postmerger and postacquisition integration? Please provide examples.
15. How would you describe the positive impacts of entropy during postmerger and postacquisition integration? Please provide examples.
16. In your experience, what other factors or considerations contribute to or impact entropy during postmerger and postacquisition integration? Why? Please provide examples.