

Making Sense of a Shifting Communication Model:

What Might **IT** Look Like?

by

Richard Ross Bjorgvin Ingimundson

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## Abstract

Choosing information and communication technology (ICT) can be as daunting as it is exciting. For all its intrigue and promise, decisions concerning its adoption are often based on subjective or limited knowledge. For leaders who make these decisions at an organizational level, they face larger challenges like: ever-increasing time and cost pressures; having sufficient knowledge regarding adoption and implementation; as well as, concerns whether current organizational practices can or should be maintained. Of these organizational challenges, this study focusses on how leaders approach the adoption of ICT. The problem is situated in how they perceive the role of ICT in their organization. From an organizational perspective: the circumstances that precede ICT adoption occur when: industry or field changes make it necessary; it alleviates a gap; regulations require it; and/or new functionality requires additional or upgraded technology; whereas, the conditions: reside in a leader's perspective of the future value and strategic orientation of ICT; impact a leader's ability to overcome barriers of subjective and limited knowledge; precede the organizational activities of consultation, strategic decision-making, adoption and implementation. Working from this premise and using sensemaking as a lens, this case study investigates: 1) how leaders' perceptions influence their actions, 2) how they make sense of ICT on a personal level, and 3) whether subsequent sensemaking impacts enterprise strategy.

*Keywords:* action, adoption, approach, cognition, communication, decision-making, enactment, expertise, ICT, implementation, information, interpretation, involvement, knowledge, leader, operational, organizational, role, sensemaking, strategic, technology, understanding.

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## Making Sense of a Shifting Communication Model: What Might IT Look Like?

### Chapter 1 - Introduction

#### Background

Family Roots (FR) is a genealogically-focussed online organization that was founded in 2012 by Lynne Williams. FR is a nonprofit, nonpolitical, charitable organization with a mission to educate, preserve, and promote family heritage. It is based on the lifetime work of genealogist William Johnson and integrates his genealogical database. Since its inception, the organization has made definitive progress and seen substantial growth. With expansion and success however, come opportunities and consequent demands on time and personnel. Lynne and the part-time volunteers who comprise FR's executive membership<sup>1</sup> are kept busy with inquiries, research, translation and technology support.

The FR database resides on a site building platform specializing in genealogical content management. The system is robust and very functional but does present a significant limiting factor in that it does not accommodate member-to-member collaboration. Until recently, Lynne facilitated most of these activities, acting as, a bridge or go-between for the team's task management and communications. Her own workload averages 60 hours per week. Though she enjoys the work thoroughly, Lynne admits to being tentative regarding any new initiatives she and her team undertake. This presents a challenge to the organization because: 1) it decreases member-to-member, or member-to-group conversations which can generate connections and contributions; 2) Lynne has felt compelled to be directly involved in most inquiries; 3) the

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<sup>1</sup> The FR executive membership or executive team, comprised of genealogists, IT consultants, and its founder will be referred to as the 'team'.

capacity of the team meets a bottleneck in the way they communicate with one another; 4) collective action is limited to what a few members can facilitate.

To address these conditions, the team has been compelled to consider how to better accommodate;

1. the ongoing requirements for verifying genealogical contributions,
2. training in the rigours of genealogical research and using the FR database which requires time and one-to-one mentoring,
3. the additional time and staff required to manage its communications, membership, data entry, website and blog.

Though FR utilizes a webspace, blog, Facebook and Twitter presence, the interactions are limited and seem more suited to news and events rather than member-to-member conversations and collaboration.

Due to the efforts and expertise of its leading members, the FR community shows significant promise to develop based on its wealth of genealogical data, database functionality, online presence, and people's growing interest in genealogy. According to new media scholar José Van Dijck, however, "It is a common fallacy, though, to think of platforms as merely facilitating networking activities; instead, the construction of platforms and social practices is mutually constitutive" (2013, para. 9). The change from one technology to another (technology adoption) is a transformational shift from one communication model to another and is, at the very least, an addition of capabilities that differ from the organization's more recent processes (i.e. model). The relationships among the participants change, which for the FR community presents an opportunity to harness members' social and intellectual capital. Member commitment

and contributions leverage the research of experts, and provides the asker with a power and responsibility to be involved. By engaging the asker, FR can achieve a better division of labour among its experts.

Scholars claim the first test in distinguishing these pursuits is in the mutual interactions that take place between individuals (Shirky, 2008; Howard, 2010). In a social network (e.g. Facebook, Twitter, blogs, etc.) their pursuits are egocentric and can be characterized as encouraging weak ties<sup>2</sup>, whereas for online communities, an individual's relationship to others is secondary to the group's mission. Howard (2010, pp. 18-19) further reasons that sharing activities are relatively simple and can be accomplished through social media. Cooperation, and then collective action demand progressively stronger ties between members, which are better served through the constructs of an online community.

This shift, broadens the instances and purposes of those communicating, placing demands on their level of engagement, and may require that they begin thinking more strategically than operationally. The primary objective of adopting ICT<sup>3</sup> (information & communication technology) then, is for strategic aims which differs significantly from the affordances of ICT which are secondary and lean toward operational, or more task-oriented activities. Moreover, scholars such as Jarzabkowski and Kaplan (2015) have focussed significantly on organizational strategy-as-practice<sup>4</sup> relationships and the affordances of ICT 'tools'. Insights regarding the

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<sup>2</sup> The concept and role of strong and weak ties are described in Granovetter's (1973) work on network analysis, where he characterizes strong ties "as a combination of time commitment, intimacy, reciprocity and emotional intensity, [whereas] a weak tie, or bridge, is more likely to link members of 'different' small groups as it does not require that same level of committed interaction [although] it is through weak ties that information is most efficiently diffused" (as cited in deBruijn, 2010, pp. 16-17).

<sup>3</sup> For the sake of clarity and convenience, the term **ICT** will be used in place of its lengthier labels, information & communication technology or information technology (IT). The acronyms ICT and IT are generally speaking, one in the same. The subtle difference has been the introduction of unified or integrated communications into IT, which has spawned ICT's prevalence.

<sup>4</sup> "Bridging this gap between the utopia of the mind (the theory of how strategy tools [or strategy tools-in-use] should be used) and the realism of experience (how managers actually use tools) falls squarely into the strategy-as-practice research agenda (Balogun et al., 2007; Golsorkhi et al., 2010; Johnson et al., 2007; Orlikowski, 2010; Vaara and Whittington, 2012)" (Jarzabkowski & Kaplan, 2015).



dynamics of how and why these tools-in-use are adopted, tell much of the risk and reward balance in an organization. Their framework explains that “Tools are most usefully seen as parts of the process rather than purely as sources of the answer” (2015, p. 554) and leaders’ conscious and unconscious actions affect their value.

With the introduction of a new communication model, FR is provided a means for distributed and strategic thinking. That being so, the model requires buy-in from those who are using it. The relationship between participants’ degree of strategic thinking, however, has not been adequately explored or understood. This community, as we have seen, provides an opportunity to pursue these interesting questions.

### **Purpose of the Study**

We begin by asking: why is this kind of shift in thinking important? And, as the team engages in this new communication model, do members consider it as just a new, or different ICT? Do they characterize this ICT shift as a technological change or a communication change, or both?

In April 2015, I delivered a report to Lynne that was aimed at refining the organization’s communication model. The report’s primary focus was to help FR improve its viability by adopting activities that better facilitate sharing and cooperation, and foster strong, predictable relationships where members are dedicated to a shared goal rather than only individual pursuits. As a consequence, in February 2016, the team undertook a technology initiative, or as it will be referred to, an “ICT adoption” project, intended to improve their internal communications and collaboration, and encourage stronger and more fluid ties between themselves. To begin, they

adopted Google's Business for Nonprofits<sup>5</sup> platform to create accounts and a *group shared mailbox* where members of the executive team could monitor, respond to, and assume responsibility for incoming tasks and inquiries.

The shift in communication practices the team is undertaking has prompted a scenario worthy of examination. It is situated amongst FR leaders who are engaged in a move from their recent practices of one-to-one or one-to-many communication, toward a more collaborative model of many-to-many (peer-to-peer).

The problem, as it will be alluded to in the literature review chapter, resides in how leaders perceive the role of ICT in their organization<sup>6</sup>. In general terms, do their perceptions<sup>7</sup> (or attitudes) of the future value and strategic orientation of ICT impact their ability to overcome barriers of subjective and limited knowledge? Does individual sensemaking precede the organizational activities of consultation, strategic decision-making, and hence, further adoption and implementation? Thus, to address these questions, the following factors will guide the inquiry:

- How do they make sense of ICT on a personal level?
- How do their perceptions of ICT influence their actions?
- How do they envision their role in this ICT adoption?
- How might subsequent sensemaking impact FR strategy?

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<sup>5</sup> Google for Nonprofit delivers free access to cloud-based tools and applications such as GMail, Google Calendar, and Google Drive. The platform provides for online collaboration between staff, reduced organizational IT costs, access to data from anywhere, and features for securing data from potential loss and damage while still using an organization's unique domain. <<https://www.google.ca/intl/en/nonprofits/>>

<sup>6</sup> The term **organization** denotes an organized body of people with a common purpose or enterprise (i.e of any size; commercial or non-profit).

<sup>7</sup> It should be noted that the terms perception and attitude are for the most part, interchangeable, however, there is a subtle distinction. Both define the way one thinks about someone or something, whereas they situate understanding, and feeling, in their definitions, respectively.

And, in so doing, this study intends to observe these factors and seek a correlation between a leader's perceptions and their involvement in the adoption, and the outcome, i.e. the degree to which these influence his/her ability to make sense of it.

## Chapter 2 - Literature Review

### Preamble

For this graduate student, to read, reflect, sort and organize the sheer volume of research artifacts provided and gathered over the past three years has been a significant task. Various articles and texts by practitioners and academics alike, emanate from my screen or sit on or around my desk; labelled, hyperlinked, colour-coded and jam-packed with notes, reminders, highlighted passages, references, commentaries and more questions. The possibilities or variations on how to approach these artifacts have posed “wicked problems [that] are complicated, uncertain, fuzzy, [and] difficult [to deal with]” (Gow, 2015, para. 10). As professor Gordon Gow expressed in his 2015 essay, *Messy desks, wicked problems, and the intellectual life of a graduate student*, the MACT graduate experience was intended to be this way. What follows is a literature review (the cornerstone of this project), and though it is the result of some messiness, its aim is to meet the latest challenge designed to “foster [one's] sense of mastery within a domain” (Gow, 2015, para. 8).

### The Leader, the Organization & ICT

On a personal level, choosing ICT can be as daunting as it is exciting. For all the intrigue and promise associated with ICT, decisions concerning its adoption are often based on subjective or limited knowledge. Such is the case for leaders<sup>8</sup> who make these decisions at an organizational

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<sup>8</sup> The term **leader** denotes a key or senior-level decision-maker, i.e. corporate, business or organizational leader (key informant).

level. However, they face larger challenges like: ever-increasing time and cost pressures; having sufficient knowledge regarding adoption and implementation; as well as, concerns whether current organizational practices can or should be maintained. Of these organizational challenges, the focus of this literature review will be on how leaders approach the adoption of ICT, which in general terms refers to when an individual or organization approves of and proceeds to use a new or different ICT.

To clarify, ICT adoption as it is commonly referred to, occurs when an “individual [or group of people] makes sense of ICT in relation to the work process, as in sensemaking” (Weick, 1995; Weick et al., 2005; Tan et al., 2010, as cited in Gäre & Melin, 2011, p. 521). It is “a dynamic process, a formative context that is in constant movement (Eze, Duan, & Chen, 2014) [...] through the lens of personal thinking and experience, [that] relates to the technology and perceives potential influences on its everyday work and strategic plans (Weick, Sutcliffe, & Obstfeld, 2005; Tan, Chong, & Uchenna, 2010, as cited in Onicescu & Gurbin, 2015, p. 1). From an organizational perspective, the circumstances that precede ICT adoption occur when: industry or field changes make it necessary; it can alleviate a gap; regulations require it; and new functionality requires additional or upgraded technology, etc..

As mentioned in the previous chapter, the problem is situated in how leaders perceive the role of ICT in their organization. The conditions: reside in a leader’s perspective of the future value and strategic orientation of ICT; impact a leader’s ability to overcome barriers of subjective and limited knowledge; precede the organizational activities of consultation, strategic decision-making, adoption and implementation. The guiding questions used to inform this review were:

- What resources do leaders draw upon when making decisions about ICT adoption?
- How do leaders' perceptions of ICT affect this process?
- What is the relationship between ICT adoption and strategic decision-making?

Working from this premise, the purpose of this literature review is to take stock of how organizational leaders approach ICT adoption. The investigation aims to study: 1) how leaders' perceptions influence their actions, 2) how they make sense of ICT on a personal level, and 3) whether subsequent sensemaking impacts enterprise strategy.

### **Leaders Encounter a Spontaneous Urge to Action**

Shortly after the publication of Nathan Clevenger's 2011 book entitled, *iPad in the Enterprise*, Forbes journalist Tom Groenfeldt delivered a critical review of the author's insights concerning this disruptive technology. Groenfeldt, renowned in his own right for influence and thought leadership about critical topics such as technology innovation, wrote that Clevenger declared "the iPad so controversial that a number people he interviewed refused to speak on record" (Groenfeldt, 2011, para. 2). And why? Well, for one, the iPad ignited the imaginations of users by providing a versatile, network-connected, mobile technology, unlike anything they'd ever seen. Two, it raised a resistance in ICT professionals who balked at the impact it would have on enterprise policies, purchasing, and practices. Three, journalists such as Groenfeldt and Wakabayashi (2014) have continued to intimate that even CIOs<sup>9</sup> are adopting these technologies in a frontier where anything but enterprise ICT products were avoided or frowned upon. The practical application from the user's vantage, was bridging what was once considered

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<sup>9</sup> CIO => chief information officer, or any other senior-level ICT leader

impossible. Yet, this technology's empowering influence and widespread adoption would have an especially significant impact on non-ICT leaders.

The world has seen technologies emerge before. Communications theorist Brian Winston (2000) contends that this process is more evolutionary than it is revolutionary when he analogized, "Here then is a real and pressing supervening necessity - railway safety. The history of telegraphy offers a clear example of how one technology, in this case the railways, creates a supervening necessity for another, the telegraph." (p. 23). Which, arguably places innovations like the iPad, driven by societal and organizational ICT needs, at the forefront of this phenomenon.

The rise of the iPad spawned a period of disruptive innovation and revealed a turning point—or a shift in thinking by key decision-makers. For many, it sparked a new sense of value and strategic orientation deliverable through ICT. "The iPhone and iPad really opened up the enterprise and forced IT departments to get into the game or risk being bypassed" (Groenfeldt, 2011, para. 6). Curiously, whether it was the iPad or some other technology seems incidental in the context of Clay Shirky's notion: "[it is] when a technology becomes normal, then ubiquitous, and finally so pervasive as to be invisible, that the really profound changes happen" (Shirky, 2010, as cited in Clevenger, 2011, p. 32). This technology drew out often disengaged leaders who may have felt unqualified, frustrated or compelled to have others decide on enterprise ICT adoption. Consequently, many were left pondering its potential and "a spontaneous urge to action" (Marcus & Anderson, 2010, p. 187) was underway.

### **Making Sense of the Literature**

Based on the literature reviewed, it became evident how prevalent this area of interest is to both scholars and practitioners. Research concerned with how leaders address ICT adoption is wide ranging, yet appears to be diverging from more traditional approaches such as Fred Davis' (1989, 1992) usability or technology acceptance model (TAM<sup>10</sup>) to where "future research should study the degree to which systems perceived as successful from an IT adoption perspective (i.e., those that are liked and highly used by users) are considered a success from an organizational perspective" (Venkatesh, Morris, Davis, & Davis, 2003, p. 470).

What follows is an outline of the methodology used for gathering, filtering, refining and making sense of ICT adoption research as it pertains to organizational leaders. As described earlier, guiding questions initiated this process, whereas this section explains a) how a systematic library search was planned and performed to collect a rich, varied body of literature associated with these questions, b) what eligibility criteria were used to refine the variety of literature sourced, and c) how certain themes emerged as a result.

#### **a. Systematic Library Search**

The following activities comprised my library search:

1. I prepared a timeline of activities and tentative due dates to structure my work developing an annotated bibliography and this literature review.
2. I reviewed the University of Alberta's online tutorials for conducting advanced searches of EBSCO and other databases and academic journals. I participated in Dr. Tom Barker's webinar where he highlighted literature review tools and tips.

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<sup>10</sup> TAM represents Fred D. Davis' Technology Acceptance Model (Venkatesh & Davis, 2000)

3. In order to conceptualize my research, I established a guide/rubric for searching keywords, theoretical categories, authors, subjects based on my evolving research questions, and my May 2015 Design Brief (COMM 501). My results were aggregated and sorted in a Google Sheet for ease of access, searchability and backup. Each potential source was examined for the contents of its title, abstract, keywords and conclusion. If the article met these initial criteria it was exported to RefWorks<sup>11</sup> and downloaded for printing whenever permissible.
4. By mail, on a half dozen or more occasions, I consulted MACT librarian Patti Sherbaniuk (Public Services Librarian at the Winspear Business Library at the University of Alberta) for guidance or help with source retrieval.
5. RefWorks provided me an electronic tool to aggregate and organize sources, collect citations and create my reference list.
6. I visited the University of Manitoba's Elizabeth Dafoe Library for interlibrary loan approval, in order to sign-out hardcopy materials such as Karl E. Weick's seminal texts and to access various electronic sources in their database.

The results yielded about 90 articles covering primary and secondary research, grey literature, professional or organizational publications, textbooks and chapters, and online media such as interviews. From these sources, I further refined the list to 50 by reading and examining each noting its relevance, jargon and keywords, research methods, sample types and sizes, dates of publication, authors, peer-review, article content, key and divergent findings, limitations and

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<sup>11</sup> RefWorks -- an online research management, writing and collaboration tool designed to help researchers easily gather, manage, store and share all types of information, as well as generate citations and bibliographies. <source: <https://www.refworks.com/>>



reference lists. As a result, I submitted a fifty-source annotated bibliography to Dr. Rob McMahon for feedback (COMM 509).

### **b. Eligibility Criteria**

The following criteria were used to evaluate my literature findings:

Stage 1: Using the CRAPP<sup>12</sup> Test: Currency, Relevance, Accuracy, Authority and Purpose of each resource was systematically evaluated throughout my library search process. The currency of articles presented a problem of subjective evaluation as, historical significance has so profoundly influenced successive researchers, that research going back more than 10 years, merited inclusion. Each of the remaining criteria acted as an objective reason for including or excluding a source.

Stage 2: I took time to gather and examine background achievements and areas of expertise for the authors featured in my bibliography. Having a clear sense of their insights, chronology of work, partnerships with their peers, and the frequency of their collaboration or reference to other scholars' work, gave me one other level of validity for their relevance.

### **c. Themes Emerge**

In reflecting on my June 2014 *Exposé of Research Interests* (COMM 502) paper, I realized where this literature review process got its start. Generally speaking, the insights gained through the MACT course of study have and continue to evolve for me, however, the rigours of this activity have raised five research themes into view that have been worthy of consideration. These perspectives of study overlap and integrate with one another, and their historical relevance impacts what scholars are focussing on today.

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<sup>12</sup> source: [http://www.nait.ca/libresources/res\\_tips/craap\\_eval.pdf](http://www.nait.ca/libresources/res_tips/craap_eval.pdf)

**Technology Adoption:** At the outset of this review, work by authors such as (Aharony, 2015; Davis, 1989; Gangwar, Date, & Raoot, 2014; Lin, 2013; Venkatesh et al., 2003) concerning the application of TAM seemed most promising. This approach aims to predict reasons for how and why leaders perceive ICTs as, useful (PU<sup>13</sup>) or easy to use (PEOU<sup>14</sup>).

**Sensemaking:** Amidst the literature on ICT adoption, another theoretical lens or perspective of investigation began to surface. Sensemaking has become “a central activity in organizations, and one that lies at the very core of organizing” (Maitlis & Christianson, 2014, p. 58). In the context of this inquiry, I began to wonder if this might be the seed for a process that starts within the individual.

**Enactment:** Once an investigation of sensemaking commenced, the literature lead to what Karl E. Weick considers to be its companion. Enactment moves sensemaking into the second stage of the process. It recognizes that environments in part are self-created (Weick, 1979) and as Marcus and Anderson (2010) explain, actions of leaders “create for them a reality that alters their beliefs that prompts them to additional actions; the actions they take shape beliefs and bolster their commitment” (p. 187).

**Organizational Knowledge:** This aspect of the study was a central consideration from its earliest stages. How do leaders use their expertise and enterprise knowledge and that of the people in their organization to decide on ICT adoption?

**Strategic Decision-Making:** Based on the literature reviewed, the underlying premise and purpose of ICT adoption is in how it can leverage organizational strategy. Whereas, the contrary would suggest that ICT adoption serves itself and a perpetuating cycle ensues.

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<sup>13</sup> PU denotes ‘perceived usefulness’

<sup>14</sup> PEOU denotes ‘perceived ease of use’

These themes have become my prompts for an academic conversation that can use the knowledge and research of others to guide my research and address my questions.

### **Making Sense of the Conditions**

A dozen years have passed since author Nicholas Carr (2003) dared question the avalanche of popular demand that every kind of enterprise hurriedly adopt ICTs. He offered a counter-perspective for leaders and likened the race to what happened for technological predecessors like railways and electricity, where each became a commodity that yielded no particular advantage to any given organization. Carr asked his readers then, if they'd begun "to take a more defensive posture toward IT" (para. 33), whereas, even today, leaders are challenged by his words when considering their adoption practices.

In view of the myriad oncoming technological possibilities it seems wise to reflect on what media theorists Neil Postman and Charles Weingartner (1969) foresaw of our modern education system. They explained that it is:

As if we are driving a multi-million-dollar sports car, screaming, 'Faster! Faster!' while peering fixedly into the rear-view mirror. It is an awkward way to try to tell where we are, much less where we are going, and it has been sheer dumb luck that we have not smashed ourselves to bits – so far. We have paid almost exclusive attention to the car, equipping it with all sorts of fantastic gadgets and an engine that will propel it at ever increasing speeds, but we seem to have forgotten where we wanted to go in it. Obviously, we are in for a helluva jolt. The question is not whether, but when. (p. xiii)

The warnings given by these authors pose a fundamental sensemaking challenge for today's leaders. For them, technology adoption processes are "anything but straightforward," claims

organizational ICT scholar, Ola Henfridsson (2000), and “the practical problem for the single organizational actor is to figure out what a new technology means in his or her specific work practice” (pp. 90-91).

**a. A Sensemaking Perspective**

There is a growing body of academic literature concerned with sensemaking. Many scholars approach it from a leadership frame of reference (Akgün, Keskin, Byrne & Lynn, 2014; Ancona, 2012; Maitlis & Lawrence, 2007; Smerek, 2011; Starbuck & Milliken, 2006; Tallon & Kraemer, 2007; Tallon, 2014), while others consider it in more general terms for various decision-making situations (Choo, 2006; Gäre & Melin, 2011; Onicescu & Gurbin, 2015; Seligman, 1999, 2006).

From a theoretical standpoint, most consider sensemaking a process, rather than a theory. Some characterize it as a lens or framework, however, it appears that many would agree sensemaking offers a perspective that describes “the ways in which people redeploy concepts in order to ward off blind perceptions, and redirect perceptions to ward off empty conceptions” (Weick, 2012, p. 151). Karl E. Weick is arguably the preeminent scholar in this area of research, and though there are other dimensions to sensemaking, his synopsis is granted significance when his peers acknowledge its relevance time and again throughout the literature.

Most scholars acknowledge the value of sensemaking, yet their opinions diverge as to whether it is located in solitary or shared contexts, and how it is initiated. Some say “it is an individual, cognitive process (Klein, Moon, & Hoffman, 2006; Louis, 1980; Starbuck & Milliken, 1988), whereas others depict it as, inherently social and discursive (Maitlis, 2005; Weick, 1995; Weick et al., 2005)” (as cited in Maitlis & Christianson, 2014, p. 58).

Where ICT adoption is concerned, many would think individual or shared sensemaking is about getting it right or making perfect choices. Authors Weick, Sutcliffe and Obstfeld address this notion when they explain: “The idea that sensemaking is driven by plausibility rather than accuracy conflicts with academic theories and managerial practices that assume that the accuracy of managers’ perceptions determine the effectiveness of outcomes” (Weick 1995, p. 55, as cited in Weick, Sutcliffe & Obstfeld, 2005, p. 415). Their distinction hits at the center of what distinguishes interpretation from sensemaking. Weick (1995) further explains that interpretation pursues something that is evident or can be taken for granted, whereas, sensemaking asks “why is this so? And, what’s next?” (p. 14).

What arises next, is understanding how leaders’ perceptions of ICT, impact adoption. Many scholars acknowledge the fact that perceptions are a precursor to sensemaking (Seligman, 2006; Starbuck & Milliken, 2006). In an IT study of over 200 firms, Tallon and Kraemer used a model where sensemaking activities provided a means for distinguishing between the ambiguous nature of perceptual measures of ICT, as compared to more objective measures of firm performance. They asserted that leaders’ perceptions are formed by attitudes and beliefs that “can shape how [they] notice and make sense of IT” (Tallon & Kraemer, 2007, p. 19). Hence, plausibility, rather than accuracy, may be better accommodated through sensemaking in the ever-changing environment of ICT. As Tallon (2014) further relates, leaders’ perceptions “can still mirror reality to such a degree that [they] can be used in lieu of hard-to-find objective or financial measures of IT business value” (p. 308).

Sensemaking, studied in the context of organizational strategy, is increasingly relevant to individuals’, and particularly leaders’ decision-making processes (Brown, Colville, & Pye, 2014;

Hernes & Maitlis, 2010; Sandberg & Tsoukas, 2015; Weick, Sutcliffe & Obstfeld, 2005). For example, in a 2013 interview with McGill University professor Karl Moore, MIT scholar Deborah Ancona, indicates that “the two biggest predictors of leadership effectiveness are sensemaking and inventing” (Moore, 2013, [0:47](#)). In a similar context to Weick (1995), she encourages leaders to ask “what’s going on out there? [... because] sensemaking provides a precursor to more effective action” (Ancona, 2012, p. 6).

Upon returning to Weick’s (2012) description of sensemaking, it may be clearer to see that through language and action, leaders “deploy concepts [...] and redirect perceptions” (p. 151). Scholars Colville, Brown and Pye deliver insights that support this notion. They warn that “the ultimate lack of sense is when you cannot produce a narrative to go with a situation (Wallemacq & Sims, 1998, as cited in Colville, Brown & Pye, 2012, p. 8), and reiterate that sensemaking is useful for understanding “the micro processes that underlie macro processes” (Zilber, 2007, p. 1049, as cited in Brown et al., 2014, p. 273). Sensemaking asks leaders to notice, organize, “distinguish and study certain [processes] more thoroughly. [It] is very much about [...] putting words to what has happened” (Weick, 2005, as cited in Suneson & Haldal, 2011, p. 970).

#### **b. Mindful Action & Enactment**

Enactment is the stimuli created by a person’s actions. Weick (1995, p. 32) and Sætre, Sørnes, Browning, and Stephens (2007, p. 135) trace the concept, though not the term, to the work of Mary Parker Follett (1924). Follett explained that this action-response-action loop perpetuates itself and one cannot pinpoint when stimulus stimulates or response responds (Sætre, et al., 2007, p. 135). Another way of framing this would be to say that as an actor adjusts to his

environment he receives input that further compels him to action. It is through this cycle that he makes sense of his situation. Enactment exerts “the reciprocal influence between action and the environment during sensemaking” and “is one of the aspects that differentiates sensemaking from interpretation” (Maitlis & Christianson, 2014, p. 84).

Centered around their work on enactment theory, Marcus and Anderson (2010) provide a significant connection to what Clevenger (2010), Groenfeldt (2011) and Wakabayashi (2014) related about leader adoption of the iPad. In the context of enterprise leaders, Marcus and Anderson cite the importance of major decision-makers being the “key informants” in further research (2010, p. 205). As well, their hypothesis that actions shape beliefs is supported by Weick’s (1979, p. 194) defence of what may seem counter-intuitive, and Danneels’ notion that “enactment implies that taking actions produces cognitions, which then guide further actions” (2003, p. 560, as cited in Marcus & Anderson, 2010, p. 192).

Enactment recognizes that environments in part are self-created (Weick, 1979) and a leader’s actions “create for [themselves] a reality that alters their beliefs [and] prompts them to additional actions; the actions they take shape beliefs and bolsters their commitment” (Salancik, 1977b, as cited in Marcus & Anderson, 2010, p. 187). With respect to leadership, the research of Sætre et al. provides a strong context for technology issues in organizations today, and draws attention to Weick’s claim that “enactment drives everything else in an organization. How enactment is done is what an organization will know [and] the same holds true for individuals” (Weick, 2001, p. 187, as cited in Sætre, et al., 2003, p. 1130). They reiterated his perspective that “Enactment means that people receive input as a result of their own actions. When people act,

these actions become the raw materials from which a sense of the situation [sensemaking] is eventually built” (2007, p. 135).

Insights such as these align with what Jennings and Greenwood (2003) call “Weick’s trinity of processes [...] enactment, organizing, and sense making” (p. 196). However, according to Sætre et al. (2003), mindfulness is one other element of these processes that deserves notice. Their longitudinal study (2000-2002) garnered qualitative interview results from advanced ICT users in both Norway and the USA. A key aspect of their findings suggested that when social actors demonstrate mindfulness concerning communication activities, they choose appropriate ICT (p. 1142). In contrast, they define mindlessness as “limited information processing, rigid categorical thinking, single perspectives, and failure to recognize context” (Burgoon & Langer, 1996, p. 107, as cited in Sætre et al., 2003, p. 1132). According to Sætre et al.’s subsequent study, “mindful ICT use can also have unintended consequences [and] can affect perceptions and use of additional ICTs” (2007, p. 151). In terms of research limitations, they acknowledge that having to rely on participants’ self-reports of behavior muddies the distinction between mindful and mindless action.

These scholarly perspectives demonstrate the critical interchange between enactment and action, where without them, inaction and mindlessness have a random, disorganizing effect on the organization. This interchange begins within individuals, and is especially impacted by leaders. Maitlis and Christianson make a clear connection to this premise: “Enactment is premised on the idea that people play a key role in creating the environment in which they find themselves” (Orton, 2000; Weick, 1979, 1988, 1995, 2003; Weick et al., 2005, as cited in Maitlis & Christianson, 2014, pp. 84-85).



### c. What an Organization Knows

This research pursuit has origins in seeking to alleviate (or balance) the ever-increasing demands on those who dictate enterprise-level ICT adoption. The intention is not to relieve them of responsibility or to encourage them to only imitate others. Rather, the motivation is to consider how strategy (dialogue, design and adoption) can harness the power of organizational knowledge. The academic perspectives that follow examine how these two aspects of an organization overlap.

Organizational knowledge theorists, Tsoukas and Vladimirou (2001) explore the relationships between an individual's knowledge<sup>15</sup> (implicit) and organizational (explicit) knowledge, which they define as “the capability members of an organization have developed to draw distinctions in the process of carrying out their work, in particular concrete contexts, by enacting sets of generalizations whose application depends on historically evolved collective understandings” (p. 973). Another prolific scholar, Dr. Chun Wei Choo of the University of Toronto, further reveals how individual and systems knowledge integrate when he writes:

Explicit knowledge does not appear spontaneously, but must be nurtured and cultivated from the seeds of tacit knowledge. Organizations need to become skilled at converting personal, tacit knowledge into explicit knowledge that can push innovation and new product development. Whereas Western organizations tend to concentrate on explicit knowledge, Japanese firms differentiate between tacit and explicit knowledge, and recognize that tacit knowledge is a source of competitive advantage. (Choo, 1996, p. 335)

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<sup>15</sup> As Choo (1996), Tsoukas and Vladimirou (2001) intimate, tacit knowledge is implicit in nature and relates to a person's knowhow without being stated. It is also classified as heuristic because the person has often learned or discovered these things on their own. Putting this knowledge into words makes it more explicit.

In their study, *System Support for Knowledge Work*, scholars Stenmark and Lindgren (2006) investigate ways to improve the adoption of knowledge management systems (KMS) at Volvo Headquarters in Sweden. Interestingly, their research recognizes the value in having IT systems (KMS in this case) integrate with everyday knowledge work, both individually and collectively. In other words, one ought to reinforce the other. Their work attempts to “bridge the knowing-doing gap in organizations where individual members do not know or know of each other and the organization as a whole does not know what it knows” (2006, p. 48). Given this objective, the actions and perceptions of Volvo’s decision-makers concerning KMS technology impact how organizational knowledge is utilized. They act as catalysts for communicative and strategic decision-making purposes.

In contrast, Tsoukas and Vladimirou (2001) used a case study performed in Greece to provide a theoretical examination aimed at the dynamics of turning an unreflective process (such as decision-making) into a reflective one (p. 981). Which, is to say that decision-making can be unreflective and mundanely routine. The authors argue that organizational knowledge is put into action by particular contexts that individuals are confronted with in their work. And, can only be made effective when the individual’s (a decision-maker) heuristic knowledge, i.e. experiences, perceptions and motivation are reflected upon. They further emphasize that: “knowledge is both an outcome – ‘a framework’ – and a process for ‘incorporating new experiences and information’ [...] In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms” (Davenport & Prusak, 1998, p. 5, as cited in Tsoukas & Vladimirou, 2001, p. 974).

#### **d. What Leads to Decision-Making**

In spite of the fact that research on strategic decision-making has been vast, two aspects in particular that relate to ICT adoption emerged from the literature: 1) the reliability of leaders' perceptions in decision-making (Mezias & Starbuck, 2003; Shotter & Tsoukas, 2014; Starbuck & Mezias, 1996), and 2) frameworks for understanding technologies through the use of shared mental models, participatory process models and tools-in-use (Bailey & Peck, 2013; Hansen, Kraemmergaard & Mathiassen, 2011; Jarzabkowski & Kaplan, 2015; Tamm, Seddon, Parkes & Kurnia, 2014).

Organizational scholars liken senior-level leaders to the role of architects in enterprise strategy (Ancona, 2012; Choo, 2005; Collins, 1997; Lefebvre, Mason, & Lefebvre, 1997). Leaders' perceptions however biased, are predominant and impact how their organizations function. Hansen, Kraemmergaard and Mathiassen (2011) revealed clear discrepancies in how leaders valued ICT and where it served organizational strategy. The results are as compelling as their claim that "digital transformation requires conversations that matter: 'The relevance comes from ideas, knowledge and expertise that relate directly to the critical business agenda'" (2011, p. 125).

Many scholars propose that the vantage leaders have over their organization affords them a complement of tools for ICT adoption. Leaders possess organizational knowledge, experience and decision-making authority that can guide adoption based on enterprise strategy. From an organizational perspective, research supports the notion that successful adoption derives from core pursuits and leader involvement. What leaders notice spurs their "situation awareness" (Suneson & Haldal, 2011, p. 970). Starbuck & Milliken suggested that if events or conditions go

unnoticed by leaders, “they are not available for sensemaking” (Starbuck & Milliken, 1988, p. 60, as cited in Tallon & Kraemer, 2007, p. 21). Hence, because organizations are frequently confronted with technology and innovation considerations that demand strategic and organizational shifts, success hinges upon leaders who are ready and significantly engaged in this process.

Now, if we consider what leaders know and what they think, scholars Suneson and Haldal (2011) revealed that significant knowledge barriers impeded a telecommunications adoption in Sweden. Their results demonstrated how complex ICT decision-making can be and they suggested that connections between sensemaking (making sense out of situations) and mental models (a mental image of a specific situation) offer promising interventions for practice and research. When asked how they made decisions, most of their subjects answered, “they did not make any decisions – they just worked” (2011, p. 969). Their research also reported that decision-makers search for “good enough” solutions rather than optimal ones; “this process is not necessarily conscious” but automated and heavily affected by “cognitive perception” (Klein, 1989, 2008, as cited in Suneson & Haldal, 2011, pp. 969-970).

Findings such as these offer in-roads to situational awareness that can aid in breaking down knowledge barriers and perceived complexities. They also reiterate the roles that sensemaking, enactment, and organizational knowledge can play in how leaders make decisions. Enacted sensemaking offers an approach to ICT adoption, while organizational knowledge provides the key input for leveraging leader involvement in this decision-making process.

**Summary of Key Findings, Observations and Gaps**

- A. After initial consideration, using TAM as a means for addressing leaders' perceptions of ICT was deemed unsuited for sensemaking. The reason being: "If sensemaking is part of adoption, then adoption involves retrospection, which implies that behavioral intention, especially when measured before subjects actually use a technology, may be a weak indicator of actual enduring adoption behavior since there is no real experience yet with the system" (Seligman, 2006, p. 112). As well, research indicates that this stage of observation (PEOU and PU) is preceded by sensemaking processes and does not properly engage ICT adoption beyond a personal level. "Experience comes first, knowledge later. 'Language', as Wittgenstein (1980a) famously remarked, 'is a refinement, in the beginning was the deed'" (p. 13e, as cited in Shotter & Tsoukas, 2014, p. 383).
- B. Some studies left out non-ICT leaders in their investigation of ICT adoption. In some cases it seemed appropriate, however, a concern would be that this variety of participant (ICT leader) might not possess the authority or experience to make these decisions on behalf of the organization.
- C. As described, some scholars contend that sensemaking occurs in a social context, yet, there are those that see it being initiated at an individual level, first. Which means it happens when a leader confronts issues, events and/or actions that are confusing or surprising to them. This implies an awakening (of sorts) occurs where a leader's perspective of ICT may shift.
- D. The role of the researcher can guide, what has possibly been mindless action and/or routines, into an enacted environment. This requires an initial commitment on behalf of

the participant (leader), but can be the spark for creating mutually constructed meaning through sensemaking with the researcher. There were instances in the literature where researchers entered into sensemaking activities, e.g. (Hansen, Kraemmergaard & Mathiassen, 2011), but they were infrequent and mainly focussed on observation.

- E. Even though there is a great deal of discussion regarding the nature of sensemaking, explicit instruments or methods to foster and guide the process with practitioners appears less visible in the literature.
- F. Research involving self-reports by leaders can be biased and must be carefully observed for validity, i.e. self-serving, overstated, inaccurate, etc.. Scholars such as Starbuck and Milliken (1988, 2006) warn that “retrospective explanations of past events encourage academics to overstate the contributions of executives and the benefits of accurate perceptions or careful analyses” (p. 33). Whereas, Tallon and Kraemer (2007) claim that measuring executives ‘notice’ can be valid survey instrument that correlates sensemaking processes with perceptual accuracy.

## **Discussion**

This literature review has attempted to deliver a context and framework that is analogous to what scholars have described as, the relationship between sensemaking and enactment. What began to surface amidst this process, was a way to envision the role of researcher and participant in what will be the next step of this study. The themes that have emerged act as signposts for guiding organizational leaders’ sensemaking of ICT, and subsequent sensemaking concerned with adoption for enterprise strategy. The literature also shows us that interventions ought not to

be prescriptive because of the inherent ambiguity<sup>16</sup> (uncertainty) of each leader's environment (situation).

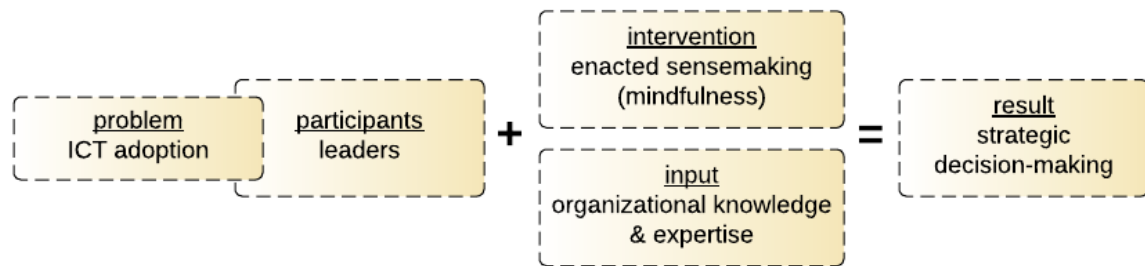


Figure 1. This figure illustrates a framework for enacted sensemaking.

“Sensemaking is a way station on the road to a consensually constructed, coordinated system of action” [where] circumstances are “turned into a situation that is comprehended explicitly in words and that serves as a springboard to action” (Taylor and Van Every, 2000, p. 275, as cited in Weick et al., 2005, p. 409).

### Theory & Practice & Sensemaking

In a 2001 special issue of the *Communication Theory* journal focussed on “Practical Theory”, editor J. K. Barge delivered a framework that encompassed the submissions of scholars concerned with the theory-practice relationship. Based on these perspectives he identified three broad (though different) approaches that practical theory addresses: mapping, engaged reflection and transformative practice (p. 7). For the purposes of this study, transformative practice nicely connects theorist and practitioner by providing a “participatory action research model where there is shared ownership [...] and an orientation to action” (Kemmis & McTaggart, 2000, as cited in Barge & Craig, 2009, p. 67).

<sup>16</sup> Scholars such as “Orlikowski & Gash (1994), Ciborra & Lanzara (1994) view **ambiguity** and puzzles as unexploited sources of innovation” (Henfridsson, 2000, p. 91) and “To deal with ambiguity, interdependent people search for meaning, settle for plausibility, and move on. These are moments of sensemaking, and [...] affect how action gets routinized, flux gets tamed, objects get enacted, and precedents get set” (Weick, et al., 2005, p. 419).

According to communication scholars Barge and Craig (2009), fewer examples of engaged reflection and transformative practice occur in applied communication research. However, both approaches situate the researcher in “a participant position” (p. 71) and provide a constructivist strategy for research. They acknowledge that boundaries can often blur, yet encourage researchers to balance the tension of theory (ontology) and practice (epistemology) so that one doesn’t preclude the other. Furthermore, theory must grasp the reasoning underlying the practice and “bridge the gap between the formal knowledge produced by [...] scholars and the applied knowledge practitioners need” (Sandberg & Tsoukas, 2011, p. 354).

In their work on applied communication scholarship, Barge and Craig reiterate that practical theorizing involves “joint learning” that investigates what’s going on and what should be done about it (Pearce & Pearce, 2001, as cited in Barge & Craig, 2009, p. 67). “The first question emphasizes learning with others about how to expand one’s vocabulary to make sense of situations [whereas] the second question involves learning how to elaborate one’s vocabulary of action” (2009, p. 68).

Given these questions, scholars Van de Ven and Johnson (2006) and Sandberg and Tsoukas (2011) relate how research can facilitate problem solving by synchronizing practical (specific) and scientific (generalized) knowledge. The manner in which practitioners and academics go about knowing things is derived from investigation and experience. And, though processes may differ and knowledge be distinct, they contend that opportunities reside in how researcher and practitioner communicate and engage with one another. They intimate that a feedback loop of sorts, leads back to the problem observed. It provides what Van de Ven claims is essential for sharing and interpreting knowledge, i.e. the need for repeated engagement over a



time interval to reveal “each activity of the research process: problem formulation, theory building, research design, and problem solving” (2007, p. 26).

Hence, what does this research intend to accomplish or what difference can it make? The goal is straightforward: “to reveal more of the qualities, tensions, and challenges of sensemaking” (Maitlis & Christianson, 2014, p. 108), as well as, to “change an existing practice [and] improve research participants’ lives” (Barge & Craig, 2009, pp. 71-72). However, doing so has been the challenge.

### **Chapter 3: Research Design & Methodology**

#### **Research Design**

This research is a limited case study where qualitative methods of gathering and analyzing data are used “to investigate a phenomenon in its real-life context rather than in theoretical terms or in a laboratory setting” (Yin, 2002, as cited in Merrigan, Huston & Johnston, 2012, pp. 144-145). The ICT adoption process that the FR team is undergoing provides an ideal setting in which to profile how each member makes sense of it, and how their actions reflect their perceptions of what is going on, and what can be done about it.

In order to establish a baseline, participants were assessed on whether they approach ICT adoption from an operational or a strategic perspective, as well as their perceptions of ICT, organizational knowledge, roles, and strategic decision-making with respect to this ICT adoption. To differentiate these approaches and illustrate their subtle distinctions we can reflect on the manner in which FR currently utilizes social media (e.g. Facebook and Twitter). On an operational level, each of these platforms allows FR to provide news and events to people that are, or may be, interested in the community, whereas, on a strategic level, they can provide

network mechanisms for connecting people who have varying associations to, or interests in, their family heritage. Consequently, the former provides a generally passive service, while the latter provides a more engaged and tactical mechanism for people to assist one another and to seek, gather, and generate quality information.

By using sensemaking as a lens and employing a qualitative method of analysis, I have intended to draw insights from “the words that [the participants] use and the meanings that they give the experiences they have” (Maitlis, 2013, [0:39](#)). This study is aimed to engage what scholar, J. Kevin Barge describes as a transformative process:

Practical theorizing from this perspective takes seriously the need to honor the interests of the community members and to engage in theorizing practices that transform the abilities and practices of individuals to make their lives better. [It provides] a way to encourage useful description, explanation, critique, and change in situated human action [and] coevolves with both the abilities of its practitioners and the consequences of its use, thus forming a tradition of practice. (Barge, 2001, p. 9)

Based on the results of my literature review, this research was limited to a focus on the individual as a precursor (and lever) for organizational sensemaking. Scholars Maitlis and Christianson draw recent attention to the importance of distinguishing between individual, cognitive processes of sensemaking versus those that occur on social, discursive levels (2014, p. 58). Their appeal for more research on individual “sensemaking that is triggered by an experience or event that undermines people’s ability to do work that is central to their identity” (2014, p. 73), fits accordingly into what the leaders and especially the owner of FR, have been experiencing. Lynne and her team frequently find themselves overwhelmed with ICT

considerations, and the bottleneck in their communication model is catching their attention and provoking their individual sensemaking.

Sensemaking is achieved through enactment which is the reciprocal influence between action and the environment/situation, actors encounter. Maitlis and Christianson further emphasize this relationship when they reiterate Karl Weick's notion that, "action is an integral part of sensemaking—that is, we know the world by taking action and seeing what happens next [... and] cognition<sup>17</sup> lies in the path of action. Action precedes cognition and focuses cognition" (2014, p. 84). Consequently, my primary hypothesis is that a participant's approach to the problem, and the degree to which they are engaged (active) in the adoption, impacts their ability to make sense of it, i.e. enacted sensemaking.

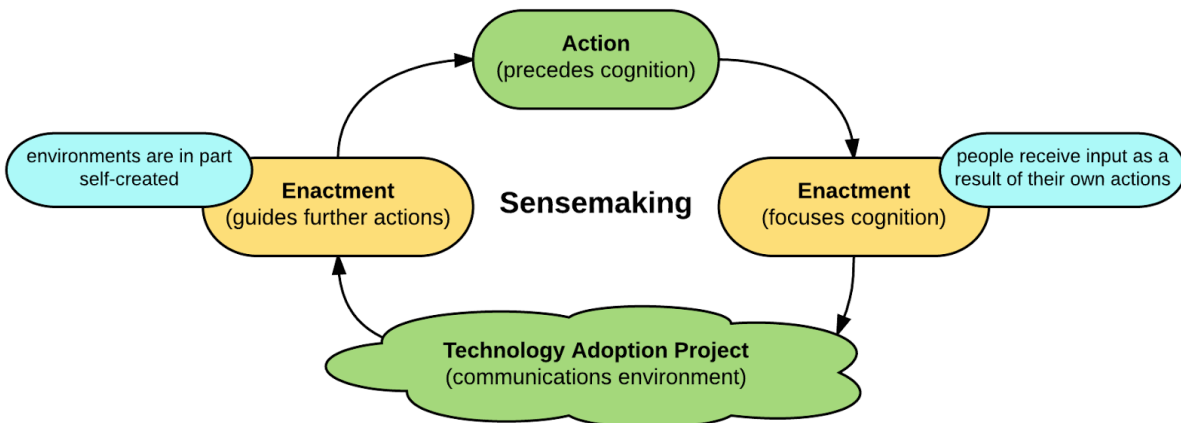


Figure 2. This figure illustrates the action, enactment, cognition cycle of sensemaking.

### Sample

The study has relied on a purposive sample of people currently on the FR executive team. Each individual is considered to be a key informant because s/he possesses relevant experience and knowledge of the organization's mission, and has influence over its strategic decisions.

<sup>17</sup> **Cognition** => The mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. Source: Oxford Dictionaries <<http://www.oxforddictionaries.com/definition/english/cognition>>

Having worked with the owner and IT manager over the past year, I was afforded an indirect introduction to the others by Lynne. Upon receiving approval for my ethics application from the University of Alberta's Research Ethics Board, I made email contact with executive team members requesting the opportunity to orient them to my study. Consequently, four of the five prospective members agreed and provided written consent to participate. The sample consists of the following subjects, separated by geography (e.g. United States and Europe), including; the owner, Lynne and two other genealogists, George and Anita, as well as their technology manager, Ross.

### **Benefits & Limitations**

Since March 2015, I (the researcher) have developed a relationship with the group as I, too, have participated in discussions around what platform could best serve the communications shift. These conversations have occurred specifically with Lynne and Ross. My approach can be characterized as autoethnographic because I "already know a [good] deal about the nature and quality of relationships in the setting or situation [I am intending] to study" (Merrigan et al., 2012, p. 202). Where, my aim was to examine the rich descriptions of the team's everyday communication and culture, and describe how their organizational knowledge is used to organize experiences and coordinate their actions (Philipsen, 1989, as cited in Merrigan et al., 2012, p. 202).

A benefit of this research is that a form of joint learning develops between researcher and participants that is intended to expand participants' vocabulary for making sense of their current situation and their vocabulary of action.

There were no foreseeable risks of discomfort for participants. The questions were not aimed at contentious or controversial issues or concerns. The duration of the interviews was relatively short and designed to encourage natural rather than contrived responses, and if there was any cause to discontinue an interview, the participants were made aware, beforehand, that they were free to do so.

### **Research Methodology**

At first, I planned to deliver the study orientation in a group webinar format (using Zoom<sup>18</sup>, a web conferencing tool) to share presentation content. This orientation was intended to bring mindfulness to the situation, as well as, to my research. It was also a form of intervention that provided an opportunity:

- for us to meet face-to-face and establish a collaborative atmosphere.
- to familiarize them with the report (April 2015) I delivered to Lynne which provided an assessment of Family Roots' communication practices as well as recommendations to help transform its communication model.
- to provide text excerpts illustrating terminology, e.g. ICT, "technology adoption project", transformation process, communication model, etc.; and the background to my studies and the role of my mentor and capstone supervisor, Dr. Thomas T. Barker.
- to provide a brief context for:
  - the study's purpose and participation requirements, i.e. time, consent,
  - and what we are attempting to engage in through this emerging communication model, i.e. to establish a mindfulness of it.

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<sup>18</sup> Zoom is a web-based video and web conferencing service <<https://www.zoom.us/>>

However, due to scheduling constraints, it was more convenient to provide this orientation (10-15 minute duration) on an individual basis.

### **Data Collection**

To refine and reduce the semi-structured interview protocol, I pilot tested questions with four people unrelated to the study but who had experience with ICT adoption. These interviews were performed face-to-face and/or by using the Zoom web conferencing tool. The pilot interviews were recorded using the features both available in Zoom and an iPad voice recorder app to ensure that they would suffice for transcription and act as a backup recording and alleviate any issues with audio quality. The test results aided in finalizing the two-part interview protocol (Appendix B) and provided focus on what I intended to gather from the inquiry. They also acted as a means for reducing the number of questions and duration of each interview.

Interview one was comprised of ten open-ended questions (15-20 minute duration) and served to establish a baseline of participants' perceptions regarding ICT and this particular adoption project. Their situational narratives and storytelling also provided a means for profiling their:

- approaches (i.e. strategic (S) or operational (O) perspectives of the role of ICT)
- involvement (i.e. action (A) or understanding<sup>19</sup> (U) orientations)
- perceptions of what was going on, i.e. what was working, and where there were gaps

The second interview (5-10 minute duration), held approximately two weeks after the first, employed five open-ended questions that were aimed at capturing a retrospective sense of participants' experience and perspective on the communication shift.

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<sup>19</sup> In the context of enactment, people receive input as a result of their actions, whereas "interpretation [understanding without action] implies that there is already something in the world waiting to be discovered (and will be found once ambiguity is cleared)" (Brown, Colville & Pye, 2015, pp. 266-267), hence, understanding without action does not engage sensemaking.

Within the context of this ICT adoption, I developed a data gathering instrument for coding and categorizing the participants' responses which aided in detecting any correlations between their approaches and level of involvement in the project. Data gathering beyond the interviews made limited use of the Google Shared Mailbox artifacts e.g. email activity re: commentary, reflection, questions, however, these too, did reveal details of the participants' involvement, e.g. Ross's notice of the Google Group Shared Mailbox (Appendix C).

### **Data Analysis**

By reviewing the interview transcripts, I generalized the participants' language in order to characterize their approaches to ICT adoption as strategic (S) or operational (O), and their involvement in the project as being oriented toward action (A) or understanding (U).

Before undertaking the analysis it was important to recognize scholars' underlying notion that sensemaking is achieved through enactment, which is the reciprocal influence between action and the environment (situation). And equally so, Maitlis' and Christianson's allusion to what distinguishes sensemaking from interpretation:

Sensemaking is about the ways people construct what they interpret. Interpretation assumes a frame of meaning is already in place and that one simply needs to connect a new cue to an existing frame. It also assumes that one recognizes a need for the interpretation [...] Consequently, sensemaking is concerned more with invention than with discovery; invention precedes interpretation." Consistent with these scholars, we thus see interpretation as an important component—but only one component—of the sensemaking process. (2014, p. 109)

Hence, after having worked through this process, I sought measures of effectiveness that reveal

how these leaders’ characteristic involvement and perspective have impacted their FR realities. In other words, has involvement paid off, or has “sensemaking [provided] a precursor to more effective action” (Ancona, 2012, p. 6)? Do their words intimate their level of engagement in sensemaking?, i.e.

- action (A) = enacted/experiential interpretation = sensemaking
- understanding (U) = not enacted/theoretical/conceptual interpretation ≠ sensemaking

When analyzing the data I utilized the codes previously described to reduce, organize and draw meaning from the interview data. Responses identifying issues, concerns, confusions, possibilities, notions and perceptions, and interesting language were also labelled for reference in the Findings & Discussion chapter.

In review, the outcome/hypothesis I have intended to examine is: whether each of these leader’s approach to the problem, and the degree to which they have been engaged in the adoption, impacts their ability to make sense of it (enacted sensemaking). As, previously mentioned, my aim was (by virtue of the results) to foster a more straightforward method for observing individual sensemaking.

Interview	Factors to be observed	Results	Measures
1	to establish a baseline of participant perceptions re: <b>a)</b> ICT and its role (personally, organizationally); <b>b)</b> their role in the adoption (expertise, organizational knowledge, conversations)	words used to describe: “what’s going on”	<b>Approach:</b> operational (O) or strategic (S)
2	participants’ retrospective view of the process re: <b>c)</b> how they make sense of it (results, impact, new knowledge) and what can be done about it	words used to describe: “what’s next?”	<b>Involvement:</b> action (A) or understanding (U)



## Chapter 4: Findings & Discussion

### Introduction

It would be fair to say that this study, itself, parallels what the participants have themselves experienced through this adoption. Both activities have enacted opportunities for us to act, in order to think. Each illustrates that a sensemaking perspective can be used “to move analysis from isolated events to more comprehensive, ongoing flows of experience [and] emphasizes that the nature of things is continually developing, meaning we are always in the middle of events” (Smerek, 2013, pp. 374-375). Hence, as Weick (2005) suggests, sensemaking asks us to notice and “distinguish and study certain [processes] more thoroughly [and go about] putting words to what has happened” (Suneson & Heldal, 2011, p. 970).

What follows is a qualitative analysis of the words and expressions of the FR team in the context of this ICT adoption. Where, the central goal was to observe whether the participants’ perceptions of ICT and their role in the adoption, has influenced their ability to make sense of their situation and what happens next. Therefore, by acknowledging that “we act in order to discover [and] are largely in the throes of action that make sense only in retrospect. [And that by honoring the sensemaking maxim:] ‘How do I know what I think until I see what I say?’” (Smerek, 2013, p. 375), we hope to leverage these findings in order to make better sense of the problem and what strategic actions might follow.

### Interviews & Data Collection

The first interviews (15-20 min.) went smoothly and were preceded by the study orientation. Participant responses were both relaxed and engaging. The questions (Appendix B) were open-ended and allowed for personal perspective and varied illustrations of participants’

own FR activities. Interview one was aimed at establishing a ‘perceptions-baseline’ regarding ICT and its adoption, and the consequent influence it was having on their approaches and involvement in the project. The factors used to observe this baseline were concerned with their perceptions of ICT and its role, both on a personal and organizational level, as well as, their own role in the actual adoption.

With the exception<sup>20</sup> of one participant, the second interview (5-10 min.) was undertaken approximately two-weeks after the first. The nature of this interview, from a more retrospective vantage, was related to their experience using the group shared mailbox. It was intended to:

- observe whether, or to what degree, their adoption perspectives had changed.
- inquire about the effects on their realities after having worked through this process.
- consider correlation and what role “sensemaking” was having in the process, i.e. assess how they describe “what we should do now”.

During the interview process there were a few instances where I needed to repeat or reiterate a question or expand on the specific context of the ICT adoption (i.e. Google - group shared mailbox). The recordings were successful and allowed for good transcription of each pair of interviews, which generated an average of 3000 words per respondent. However, this mean value is somewhat misleading in such a small sample, because Lynne provided an additional 50% word count as compared to the average. Her narratives encompass the widest scope of those interviewed on the executive team. This is an indicator not only of her involvement in the ICT adoption, but also within the context of the community, itself.

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<sup>20</sup> This exception was due to time constraints of the study, i.e. for this participant, both interviews were conducted during a single session.

Another item worthy of mention relates to one member of the team who declined participation in the study. Following Lynne's initial inquiry to her team about participation, this member's reluctance appeared to stem mainly from time pressures and tasks she was currently undertaking. She was unwilling to lend her efforts based on (as Lynne related and I am paraphrasing) a preconceived notion that a better means of internal communications should have already been in place soon after my April 2015 report had been delivered. This mention, supports and acknowledges her decision and by no means infers any contention or lack of validity in her reasons for not participating, however, as alluded to in the Literature Review chapter, it does reflect the nature of what Suneson and Heldal (2011) discovered in their study on leaders involved in a Swedish telecommunications adoption, when asked how they made decisions, most answered, "they did not make any decisions – they just worked" (2011, p. 969). This internal communication between Lynne and her colleague provides insight and illustrates how the operational side of an enterprise impacts the way members' organizational knowledge, mindful action and strategic decision-making are leveraged (or, for that matter, impede it). It did, however, provide us another instance in which to examine "the qualities, tensions, and challenges of sensemaking" (Maitlis & Christianson, 2014, p. 108).

### **Data Analysis & Findings**

What follows is a presentation of the results of the data analysis. As mentioned, three factors were used to profile each leader's approach to ICT and their involvement in the ICT adoption. Interview one data was used to evaluate how each perceives ICT and its role on both a personal and organizational level (factor a), and how s/he perceived their role in the ICT adoption (factor b). Whereas, in order to gather their retrospective view (or sense) of the

communication shift, the results of the second interview provided the basis for analysis of how each of them makes sense of the problem and what they suppose should happen next (factor c).

a. **The Role of ICT**

i. **On A Personal Level**

For responses that pertained directly to how each leader perceived ICT and its role on a personal level, participants were categorized as approaching ICT adoption from an operational (O) or strategic (S) perspective. On a personal level, the results were even, two operational and two strategic. Those that had a tendency to use ICTs for operational or task-oriented reasons, explained that they chose them because of popularity, ease of use, and/or because it offered an efficient way (usefulness) to communicate with others, generally. For those that lean toward choosing ICT for strategic purposes, their preferences were both directed at the value of FR's genealogical database, e.g.:

The database, MySQL; you've got people who are users – who have business needs or in this case, the non-profits needs, and this supports their needs and it's not an end, it's sort of a facilitator, a facilitating technology. (Ross)

The FR [database] because we're honing our skills and data and we're asking what's best to do, or should we change this process? (Anita)

ii. **On An Organizational Level**

When categorizing how each leader perceived ICT and its role on an organizational level, Lynne's approach could be characterized as operational. She illustrated this by saying:

It's improving the communication just because it's there for everybody to take, [however] before, when I would ask someone to take a request, I knew that it was their specific area [...] Now with it in the shared email box [...] I feel like there is less communication between me and the other genealogists about things. But my mailbox isn't burying me. So there are some pros and there are some cons.

Whereas, the others responded from a strategic perspective:

If we can communicate internally better and still preserve all of that reputation and integrity of the data, I think that's really key. (George)

It will help because we'll all be using the same ICT; however, we should dictate what the ICT does and not have it dictate our actions. (Anita)

It's not a target, so the needs will change and the organization will evolve; we have to look outside the organization to the other 503c organizations we can partner with [and] recognize the niche that we're going to carve out for ourselves. (Ross)

Lastly, when asked whether ICT adoption should be focussed on making the right choice(s) the first time (accuracy), all four contend that it requires more of a trial and error approach (plausibility). Examples included:

What in life do we get right the first time? Next to nothing. So I always look at rollouts of new things, communication and technology for sure, as a trial and error kind of thing. I think we have to test things out and we don't know the mistakes or the gaps until we play with it. So, I'm totally fine with taking things in progression and not expecting things to be right immediately out of the gate. (George)

You don't want to try things that are unlikely to succeed, but similarly you can spend a huge amount of time trying to think through the perfect solution [...] it makes a whole lot of sense to spend a minimal amount of time making sure that what you're doing is likely to succeed and then only after your first iteration do you start to get the learning process. (Ross)

You might end up heading a short way down a road that is a little bit misty and murky and maybe a little bit dusty under the feet, but you need to have the wisdom to turn around and then comes your second time and maybe you get it right [then]. (Anita)

We've gotta get some pressure off the pressure cooker, I don't care what it is because this is like seriously, so bad, we have to just do something and maybe Google groups or Google docs is not the way we need to go, and eventually it will change to something else and I am totally open with that. If it's something that's going to help and be better. (Lynne)

The one exception to this notion, however, was Lynne's response concerning her decision to use

the TNG database<sup>21</sup> platform:

When I picked the software, I spent months trialing and erroring but I didn't put anything up until we had it right.

**b. Role in the ICT Adoption**

The next important aspect of the responses gathered from the first interview was concerned with how the executive team members perceived their own role in the ICT adoption. The approach measures (O and S) continued to be used but it was here that each participant's level of involvement was categorized as being oriented toward action (A) or understanding (U). From the outset, it was important to acknowledge that each member has clearly been engaged in the adoption process, however, what is significant to the study, relates to their level of engagement in sensemaking. The words they use to describe their role reveals their perceptions of "what's going on" in the adoption process, and the impact it has on their actual involvement.

The results demonstrate that there was an even split between participants when it came to their involvement (i.e. A or U). For George and Ross, their involvement is characteristic of needing or preferring to understand (U) things prior to action. Both are willing to devote energy and commitment, but require time to observe and look to others for helping them recognize an ICT's strategic value. For example, these remarks tell of their tendency to rely on understanding (cognition) prior to action (enactment):

**George:**

I don't jump on board too easily. [It usually happens through] a colleague, or someone being more of a mentor, walking me through it, holding my hand through the initial stages, helping me see the value and why [I'd] want to add something more to my plate.

I haven't been involved in the planning of it or being able to comment on the system itself. I've just been a user of it [...] I kind of want to take a supportive role and kind of a

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<sup>21</sup> The Next Generation of Genealogy Sitebuilding<sup>®</sup> ("TNG") is a powerful online platform that manages and displays genealogical data. The information is stored in a database and the content is created on demand. Source: <<http://www.tngsitebuilding.com/>>

background role. I hope to retire this next fall and have more time and then I feel like I could step into that piece a little bit more.

Right now [...] I prefer to be told that this is the system we're going to and here's how to use it. But, I also kind of like that open engagement piece [and] do want an avenue to ask questions when things don't seem to be working as effectively or efficiently as I perceive they could be.

**Ross:**

[During my career] I was surrounded with a cadre of lots of very very bright people that did a lot of reading and as a result over the coffee machine or water cooler or business meetings, there were just thousands of opportunities to say, well, here is a technology that's available and I wonder if it might be applicable?

When I first came on, the challenge was just to understand what they had, it really was not to try to make any changes. [However, there aren't many] technical people on the FR [team], although that's not to say that the people there don't have a huge knowledge around the processes that they have today. So, I would say yes, I should be involved in [these conversations]. It's sort of a mistake if I run away with a problem and come back with a solution and I try to plop it down because I may not have interpreted right [or] come up with a good solution.

We put the support mailbox up and now that it's up I do log onto it [...] every two to three days just to see how it's being used and I've [been monitoring it and have] got some ideas of how we can refine it in the future.

I think I'm expecting to work with you [the researcher] to try to develop a bit of a target and I'm sort of back to the trial and error and not the "ultimate figure it out" target and then to assist you with the technologies in iterating towards a better adoption of communication amongst the members.

From an action (A) orientation, Anita and Lynne indicated their desire to typically try out ICTs, first. The responses don't infer that there isn't good reason for their choices, but the results do align with Weick's argument that action precedes their cognition and focusses their cognition:

**Anita:**

Someone will send me an email and say, "did you know about this?" [...] I have been learning by bits and pieces.

Lynne and I have talked probably more than I do with the others, but we share information and we have tried to maintain frequent contact, it's mostly through the FR team [...] I am beginning to explain, mention or offer ideas from a perspective beyond the USA.

[I have been] listening and talking. Writing emails. Someone writes me an email and I have to admit the team email gets answers first. I'm fairly content with how I am involved now.

**Lynne:**

[Learning about ICTs] just usually [happens] by somebody talking about it [...] I have a lot of really high tech friends and my kids, one is an engineer and one's a teacher.

Even though I don't understand all the technology, I know what I need it to do [...] Since the very beginning I was working with an IT person [explaining what we need for genealogy] and [the other] genealogists [...] every day trying to figure out the best method of getting it done.

Well, in my ideal world, I would have you [the researcher] and [Ross] just take care of it. And let me do the helping with the membership and helping teach people how to use the genealogy part [...] I can design websites and do all this and figure out the technology piece – I don't like it. It's not something that I choose to do, it's just that it has to be done and I choose to do genealogy and [...] be a people person and help people with their family history. That's what I have the passion for.

With respect to the approach measures (O and S), the participants' perceptions of their role in the ICT adoption were indicated by their responses concerning to what degree their own:

1) expertise, 2) organizational knowledge, and 3) ICT conversations, have influenced the process. The following (Table 1) is intended to provide a better representation of these three elements and that participants' approaches to each, varied between O and S:

Table 1

Element	expertise	organizational knowledge	ICT conversations
Anita	Well, if [my] help leads to putting [data] in once, instead of twice, or three times and	If I have a question that has come up because of a small problem, it doesn't pay to let the problem get bigger, I will	I'm not sure anyone is leading the conversation. Certainly no one is steering the conversation, which is fine. Probably Lynne has a better handle on it than the



	refining it and correcting it – we have a good system, then that would be helpful. (S)	first contact Lynne [then] contact [Ross]. So that for me is sort of the chain of command. (S)	rest of us. She’s been involved in it from the very beginning. (O)
George	For 30 years I’ve worked [...] trying to please customers, trying to explain complicated things to customers. So I think one of the areas I can add is putting myself, being a voice of the customer. What does the customer see, what does the customer experience? (S)	I always wind up throwing my questions back to Lynne and Lynne says well that is really a question for Ross, why don’t you ask Ross? [...] And I never have time to follow through and ask Ross, so I just kind of crutch along with you know my band aid approach or no approach. (O)	Probably very minimal [...] because I work full time, I can kind of pick and choose [when] to get involved [...] I think Doreen is probably the most involved because I think she donates the most time, and [...] we all kind of defer to her ways. It would be nice to have a little broader communication around that and maybe Ross, I think definitely is the guy that understands the workings of the system the best. (S)
Lynne	So, as far as the emails go, I’m pretty fast about discerning where best they should go [...] I’d like to be able to flag emails, for certain people, but then I don’t want to do that because I’m trying to get away from that role. (O)	I might have this idea of how something – oh, I think we should do this and [Ross’s] like, “well that’s not really how it works, it’s more like over here” [...] I just have some fantasy world idea of how something might work and he has reality. (O)	I think both [Ross] and I do, because I’m like try this try that, what about this what about that? But then people will come up with an idea [...] and I’m like “it’s an awesome idea”. So then I talk to [Ross] about how that could be [...] but when he first started he was like “well what are you trying to do? What is your goal?”. So you know, we have to have that conversation about how our vision is and then how does he make that work. (O)
Ross	I think my background was such, as an analyst over my career, recognizing that even though we were being asked one question, the question had moved and for us to solve the real problem, we had to solve the other problem, first. (S)	Actually, one of the major answers is you [the researcher]. Everybody has got their own lens on the world [and mine] is somewhat backwards because I’m looking at existing problems [FR has] because my background comes from my time in the work force. Your lens is more academic and you [are aware of] new products and new ideas. (S)	That sort of implies that there is an effort that is forward-thinking, like an architectural vision or technological vision, and I think that based on the size of the organization and based on the people that we have, not a lot of effort goes into that. (S)

**c. Making Sense of the ICT Adoption**

The results of the second interview provided a means for gathering the participants’ retrospective view (or sense) of the communication shift. The rationale for this final portion of the analysis was based on how each of them makes sense of the problem and what they suppose should happen next (factor c). Three aspects of this process were used as signposts for examining how each member described the ICT adoption project:

- i. results, impact on work, new knowledge
- ii. what can be done about it (improving the communication model)
- iii. and, what’s next?

**i. Impact of the ICT Adoption**

Table 2

Signposts	Results	Impact On Work	New Knowledge
Ross	Probably the biggest is that there can be a sharing of effort without bottlenecking everything through Lynne. Requests can come in and they can be taken by somebody without her involvement.	It does however, give me an opportunity to monitor, what’s going on, so even though I’m not personally hands on doing the work, I can see the process and it seems to work. And the amazing thing to me is that it sort of worked at the first iteration. First time round, as you can appreciate, not every time works that way.  I’m not sure if this was technology they [the other members] understood or something that Google just managed to put into place that works, but for whatever reason, without a lot of training we just sort of slapped it into place, it’s working and worked on the first iteration.	If you’re talking about the pieces of the work that are actually being distributed, I would say that just by virtue of the new process, it now highlights what is being done and by whom. Whereas, previously it was sort of all second hand. People were telling me that Lynne was coordinating everything and parceling it off to others but it was sort of sight unseen. Now, it’s very visible and what has to be done and who is doing the work. So I would say that it’s very enlightening.  I think that they’re pretty much isolated from what’s happening. They see this as the tool that’s better and I’m not sure that they’re fully aware of why it’s better or what it is that they’re doing. Or even, at the fundamental level of what’s

		<p>The group had a problem and they didn't really know what that was, they could sort of describe that they were falling in on themselves because as more volume increases the existing processes break, but that's, I think, as far as their knowledge went.</p>	<p>happening is that the flow of information, the flow of requests, the flow of work is changing and they're just seeing that it's more efficient, they're not recognizing why it's more efficient.</p>
Anita	<p>I know that it's been a big help for Lynne. That some of us have been able to pick up some of the requests that come to her.</p>	<p>It's worked well as a sort of sorting box for mail that comes in. I haven't had as much that I could pull out of the mailbox to work on. And that's nothing but that I'm in this corner of the world [Europe] and the rest of them are getting lots of questions that they can answer [where they are]. It is a useful tool.</p> <p>Lynne has been in the habit if she notices that I'm not checking in, of giving me a poke with a very quick email. And then I can go ahead and start digging for an answer to the question.</p>	<p>As far as the mailbox thing, it's pretty standard. There is not a lot of strange terminology. It's an email box with new ones coming in and work being worked on and completed.</p> <p>I have never been part of a group mailbox so that's new and it's technological of course and it's also good for us and the team.</p>
Lynne	<p>Emails are not coming to my inbox and [...] getting stuck in there and me feeling like I'm going to lose my mind because I can't take care of all of them. So that is a big positive. One of the negatives is that not everybody is picking up as much as is needed to be done. I mean they're picking up, but it's not enough.</p>	<p>It gives me another mailbox to check. But I feel, I feel like it's not such the weight, it isn't burying me [...] like I'm the only one holding up this weight.</p> <p>I was hoping that the email box would stay empty. And that people would see something was in there and would just take responsibility and go with it, but [...] I feel that the reason that they're not, is because they're not sure how to proceed.</p>	<p>The shared mailbox, how that works because I had never done one of those before. I have used Google drive and Google docs before, and I added some Snag-its [screen &amp; voice recordings], which you [the researcher] introduced me to, which was good. Otherwise, those are the only two new things.</p>
George	<p>[It has] allowed me to engage directly with customers which I haven't done before, and I think I've got a good</p>	<p>It's given me a little bit more personal satisfaction because I can contribute in tangible ways without begging for work or</p>	<p>Being able to log onto a Gmail box (laughs). It's even a new product from what I was used to so, and throwing things in folders. It's</p>

	customer rapport, so Lynne’s kind of given me reign to do that.	making up my own tangents of work.	different than what I do in Outlook or at work or in my personal life.
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**ii. Improving the Communication Model**

When asked how this adoption might improve their former communication model, the team members’ responses were varied and related to ICT beyond the scope of the group shared mailbox. Examples included:

**Anita:**

I would hope that the team would grow in the strength of working together. To strengthen the team, meeting using Zoom to have sort of video meetings on a regular basis [...] So that we have the freedom to knock around ideas, even if we want to complain about some of the work, or the protests or praises, or whatever. We need to keep the team strong and in contact, on a regular basis.

There is on the site a spot that shows who has been working on the information for any particular family [...] That also strengthens the service aspect of this [...] And if there is a way to send me, or whoever last worked on something, an email directly from this little short name, it might be a good idea [...] it’s just an accountability statement that comes up [...] to create a more personal connection between the family member and me. But even that might make people feel like they’re in contact with someone who has been working on it. It might also save Lynne some time.

**Ross:**

This is the tip of the iceberg [...] once you’ve got the idea that people as a group can share information and can work with informal, many-to-many interactions, as opposed to top down, one-to-many, it opens lots of doors. I think that sometimes you’ve got to demonstrate tools and show that things are better before you’re given the opportunity to use them more. I think that we demonstrate efficiencies and improvements and now we’ve got the opportunity to improve this collaboration. [Which] can happen at two levels [... meaning] that there is a group of maybe a dozen genealogists that share work, ideas and the requirements for documentation on how they do their work [but] there is also another pool of [about 250 public] users of FR, where [there] is an opportunity to collaborate.

[The executive members] are able to consult with the technologists who recognized that technology might solve their problem. And having implemented something, I think

they're now aware that there's even better ways of doing things [and] they're more likely to experiment. But, people's predisposition is to continue to do what [they usually] do and if the going gets tough you just have to try harder. Sometimes that is the answer, but often [it is not].

**Lynne:**

I need to do a better job of teaching the team how to go in there and take a request. I need them to take more. And then I'm thinking maybe I should add more people into that shared box [...] So that each of them can take a few and then that will help relieve some of the pressure.

We are implementing a monthly meeting on Zoom so that we can get together and talk about things that we need [and] work better on. Like the media was kind of messed up and Doreen and [Ross] fixed it [and] Doreen gave a one hour presentation on media and how we should all do it [which] I recorded [for those] who didn't attend the meeting.

**George:**

There are a zillion tangents I could take on my own but I want to please the paying customer, as well. So yeah, it allows me that direct access to customers.

[The] new email system was interesting. It feels a little bit clunky still, it's not visually appealing necessarily, so there's work to be done on it.

iii. **What's Next?**

When asked about the influence this communication shift was having on them, each member demonstrated a heightened sense of what was possible and what should or could occur next for the organization. Examples included:

**Anita:**

We need to work at more connections, more contacts with each other. It's sort of like putting it at the top of the list to foster this team concept. And all of us have been working as individuals in this fun thing for a long time, so the team effort is something that we have to learn to pick up, and to keep our thinking on, so that we don't head off into the individual again.

**Ross:**

You can't just flip the switch and go from controlled to collaborative in one step. It's going to be an evolutionary series of steps.

Even if you go beyond [the team to] the non-members of FR [...] There's probably a 1000 to 1300 there, and there is an opportunity to develop a group of people with common interest that didn't know that they had that commonality. We can provide a social opportunity to spend time with somebody who's got interests the same as you. I mean you can focus on the small group, the dozen people, but I think that just opens up the door to the 250, which opens up the door to the 1300.

**Lynne:**

[The shared mailbox] is successful, it's just not to the point where I want it to be, yet [...] I think all of those interactions help us feel more like a team and I have heard all of them say 'our database'. And I celebrate that, I'm so happy, I feel like they are taking ownership, and this guy in Europe who does the abandoned farms [wrote me an email asking] "how should we do our database about this?" [...] I feel like the more we communicate the more they feel that they're part of it, that it's theirs, too.

The next meeting that we have next month in June, on my agenda is that I will talk to everyone about the shared email box and you know about taking emails from there and how to move them out of the inbox and get them accomplished by themselves and that they can just go in there and go ahead and just take one [...] Well, I thought maybe I should have some kind of a qualifier, [however] I haven't thought through how I'm going to approach it, and I'll do that before the meeting.

**George:**

I guess perhaps I'm use to really robust and intelligent systems in the line of work I do, so I have a fairly high bar as a standard [...] it's that coordination piece, that I think could be developed.

I would love to keep doing those kind of like—group jam sessions, on different topics. You know, how we handle that Google mailbox would be a perfect narrow topic. I'm sure Doreen and Lynne have ways of moving mail and recognizing what to take next. I would like to be able to grab a client's request and start working on it. I'd like to be able to establish a longer term, more direct, communication link with that client.

### Chapter 5: Discussion & Summary

As mentioned in the previous chapter's introduction, the parallel nature of this study and adoption process have enacted opportunities for us to act, in order to think. In so doing, we are met with American linguist, Charlton G. Laird's (1953) notion that we only see (or notice) that for which we have words. In his book, *The Miracle of Language*, he contends:

How does language promote thinking? Very much as one might expect; since there are two main aspects to language, meanings expressed in vocabulary and relationships in grammar and rhetoric, language promotes thinking by both means. Let us take the first. Brains think with words. Perhaps they need not. Supposedly if we had no words, we should still be able to think. But it is the nature of human brains that they think so much better with words than with any other medium - with mental pictures, for instance - that, words being available, we learn to think with them, and rely upon them so much that for practical purposes most people think only about things for which they have words and can think only in the directions for which they have words. (as cited in Postman & Weingartner, 1969, p. 111)

The results of this analysis provide an account of individuals' perspectives, and though the data is categorized and their responses adjacent, it isn't intended as a participant comparison, per se. By observing their individual perceptions we have a way to become more aware of the situation they are facing by "wandering around within [it], testing possible ways in which to describe it in words, [all the] while sensing how it talks back to us" (Shotter, 1978, as cited in Shotter & Tsoukas, 2014, p. 232).

### **The Role of ICT**

Regarding their perceptions of ICT on a personal level, the manner in which each leader approaches (O or S) is contingent on the situation they are facing. Ross and Anita tend to see ICT from a strategic, longer term, perspective, while George and Lynne intimated that they look for ICT that will accommodate more short-term, immediate communication tasks. This contrast in approach (O vs S) is revealed in two ways. Ross and Anita are actively involved in the adoption but do not appear to feel the day-to-day pressure that Lynne encounters. Their responses indicate that they are seeing where ICT can help, yet are careful adopting it. George, on the other hand, is less involved in the adoption, but is as watchful to pick and choose ICT based on the amount of time he has to volunteer, while working full-time. Lynne clearly feels the pressures of daily communications and is looking for ICTs that can alleviate them. Time and coordination demands of responding to her team and member (public) inquiries, compel her to typically address operational demands (tasks) rather than processes.

From an organizational perspective, their approaches appear similar, however, George shifts to the strategic when he alludes to better internal communications and integrity of data. He recognizes the importance of the communication processes and ICT that will accommodate them, when he responds, “I don’t quite know yet what direction we’re headed with whatever technology that might be, but I do see that there is way too much on Lynne’s plate. She owns it, she owns its accuracy, she owns its reputation”.

What is equally interesting was Lynne’s view of the group shared mailbox, “I [now] feel like there is less communication between me and the other genealogists about things. But my mailbox isn’t burying me”. This is further evidence of the bottleneck in the how the group



communicates, but also reveals that Lynne is starting to reflect on how the Google platform is fulfilling aspects of FR's internal communications.

Lastly, when it comes to the accuracy of ICT adoption, the demands that Lynne experiences managing the organization, tend to drive her choices. Yet, for the others, they have lessening degrees of pressure to choose, the only exception being Ross, who has the technologist's responsibility of implementing and supporting any new ICT. Consequently, their preference to use an approach based on 'trial and error' (plausibility) rather than accuracy, seems to better suit the ever-changing environment of ICT adoption.

### **Role in the ICT Adoption**

As mentioned in the analysis, it became evident that a distinction be made concerning how the participants perceived their roles in the adoption, i.e. their involvement (A or U) using the group shared mailbox, and, their subsequent engagement in sensemaking. Each participant's response demonstrated their involvement in the adoption, however, what was surprising relates to Marcus' and Anderson's (2010) research on the action-cognition cycle, which is central to enacted sensemaking. As they describe, a number of scholars (Danneels, 2003; Sætre, et al., 2003, Salancik, 1977; Weick, 1979) hypothesize that actions shape beliefs, and taking action produces cognitions that guide further actions (Marcus & Anderson, 2010). It was in this respect that we notice some deviation from their scholarly notion.

Anita's and Lynne's sensemaking approach follows accordingly, meaning that they take action (A) in order to produce cognition. They work from others' endorsement of ICT and use it to build their understanding of its strategic value—in relationship to their organizational knowledge and expertise in genealogical research processes. George and Ross, however, tend to

adopt a reverse process where observation (or interpretation) precedes their active participation. Hence, their approaches establish what might be considered a stutter-step to the claim that sensemaking requires action to produce understanding. The difference in how they make sense of the adoption is evident when George relates, “I don’t jump on board too easily. [I need to] see the value and why [I’d] want to add something more to my plate [...] I kind of want to take a supportive role and kind of a background role”, or as, Ross explained (personal communication, April 2, 2016), shortly after it was decided to use the Google platform’s shared mailbox feature: “You know, until I set it up, it was hard to appreciate the volume of correspondence Lynne was receiving. Once I had the chance to monitor it, I gained a whole new understanding of the problem”.

It is apparent that the participants rely to some degree on the advisement of others concerning ICT, and while their approaches and involvement vary, both aspects demonstrate merit in the process. The nature of the team (i.e. comprising their organizational knowledge and expertise) appears to allow for variation and any kind of overlap in order to contend with the gaps or barriers in the adoption. This complement doesn’t necessarily solve the problem, but as we see in Lynne’s approach, it leverages the knowledge gaps she has with ICT, through action, which is her main strategy. Conversely, Ross assumes the role of architect and his actions (e.g. construction of the shared mailbox), follow his understanding of what she and the others need.

Finally, in terms of ICT conversations, the approach measures (O and S) reveal how each member perceives the role they (re: their expertise and organizational knowledge) play in the adoption. The group contended that little strategic thinking had been going on and that it was needed. Ross and Anita conveyed this from the outset, while Lynne’s and George’s approaches

showed signs of shift. For example, George intimated that he saw his role increasing in the coming year, and that he could play a part in the customer-service strategy. Lynne, reflected on her conversations with Ross and other members of the team, and that it would be wise to consider their vision for FR, and how they can make it work. This was further illustrated, when after claiming she'd "like to flag emails (tasks) for certain people", Lynne promptly reconsidered by saying, "but then I don't want to do that because I'm trying to get away from that role", which reveals a shift in her thinking and how sensemaking has been impacting her approach.

### **Making Sense of the Shift**

Clearly, each FR leader described their approach to ICT and their role in the adoption, differently. However, a degree of succinctness was apparent in their second interview responses when compared to the first. My own sense of this may be influenced by the fact I have observed the communication shift over the span of a few months and not just the two weeks between interviews. When asked about the communication shift, the language they used to describe its impact and potential for improvement, was noticeable. For example, Ross explained that:

The group had a problem and they didn't really know what that was, they could sort of describe that they were falling in on themselves [...] but that's, I think, as far as their knowledge went [...] I would say that just by virtue of the new process, it now highlights what is being done and by whom. Whereas, previously it was sort of all second hand. People were telling me that Lynne was coordinating everything and parceling it off to others but it was sort of sight unseen [...] it's very enlightening.

Anita and Lynne both expressed concern over the inefficiencies of Lynne having to prompt the others to take on inquiries. They both acknowledged that the process was better, yet were now focussed on how to address this aspect of task management. Suggestions such as training on how to handle incoming requests, and a freer ability for genealogists to make more

direct (or personal) connections with the inquiring public (customers), reveal how they were making better sense of the problem. Their responses also allude to a growing team atmosphere (the executive) where they engage in regular conversations focussed on improving what they do. In other words, their grammars of practice were becoming their springboard to further action.

At this point, we should ask: Has involvement paid off? Do their words intimate their sense of the problem and what should happen next? In terms of how they are approaching the problem (i.e. what's next?), their words indicate a shift from operational to strategic orientations. The nature of their narratives lean toward processes (a journey) rather than tasks (events):

All of us have been working as individuals in this fun thing for a long time, so the team effort is something that we have to learn to pick up, and to keep our thinking on, so that we don't head off into the individual again. (Anita)

You can't just flip the switch and go from controlled to collaborative in one step. It's going to be an evolutionary series of steps. We can provide a social opportunity to spend time with somebody who's got interests the same as you. I mean you can focus on the small group, the dozen people, but I think that just opens up the door to the 250, which opens up the door to the 1300. (Ross)

[The shared mailbox] is successful, it's just not to the point where I want it to be, yet [...] I think all of those interactions help us feel more like a team and I have heard all of them say 'our database'. And I celebrate that, I'm so happy [...] The next meeting [...] I will talk to everyone about the shared email box and [...] how to move them out of the inbox and get them accomplished by themselves and that they can just go in there and [...] take one [...] Well, I thought maybe I should have some kind of a qualifier, [however] I haven't thought through how I'm going to approach it, and I'll do that before the meeting. (Lynne)

I would love to keep doing those kind of like—group jam sessions, on different topics. You know, how we handle that Google mailbox would be a perfect narrow topic [...] I would like to be able to grab a client's request and start working on it. I'd like to be able to establish a longer term, more direct, communication link with that client. (George)

### **Limitations & Further Questions**

With respect to limitations of these findings and my interpretation of them, this study could be improved in at least three ways. The study could have taken a purer longitudinal<sup>22</sup> approach than was attempted, and it may have been more effective to have inquired about “what was going on” (the problem) prior to the ICT adoption. In other words, this might have aligned with the advantages of repeated engagement over a time interval, as suggested by Van de Ven (2007), and may have helped to develop a more explicit instrument for research on sensemaking. Secondly, my perspective (ethnographic) might have impacted the study in the fact I have had a vested interest in the community’s mission. Having been involved in monthly meetings with Ross and Lynne, at various times over the past year, I have had some influence over the ICT adoption, itself, and have been hopeful that this process would yield benefits for the team. Thirdly, consideration need be given to whether the interview protocol was explicit enough, and to what degree were the participants able to answer or respond to my inquiries.

### **Summary of Findings & Discussion**

These findings support the assumption that the FR team members’ individual ability to make sense of the communications problem facing them, is impacted by their approaches (O or S) and the degree to which they have been involved (U or A) in this ICT adoption. The relationship between perceptions and involvement are evident. In the context of FR’s communication practices, the team members’ narratives demonstrate a progression in their vocabulary, i.e. where relating their situations has become their grammar of practice describing

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<sup>22</sup> “Longitudinal studies collect data at several different points in time, and tend to be more complex and less common than cross-sectional studies” (Merrigan et al., 2012, p. 76).

what can be done next. Storytelling provided a context for describing their experiences and own sense of what’s been going on, and what might be done about it.

The following illustration (Figure 3) provides a visual representation of the role sensemaking has played in the team’s shifting communication model. It outlines a process that began with participants’ orientation to the study, that was intended to establish an awareness (or mindfulness) of what the ICT adoption was addressing (situation). The factors examined in the their responses (situational narratives) have since revealed that there is a correlation between their perceptions and involvement in this adoption project.

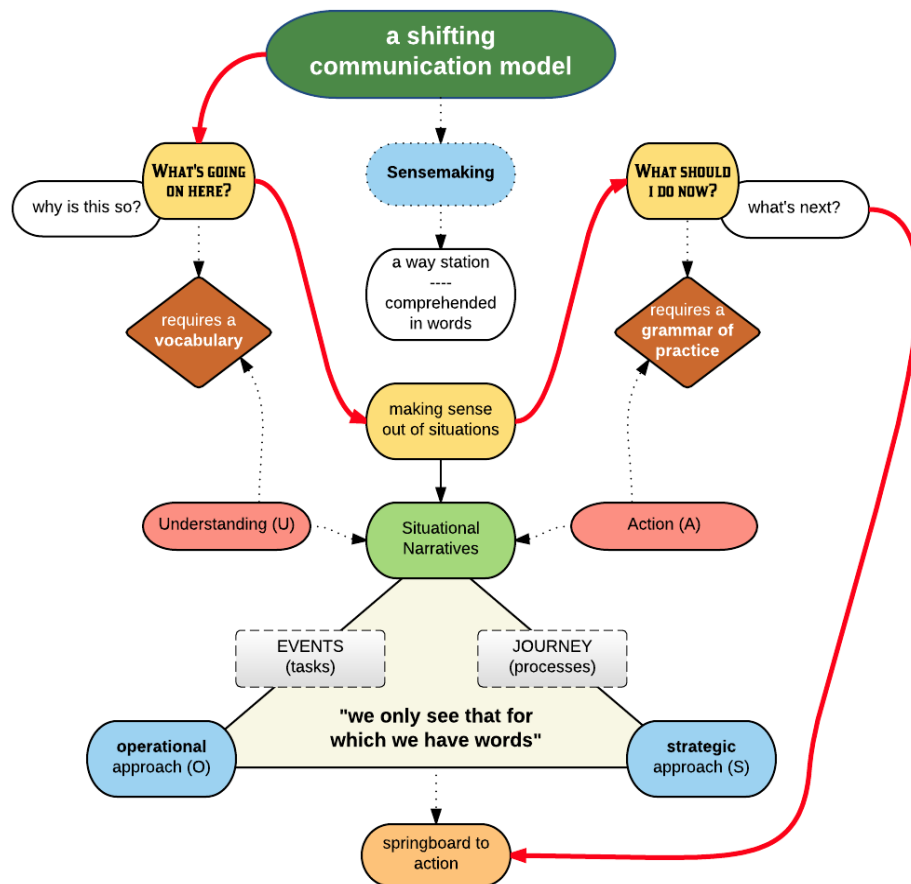


Figure 3. This figure illustrates the role that sensemaking has played in the FR team’s shifting communication model.

## Chapter 6: Conclusion

The problem this study attempts to address is based on how FR leaders perceive the role of ICT in their organization. Do their perceptions shape how they notice their situation and how they respond to it? Is there a correlation between perceptions, involvement, and one's ability to make sense of ICT? Does individual sensemaking precede the organizational activities of consultation, strategic decision-making, further adoption and implementation? The intent of this chapter is to deliver insights gained from the study, which may answer these questions or, at the very least, act as signposts for further research in this field.

Based on the the FR team's interaction in the Google platform and specifically the group shared mailbox, we have been afforded a way to observe their 'communications reality'. The methods used to study this situation (or problem) and analyze the effects of each participant's characteristic approach and involvement, reveal a correlation to how they are making sense of the organization's communication shift, itself.

### The Findings in Context

The study's findings relate to sensemaking and its impact on FR's organizational strategy. The following comprises a list of seven (7) key findings which have been revealed through the observation of these FR leaders. What follows is a summary of each finding, in the context of their shifting communication model.

1. The solitary nature of sensemaking is moving FR leaders' tacit knowledge into more explicit forms of knowledge (process).

Each member of the team expressed their own sense of the situation and how they see themselves moving forward (individually and collectively). They have accomplished this in a

manner that Henfridsson (2000) claims is necessary, that being, figuring out what this new ICT means in his/her own specific communications practice. Furthermore, “Their knowledge of priorities is largely tacit and [is becoming] explicit by placing dots next to action steps. This process not only reveals the tacit priorities of an individual but also the priorities of the collective” (Smerek, 2013, p. 388).

2. Without the intervention (study orientation) would there have been a sufficient degree of situational awareness (mindfulness) to engage this communications shift?

By working in this new communication model, we see them “putting words” to their experiences, or as, Colville et al. (2012) suggest, producing narratives that demonstrate their increasing awareness of the problem and what can be done about it. This kind of involvement indicates that they are noticing things they may not have, previously, and that sensemaking is paying off for the organization. This awareness (or mindfulness) is essential, otherwise a cycle ensues where they repeat their habits or routines, while hoping for different results. As scholars have indicated, and the FR team exemplify, events or conditions that go unnoticed can not be used by the sensemaker.

3. Though still contentious, enacted sensemaking demands action-oriented (A) involvement prior to understanding (U).

As the literature suggests, a central tenet of enacted sensemaking is the essence of the action-cognition cycle. What comes first, action or cognition (understanding)? As the results indicated, two members of the sample (Ross & George) purported to rely on understanding (cognition) prior to taking active involvement in ICT adoption. In this case, their claims seem to hold true, yet each acknowledged that only through *navigating* the group shared mailbox did



they realize the nature of what was going on. This subtlety intimates that their understanding does follow some degree of active involvement. In the context of this ICT adoption, Shotter and Tsoukas (2014) uncover the relationship between thinking (seeing) within an organizational framework, and perceiving (sensing) within what they call “bewildering situations” (p. 379). They draw attention to the inadequacy of a person’s problem solving and decision-making, if not actually immersed in the environment themselves. As cited previously, Ross’s comment regarding the shared group mailbox gives validity to this action-cognition cycle: “You know, until I set it up, it was hard to appreciate the volume of correspondence Lynne was receiving. Once I had the chance to monitor it, I gained a whole new understanding of the problem”.

4. Only through sensemaking do people’s perceptions of ease and usefulness of ICT (TAM) become reliable indicators of strategic value.

These research findings support the notion that sensemaking may provide a more reliable indicator of an ICT’s strategic value than does the work of Fred D. Davis et al. using the Technology Acceptance Model (TAM). In a related study on organizational communications change, Gillian Edwards (2015) draws attention to a person’s ‘perception of reality’ and that if s/he perceive “that a technology is not useful, easy to use, or helps them in their work, they may never shift to make a reality of them using it” (p. 7). Similar to the previous paragraph, this notion holds true on one level but also poses a ‘chicken and egg’ dilemma. It underlies my findings that only through enacted sensemaking do PU and/or PEOU become reliable measures. The nature of sensemaking makes use of retrospection and reflection “which implies that behavioral intention, especially when measured before subjects actually use a technology, may be a weak indicator of actual enduring adoption behavior since there is no real experience yet

with the system” (Seligman, 2006, p. 112).

5. By using the shared group mailbox, each FR leader is demonstrating an increasingly strategic (S) approach to the ICT adoption.

In retrospect, for both the IT team and myself, it appears the ICT adoption has prompted a joint learning opportunity. As well, the study orientation acted as a catalyst for communicative and strategic decision-making purposes, while the interviews provided a way for the team to mindfully reflect on how their organizational knowledge and expertise (role) might improve the model. Each member demonstrates a heightened sense of the situation and there are clear indications that they are approaching the ICT adoption from a more strategic vantage. Through direct participation in these emerging communication practices, we are realizing how “sensemaking provides a precursor to more effective action”, and reminded of what Ancona (2012) challenges us to do: ask “what’s going on out there?” (p. 6).

6. Non-ICT and ICT leaders, alike, have important roles to play in ICT adoption.

With respect to, “digital conversations that matter” (Hansen, et al., 2011), leaders are influenced by their perceptions and these, of course, impact ICT adoption. As we’ve discovered and these scholars propose: if leaders are not sufficiently involved, their expertise and knowledge of what’s crucial to the organization, often go unfulfilled in strategic decision-making. Sorting, understanding, and categorizing all that goes into an organization’s pursuits, is a balancing act of time, attention and knowhow. And, to reiterate Clevenger’s (2011) suggestion, that until leaders find personal reasons for adopting (and leveraging) ICT, their sense of how it can improve the enterprise is inhibited. Generally speaking, leader perceptions of the role of ICT often include such statements as: there are so many choices; I like to wait and see; the opportunities are

incredible; technology is a black hole; we don't have the resources; or, our ICT staff decide that stuff. Consequently, these influence the way in which people choose ICT for their enterprise.

This case study confronts what could be called the 'double-edged sword' of self-reports (Starbuk & Milliken, 1998, 2006) and what leaders notice in their situations (Tallon & Kraemer, 2007). It draws out the value of sensemaking in an ICT adoption context. A form of feedback loop has been initiated where each FR leader's perceptions of ICT, and their role, are taken at face value. And, regardless of viewpoints, their vantages matter, and serve to generate a better sense of the situation, as well as a way to better realize (enact) a sensemaking environment.

There is evidence of a symbiotic relationship growing between the team's executive members. In other words, both non-ICT, and ICT leaders, are exhibiting renewed and ongoing changes in their perceptions, which is leading to improvements in FR's communication model.

7. Individual sensemaking is initiating new action on a team (social/discursive) level.

The findings indicate that their individual sensemaking is initiating action on a team (social/discursive) level. It entails what scholars call a springboard to action, or what Daniel Brown (2009) cites in a similar study as, a form of organizational transformation. His allusion is twofold in that it underscores each member's "accommodations to and experiments with the everyday contingencies, breakdowns, exceptions, opportunities, and unintended consequences that they encounter [and results] in enacting an environment different from what was originally conceived" (pp. 21, 14). Sensemaking has engaged ICT adoption beyond a personal level. As mentioned earlier, "Experience comes first, knowledge later. 'Language [...] is a refinement, in the beginning was the deed'" (p. 13e, as cited in Shotter & Tsoukas, 2014, p. 383). The team members' words illustrate the influence this process has had on their thinking. What they are

now able to put in words, is a response to what they now see, or better realize, was unsustainable in their former communications practices.

### **Recommendations for Further Research**

How might understanding this process help other organizational leaders enact sensemaking into their adoption practices, at the level of the individual, followed by those at a collective level? In the context of ICT adoption, how can leaders encourage mindfulness and involvement that harnesses their stakeholders' organizational knowledge and expertise in ways that foster strategic decision-making that is ongoing, staged and less reactive?

It could be that extending research into a more longitudinal study would yield a clearer picture of how individuals make sense of their situation and how this builds to more comprehensive activities at an organizational (social) level. This approach might also lead to a deeper examination of how individual sensemaking precedes the organizational activities of consultation, strategic decision-making, further adoption and implementation. With due consideration being given to ever-increasing time and cost pressures, insufficient knowledge regarding adoption and implementation, and concerns as to whether current organizational practices can or should be maintained, it would be worthwhile to ask: What steps can be taken that allow room for ambiguity in adoption, experimentation, and conversations that matter in this context?

As numerous scholars have indicated, sensemaking presents both challenge and opportunity for today's enterprise leaders. Many would agree that technology adoption is complex, yet this study's findings reveal how sensemaking has lead an executive team from

individual perspectives to a more collective sense of their situation, what can be done about it, and what *they* can do next.

### **In Conclusion**

Reflecting back on Clevenger's (2011) insights, this researcher has been provided a worthwhile phenomenon to investigate. Disruptive innovations like he described, seem to hold little importance when compared to why key decision-makers were drawn out of their daily routines and habits into more reflective ways of leveraging ICT. Evidence indicates that something was sparked in these leaders. It may have been their individual sense of awareness of the situation, which was only further prompted by my intervention. Nonetheless, this case study has shown that the problem the FR team was facing in their former communication model, was its impetus. As a result, sensemaking has offered a way to leverage the team's "spontaneous urge to action" (Marcus & Anderson, 2010, p. 187), while enactment moved the process into the stage where new environments are in part, being self-created (Weick, 1979).

Finally, it is my hope that the contributions of this study—to the field of communications and technology, have shed light on the essential prompts for leaders to engage in sensemaking. For it demonstrates that where leaders' mindful action, expertise and organizational knowledge are present in ICT adoption, enterprise strategy and consequent decision-making are better served. And, its effectiveness, hinges upon leaders who recognize that, though technology moves fast, it's not so fast that we can't act on the insightful, yet nearly half-century old challenge of Marshall McLuhan, "If we understand [or rather make sense of] the revolutionary transformations caused by new media, we can anticipate and control them; but if we continue in our self-induced subliminal trance, we will be their slaves" (Playboy Magazine, 1969, p. 5).

### References

- Aharony, N. (2015). An exploratory study on factors affecting the adoption of cloud computing by information professionals. *The Electronic Library*, (2), 308. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsggo&AN=edsgcl.419382827&site=eds-live&scope=site>;
- Akgün, A. E., Keskin, H., Byrne, J. C., & Lynn, G. S. (2014). Antecedents and consequences of organizations' technology sensemaking capability. *Technological Forecasting and Social Change*, 88, 216-231. Retrieved from <http://dx.doi.org.login.ezproxy.library.ualberta.ca/10.1016/j.techfore.2014.07.002>
- Ancona, D. (2012). Sensemaking: Framing and acting in the unknown. *The handbook for teaching leadership: Knowing, doing, and being*, 3-21. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edszbx&AN=EDSZBW682426121&site=eds-live&scope=site>
- Bailey, B. C., & Peck, S. I. (2013). Boardroom strategic decision-making style: Understanding the antecedents. *Corporate Governance: An International Review*, 21(2), 131-146. Retrieved from <http://web.a.ebscohost.com/login.ezproxy.library.ualberta.ca/ehost/pdfviewer/pdfviewer?sid=7f95c324-2f2e-42d3-83e9-b76b017e651e%40sessionmgr4005&vid=1&hid=4107>
- Barge, J. K. (2001). Practical theory as mapping, engaged reflection, and transformative practice. *Communication Theory*, (1), 5. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsgao&AN=edsgcl.73991900&site=eds-live&scope=site>
- Barge, J. K., & Craig, R. T. (2009). Practical theory in applied communication scholarship. *Routledge Handbook of Applied Communication Research*, 55-78. Retrieved from <http://the-commons.kettering.org/wp-content/uploads/group-documents/4/1362152686-appliedcommunicationresearch.pdf#page=96>
- Brown, A. D., Colville, I., & Pye, A. (2015). Making sense of sensemaking in organization studies. *Organization Studies*, 0170840614559259. Retrieved from [http://oss.sagepub.com/cgi/collection/making\\_sense\\_of\\_sensemaking](http://oss.sagepub.com/cgi/collection/making_sense_of_sensemaking)
- Brown, D. J. (2009). Ambiguity and uncertainty in the last mile: Broadband adoption in rural Alberta. *University of Alberta Education & Research Archive*. Retrieved from <https://era.library.ualberta.ca/files/j3860753w#.V4mPo5MrKuW>
- Carr, N. G. (2003). IT doesn't matter. *Educause Review*, 38(6), 24. Retrieved from <https://hbr.org/2003/05/it-doesnt-matter>

- Choo, C. W. (1996). The knowing organization: How organizations use information to construct meaning, create knowledge and make decisions (english). *Int.j.Inf.Manage.*, 16(5), 329-340. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=fcs&AN=2535150&site=eds-live&scope=site>
- Choo, C. W. (2006). *The knowing organization. [electronic resource] : How organizations use information to construct meaning, create knowledge, and make decisions*. New York : Oxford University Press, 2006; 2nd ed. Retrieved from <http://www.oxfordscholarship.com/login.ezproxy.library.ualberta.ca/view/10.1093/acprof:oso/9780195176780.001.0001/acprof-9780195176780>
- Clevenger, N. (2011). *iPad in the enterprise: Developing and deploying business applications*. John Wiley & Sons.
- Colville, I., Brown, A. D., & Pye, A. (2012). Simplexity: Sensemaking, organizing and storytelling for our time. *Human Relations*, 65(1), 5-15 11p. Retrieved from <http://doi:10.1177/0018726711425617>
- Davis, F. D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology* The Society for Information Management and The Management Information Systems Research Center of the University of Minnesota. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsjsr&AN=edsjsr.10.2307.249008&site=eds-live&scope=site>
- deBruijn, M. (2010). Connected citizenry: An exploration of local government social media adoption for community engagement. Retrieved from <https://era.library.ualberta.ca/downloads/cf95jb516>
- Edwards, G. M. (2015). Change communications in an IT implementation. *University of Alberta Education & research Archive*. Retrieved from <https://era.library.ualberta.ca/files/6h440w31k#.V4IJmpMrKuV>
- Gangwar, H., Date, H., & Raoot, A. D. (2014). Review on IT adoption: Insights from recent technologies. *Journal of Enterprise Information Management*, 27(4), 488. Retrieved from <http://search.proquest.com/login.ezproxy.library.ualberta.ca/docview/1660759556?accountid=14474>
- Gäre, K., & Melin, U. (2011). SMEs need formative infrastructure for business transformation. *Journal of Enterprise Information Management*, 24(6), 520-533. Retrieved from <http://dx.doi.org/login.ezproxy.library.ualberta.ca/10.1108/1741039111166558>
- Groenfeldt, T. (2011, August 2). Does the iPad Change Enterprise Computing? *Forbes*. Retrieved October, 10, 2015, from

<http://www.forbes.com/sites/tomgroenfeldt/2011/08/02/does-the-ipad-change-enterprise-computing/>

- Hansen, A. M., Kraemmergaard, P., & Mathiassen, L. (2011). Rapid adaptation in digital transformation: A participatory process for engaging IS and business leaders. *MIS Quarterly Executive*, 10(4), 175-185. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=bth&AN=67793226&site=ehost-live&scope=site>
- Henfridsson, O. (2000). Ambiguity in IT adaptation: Making sense of first class in a social work setting. *Information Systems Journal*, 10(2), 87. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edb&AN=5466210&site=eds-live&scope=site>
- Howard, T. W. (2010). *Design to Thrive: Creating Social Networks and Online Communities that Last*. Burlington, MA: Morgan Kaufmann.
- Jarzabkowski, P., & Kaplan, S. (2015). Strategy tools-in-use: A framework for understanding 'technologies of rationality' in practice. *Strategic Management Journal*, 36(4), 537-558. Retrieved from <http://onlinelibrary.wiley.com/login.ezproxy.library.ualberta.ca/doi/10.1002/smj.2270/epdf>
- Jennings, P. D., & Greenwood, R. (2003). 6b Constructing the iron cage: Institutional theory and enactment'. *Debating Organization: Point-Counterpoint in Organization Studies*, 195. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.135.1197&rep=rep1&type=pdf>
- Lefebvre, L. A., Mason, R., & Lefebvre, É. (1997). *The influence prism in SMEs: The power of CEOs' perceptions on technology policy and its organizational impacts* Institute for Operations Research and the Management Sciences. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsjsr&AN=edsjsr.2634627&site=eds-live&scope=site>
- Lin, C. (2013). Exploring the relationship between technology acceptance model and usability test. *Information Technology and Management*, 14(3), 243-255. Retrieved from <http://dx.doi.org/login.ezproxy.library.ualberta.ca/10.1007/s10799-013-0162-0>
- Onicescu, A., & Gurbin, K. (2015). Actors influencing sense-making of ICT adoption in SMEs: The case of zenergy AB. Retrieved from <http://www.diva-portal.org/smash/get/diva2:819053/FULLTEXT01.pdf>



- Maitlis, S. (2013, March 28). Sally Maitlis - Interviewing for Qualitative Research [Video file]. Retrieved from <https://youtu.be/3-RmZJjDC70?t=35s>
- Maitlis, S., & Christianson, M. (2014). Sensemaking in organizations: Taking stock and moving forward. *Academy of Management Annals*, 8(1), 57-125. Retrieved from <http://web.a.ebscohost.com/login.ezproxy.library.ualberta.ca/ehost/pdfviewer/pdfviewer?sid=9bc141c1-ec3d-40ff-9016-1c88a2fd03f3%40sessionmgr4005&vid=1&hid=4212>
- Maitlis, S., & Hernes, T. (2010). *Process, sensemaking, and organizing*. Oxford: OUP Oxford. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=e000xna&AN=663081&site=ehost-live&scope=site>
- Maitlis, S., & Lawrence, T. B. (2007). *Triggers and enablers of sensegiving in organizations*. Academy of Management. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsjrs&AN=edsjrs.10.2307.20159841&site=eds-live&scope=site>
- Marcus, A. A., & Anderson, M. H. (2010). Commitment to an emerging organizational field: An enactment theory. *Business & Society*. Retrieved from <http://bas.sagepub.com/login.ezproxy.library.ualberta.ca/content/52/2/181.full.pdf+html>
- Merrigan, G., Johnston, R. T., & Huston, C. L. (2012). *Communication research methods* (Canadian ed.). Don Mills, ON: Oxford University Press.
- Mezias, J. M., & Starbuck, W. H. (2003). Studying the accuracy of managers' perceptions: A research odyssey. *British Journal of Management*, (1), 3. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsgao&AN=edsgcl.102445913&site=eds-live&scope=site>
- Moore, K. (2013, June 11). Deborah Ancona Talks with Karl Moore for Forbes. [Video podcast] retrieved November 10, 2015 from <https://www.youtube.com/watch?v=cpW1-9Saetk>
- Playboy Magazine (1969). The Playboy Interview: Marshall McLuhan. *Playboy Magazine*. Retrieved from <http://web.cs.ucdavis.edu/~rogaway/classes/188/spring07/mcluhan.pdf>
- Postman, N., & Weingartner, C. (1969). *Teaching as a subversive activity* / [by] Neil Postman [and] Charles Weingartner. New York: Delacorte Press, c1969. Retrieved from <http://blogs.oregonstate.edu/smedcohort/files/2009/07/Teaching-as-a-Subversive-Activity-Postman.pdf>
- Sætre, A. S., Sønars, J., Browning, L. D., & Stephens, K. K. (2003). Organizational members' enactment of organizational environments and media use: A study of ICT practices in Norway and the United States. Paper presented at the *Proceedings of the Joint*

*Conference Informing Science and Information Technology Education, Pori, Finland, June.* Retrieved from  
[http://www.academia.edu/2673231/Organizational\\_members\\_enactment\\_of\\_organizational\\_environments\\_and\\_media\\_use\\_A\\_study\\_of\\_ICT\\_practices\\_in\\_Norway\\_and\\_the\\_United\\_States](http://www.academia.edu/2673231/Organizational_members_enactment_of_organizational_environments_and_media_use_A_study_of_ICT_practices_in_Norway_and_the_United_States)

- Sætre, A. S., Sørnes, J., Browning, L. D., & Stephens, K. K. (2007). Enacting media use in organizations. *Journal Of Information, Information Technology & Organizations*, 2, 133-158. Retrieved from  
<http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=lls&AN=28691678&site=eds-live&scope=site>
- Sandberg, J., & Tsoukas, H. (2011). Grasping the logic of practice: Theorizing through practical rationality. *Academy of Management Review*, (2), 338. Retrieved from  
<http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsggo&AN=edsgcl.257798949&site=eds-live&scope=site>
- Sandberg, J., & Tsoukas, H. (2015). Making sense of the sensemaking perspective: Its constituents, limitations, and opportunities for further development. *Journal of Organizational Behavior*, 36(S1), S6-S32. doi:10.1002/job.1937. Retrieved from  
<http://onlinelibrary.wiley.com/login.ezproxy.library.ualberta.ca/doi/10.1002/job.1937/epdf>
- Seligman, L. (2000). Adoption as sensemaking: Toward an adopter-centered process model of IT adoption. *Proceedings of the International Conference on Information Systems, CONF 21*, 361-370. Retrieved from  
<http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsbl&AN=RN100285757&site=eds-live&scope=site>
- Seligman, L. (2006). Sensemaking throughout adoption and the innovation-decision process. *European Journal of Innovation Management*, 9(1), 108-120. Retrieved from  
<http://www.emeraldinsight.com/login.ezproxy.library.ualberta.ca/doi/pdfplus/10.1108/14601060610640050>
- Shirky, C. (2008). *Here Comes Everybody: The Power of Organizing without Organizations*. New York: Penguin Press.
- Shotter, J., & Tsoukas, H. (2014). In search of phronesis: Leadership and the art of judgment. *Academy of Management Learning & Education*, 13(2), 224-243. Retrieved from  
<http://web.a.ebscohost.com/login.ezproxy.library.ualberta.ca/ehost/pdfviewer/pdfviewer?sid=1ade8784-fe84-4cb3-9f9d-48dc28e25803%40sessionmgr4005&vid=1&hid=4114>

- Shotter, J., & Tsoukas, H. (2014). Performing phronesis: On the way to engaged judgment. *Management Learning*, 45(4), 377-396. Retrieved from <http://mlq.sagepub.com.login.ezproxy.library.ualberta.ca/content/45/4/377.full.pdf+html>
- Smerek, R. (2011). Sensemaking and sensegiving: An exploratory study of the simultaneous “being and learning” of new college and university presidents. *Journal of Leadership & Organizational Studies*, 1548051810384268.] Retrieved from <http://jlo.sagepub.com.login.ezproxy.library.ualberta.ca/content/18/1/80.full.pdf+html>
- Smerek, R. E. (2013). Sensemaking and new college presidents: A conceptual study of the transition process. *The Review of Higher Education*, 36(3), 371-403. Retrieved from <http://www.sesp.northwestern.edu/docs/publications/160654996251f81e8c24883.pdf>
- Starbuck, W. H., & Milliken, E. (1988). Executives’ perceptual filters: What they notice and how they make sense. *The executive effect: Concepts and methods for studying top managers*, 35-65.
- Starbuck, W. H., & Mezias, J. M. (1996). *Opening pandora's box: Studying the accuracy of managers' perceptions*. John Wiley and Sons. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsjsr&AN=edsjsr.2488586&site=eds-live&scope=site>
- Starbuck, W. H., & Milliken, F. J. (2006). Executives' perceptual filters: What they notice and how they make sense. *Organizational Realities : Studies of Strategizing and Organizing*, 209-232. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edszbw&AN=EDSZBW514197706&site=eds-live&scope=site>
- Stenmark, D. & Lindgren, R. (2006). System Support for Knowledge Work. *International Journal of Knowledge Management*, 2(1), 46-68. Retrieved from <http://gup.ub.gu.se/records/fulltext/43029/43029.pdf>
- Sunesson, K. & Heldal, I. (2011). *Using naturalistic decision making to understand knowledge barriers in launching telecommunication for public safety*. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=lls&AN=98280703&site=eds-live&scope=site>
- Tallon, P. P. & Kraemer, K. L. (2007). Fact or fiction? A sensemaking perspective on the reality behind executives' perceptions of IT business value. *Journal of Management Information Systems*, 24(1), 13-54. Retrieved from <http://doi:10.2753/MIS0742-122240101>
- Tallon, P. P. (2014). Do you see what I see? The search for consensus among executives' perceptions of IT business value. *European Journal of Information Systems*, 23(3),

- 306-325. Retrieved from  
<http://search.proquest.com.login.ezproxy.library.ualberta.ca/docview/1526611703?accountid=14474>
- Tamm, T., Seddon, P. B., Parkes, A., & Kurnia, S. (2014). A Model of Strategic IT Decision-Making Processes. ACIS. Retrieved from  
[http://aut.researchgateway.ac.nz/bitstream/handle/10292/8145/acis20140\\_submission\\_136.pdf?sequence=1&isAllowed=y](http://aut.researchgateway.ac.nz/bitstream/handle/10292/8145/acis20140_submission_136.pdf?sequence=1&isAllowed=y);
- Tsoukas, H., & Vladimirov, E. (2001). What is organizational knowledge?(knowledge management: Concepts and controversies). *Journal of Management Studies*, (7), 973. Retrieved from  
[http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com.login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsgao&AN=edsgcl.80929697&site=eds-live&scope=site](http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsgao&AN=edsgcl.80929697&site=eds-live&scope=site)
- Van de Ven, A. H., & Johnson, P. E. (2006). *Knowledge for theory and practice. The Academy of Management Review*, (4). 802.] Academy of Management. Retrieved from  
[http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com.login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsjsr&AN=edsjsr.10.2307.20159252&site=eds-live&scope=site](http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsjsr&AN=edsjsr.10.2307.20159252&site=eds-live&scope=site)
- Van Dijck, J. (2013). *The culture of connectivity: A critical history of social media*. New York, NY: Oxford University Press. Retrieved from  
[http://www.oxfordscholarship.com.login.ezproxy.library.ualberta.ca/view/10.1093/acprof:oso/9780199970773.001.0001/acprof-9780199970773-chapter-1](http://www.oxfordscholarship.com/login.ezproxy.library.ualberta.ca/view/10.1093/acprof:oso/9780199970773.001.0001/acprof-9780199970773-chapter-1)
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204. Retrieved from  
[http://web.b.ebscohost.com.login.ezproxy.library.ualberta.ca/ehost/pdfviewer/pdfviewer?sid=d5032d5e-a3a4-45c3-9a7b-6782b9f0574c%40sessionmgr120&vid=1&hid=116](http://web.b.ebscohost.com/login.ezproxy.library.ualberta.ca/ehost/pdfviewer/pdfviewer?sid=d5032d5e-a3a4-45c3-9a7b-6782b9f0574c%40sessionmgr120&vid=1&hid=116)
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478. Retrieved from  
[http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com.login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=bth&AN=10758835&site=eds-live&scope=site](http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=bth&AN=10758835&site=eds-live&scope=site)
- Wakabayashi, D. (2014, Jan 10). Apple devices flow into corporate world. *The Wall Street Journal Asia*. Retrieved from  
<http://login.ezproxy.library.ualberta.ca/login?url=http://search.proquest.com.login.ezproxy.library.ualberta.ca/docview/1476211938?accountid=14474>
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks : Sage Publications, c1995.

- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). *Organizing and the process of sensemaking* Institute for Operations Research and the Management Sciences. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.ezproxy.library.ualberta.ca/login.aspx?direct=true&db=edsjrs&AN=edsjrs.25145979&site=eds-live&scope=site>
- Weick, K., E. (2012). Organized sensemaking: A commentary on processes of interpretive work. *Human Relations*, 65(1), 141-153. Retrieved from <http://hum.sagepub.com/login.ezproxy.library.ualberta.ca/content/65/1/141>
- Winston, Brian. (2000). *Media technology and society: a history: from the telegraph to the Internet*. London; New York: Routledge.

## Appendix A - Information Letter & Participant Consent Form

### Study Title: What Might IT Look Like?

Researcher: **Richard R. Ingimundson**

Supervisor: [Dr. Thomas T. Barker](#)

### Background

Based on my inquiry, you are being approached on the recommendation of Family Roots (**FR**) founder, Lynne Williams. Your participation suits this study because you are a key informant in the Family Roots organization. In other words, you are a member of this community who has relevant experience and knowledge of its mission, and you have influence over its strategic decisions.

The results of this study will be used:

- to reveal the value and challenges of sensemaking with respect to information and communications technology (ICT) adoption
- to improve understanding and provide analysis and service to the FR community

### Purpose

Building on a report I delivered to Lynne Williams (April 2015), your team has begun a “technology adoption project” aimed at improving your internal communications and collaboration. The study will use this ICT adoption process and to observe how:

- A. each team member makes sense of it
- B. each member’s actions reflect their perceptions of:
  - what’s going on here,
  - and what can be done about it.

### Study Procedures

This is a case study situated amongst Family Roots leaders who are engaging in a shift from their recent practices of one-to-one communication, toward a more collaborative model.

In order to orient you to the study, an introductory meeting (via webinar) will be held with the group. The goal is to introduce ourselves and familiarize participants with the report delivered to Lynne Williams which provided an assessment of Family Roots’ communication practices as well as recommendations to help transform its communication model (April 2015). Text excerpts will be presented to illustrate terms and purpose of study, e.g. ICT, “technology adoption project”, transformation process, and what we’re attempting to engage in through this emerging communication model, i.e. mindfulness of it.

Primary data sources will be collected from two semi-structured interviews of each participant. Supplementary data sources include electronic documents, email, informal conversations, field notes from the researcher’s participation in the community’s conversations, as well as the researcher’s observations and reflections.

Each participant can expect that these three activities will require approximately 45 minutes of their time in total. The orientation and interviews will be conducted using Zoom conferencing software and recorded for transcription purposes. The activities will take place during a two (2) week period.

- Study Orientation (15 minutes) - webinar format
- Interview #1 (20 minutes)
- Interview #2 (10 minutes)

Each participant's interview transcript will be provided to them for revision and verification.

### **Benefits**

A benefit of this research is that a form of 'joint learning' develops between researcher and participants that investigates (a) **what's going on** and (b) **what can be done about it**. It is intended to expand participants' vocabulary for making sense of this technology adoption and their vocabulary of action.

The FR community can improve its viability by adopting activities that better facilitate sharing and cooperation, and foster strong, predictable relationships in which members are dedicated to a shared goal rather than individual relationships. It is our hope that insights gained from this study can further guide FR's transformation to a collaborative, vibrant and active online community.

There are no financial costs to participants and they will receive no compensation or reimbursement for their involvement.

### **Risks**

There are no foreseeable risks of discomfort for participants. The questions are not aimed at contentious issues or concerns. The number of interview questions are relatively low and are designed to encourage natural rather than contrived responses.

If we learn anything during the research that may affect a participant's willingness to continue being in the study, we will inform them right away.

### **Voluntary Participation**

You are under no obligation to participate in this study. The participation is completely voluntary and you are not obliged to answer any specific questions even if participating in the study.

If any way you choose to withdraw or modify your data, you will be granted this option immediately. Any collected data will then be withdrawn from the researcher's records and excluded from the study. (i.e. Even if you agree to be in the study you can change your mind after the interview process, you can contact me and withdraw at any time up until May 23, 2016).

### **Confidentiality & Anonymity**

During the research, names will be used as reference in the preparation of the findings, analysis and discussion portions of the report. All information will be kept confidential. Organization and key

informants' names will be made generic (nonspecific) before releasing aggregated data to the University of Alberta.

Data will be kept in a secure place (the researcher's personal computer under password protection) for a minimum of five years following the completion of the research project, and when appropriate, will be destroyed in a way that ensures privacy and confidentiality. The researcher will be the only person with access to it.

The results of the study:

- will not be released until after the Capstone Project has received approval for meeting the program requirements.
- may be used for teaching, reference and illustrative purposes, however, participants will not be personally identified in any of these.
- may be used in future unspecified research projects though not without the consent of the University of Alberta Research Ethics Board.

Due to the small number of people in the study sample (4-6), anonymity cannot be ensured amongst the participants. Each participant will receive a copy of the report and research findings.

### **Ethics Approval Statement**

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

### **Consent Statement**

I acknowledge that the research procedures have been explained to me, and that any questions I have asked have been answered to my satisfaction. I understand that my comments will be audio-recorded and may be used as data relevant to this study. In addition, I know that I may contact the person (researcher) designated on this form, if I have further questions, either now, or in the future. I agree to participate in the research study described above and will receive a copy of this consent form. I will receive a copy of this consent form after I sign it.



## Appendix B - Interview Protocols

### Interview #1

1. Can you name a favorite technology and explain how you use it?
2. How do you typically learn about new information and communication technology (ICT)?
3. In the context of Family Roots, what role have you played in previous ICT conversations? Do you think you should be involved?
4. In what ways might your expertise help guide this technology adoption?
5. How do you suppose this technology will support or improve Family Roots' internal communications?
6. Describe your involvement in these communication activities?
7. When considering technology for Family Roots, whom do you consult? Why?
8. Who leads conversations about Family Roots technology?
9. Where ICT adoption is concerned, some think it's about trial and error but others think it's about getting it right the first time. What's your perspective on this?
10. This project could be approached in various ways, however, in what way do you prefer to be involved?

### Interview #2

1. What results have come from this ICT adoption project?
2. How has it impacted your work?
3. Are there terms or processes that you are now more familiar with? If so, would you name a few?
4. What's next? In what ways do you foresee this ICT adoption growing for the FR team? for the membership?
5. When considering this Google Shared Mailbox “adoption”, what kind of shift would you characterize this as for the FR team?

## Appendix C - Notice of Google Group Shared Mailbox

**From:** Ross, IT Manager  
**Subject:** Family Roots Mailbox "Google Shared Group Mailbox"  
**Date:** February 26, 2016 at 12:46:23 PM CST  
**To:** FR executive team

Hi

Lynne asked that I email you and let you know about a process change that we are trying out for Family Roots.

Presently, Lynne receives many emails about all sorts of things and then either handles them, or sends them on to other genealogists for assistance. Since everything funnels through her, it's a big drain on her time.

I have set up a new mailbox called [yyyy@email.com](mailto:yyyy@email.com) and have routed many of the automatic computer generated (i.e. from family roots database and wordpress) emails to that inbox. Lynne is also going to forward other emails to this inbox that she would like the volunteer genealogists to handle.

### WHAT WE WOULD ASK YOU TO DO

Would you mind logging into this mailbox periodically? Anything in the inbox is "unresourced", i.e. nobody is currently working on it. If you are able to handle that piece of work (email), please move it to the folder with your name under \*IN PROGRESS. At that point, others won't be looking at the email and it will be "assigned" to you.

When you are finished with the work, please move the email into the folder under COMPLETED associated with your name. That way you can easily see what is "in the hopper" along with those things that you are working on. And, as this solution ages, we will be able to search on past work in the completed folder!

Lynne is hoping that in addition to removing much of the work associated with routing emails, this will be more efficient for you, as you will be "taking" work when it is convenient for you, rather than being asked to do something.

Please try out the site and get back to me if you have any questions. If you have used Gmail before, it should be intuitive, but if you have trouble with anything, please let me know and I'll help. We have some concern about so many people accessing the same inbox, so if you see any strange things happen, please let me know.

The URL is [mail.google.com](mailto:mail.google.com), userid is [yyyy@email.com](mailto:yyyy@email.com) and the password is xxxxx

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Ross