

The Impacts of Time Pressure and Emotion on the Information Behavior of High Stakes  
Decision Makers: The Home Buying Experience

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A dissertation  
submitted in partial fulfillment of the  
requirements for the degree of

Doctor of Philosophy

University of Washington

2014

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Program Authorized to Offer Degree:

Information School

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**Abstract**

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Decisions. As we move through our everyday activities, we make decisions. Many are routine, do not involve risk or focus on a single issue. We know what to expect. Some decisions, however, entail risk and uncertain outcomes. Such decisions are referred to as "high stakes" This dissertation determined how time pressure and emotion influence people's information behavior when engaging in high stakes decision-making within the home buying domain. Additionally, the study tested Chatman's Theory of Normative Behavior (Chatman, 2000) and ascertained the helpfulness of deciders' Information Grounds (Fisher, Durrance, & Hinton, 2004). By examining these phenomena, I expand the information behavior knowledge base. Employing an exploratory approach, I performed a deep, reflective ersatz home buying experience, conducted 33 semi-structured interviews using a timeline strategy and carried out eight observations with participants from the Seattle, Washington metropolitan area. Participants included homebuyers and home buying stakeholders such as real estate agents, lenders and escrow agents. Data were

collected from April 2012 through March 2013. Findings revealed that "information use" induce emotion and a sense of time pressure, whereas all other "non-information use" behaviors are propelled by emotion and time pressure. The study also identified the emergent theme "information use by proxy" phenomenon wherein emotions prompt people to forgo information responsibility and enlist trusted surrogates to use information on their behalf. Further, findings show that emotion and time pressure have the ability to alter one's routine information behavior, which can result in shared dyadic information behavior between couples. Moreover, the behavior has implications for such relationships as found in the business world, academia, artistic endeavors and other collaborations (Papadopoulou, Lee, Fisher, 2013). From theory testing, the study found that Chatman's Theory of Normative Behavior explains high stakes deciders' information behavior, but demonstrates limitations regarding the "information behavior" aspect of the theory. As a result, I propose a new, holistic information behavior definition to buttress Chatman's theoretical framework. The study also ascertained that Fisher's Information Grounds provide helpful information for most, but not all high stakes decision makers since sharing information with strangers went against one's nature, information was not relevant or trustworthy or people had insufficient time to socialize. Social information used for light conversation, however, was considered valuable to home buying stakeholders as such information helps to build and maintain relationships, which is viewed as a vital component of successful businesses in the competitive field of residential real estate. Lastly, study findings demonstrate relevance to other fields like medicine, emergency and disaster management or social and political science as issues of emotion and time pressure are likely to present in myriad and unanticipated ways.

## **Acknowledgments**

I wish to thank those who participated in this study and for their willingness to share home buying experiences with such candor, good humor and liveliness. I could not have completed this research without your help.

A big thanks to all the members of my supervisory committee for their worthwhile suggestions and feedback throughout this process: Dr. Michael Eisenberg, Dr. Ricardo Gomez, Dr. Miriam Kahn and Dr. Carole Palmer. I am especially grateful to my advisor, Dr. Karen Fisher both professionally and personally for her valuable support, inspiration and counsel.

I thank my fellow doctoral students for their insights and helpfulness over the years.

Finally, I would like to acknowledge my loving husband and fondest companion, Dr. Kenneth E. Landry, for his unending support, encouragement, patience, understanding and surprise bouquets of roses. Thank you for simply being there.

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## Chapter 1: Introduction

Decisions. As we move through our everyday life activities, we make decisions. Many of these decisions are routine, do not involve risk and focus on a single issue; we know what outcomes to expect (Maule & Svenson, 1993b). Choosing not to carry an umbrella or ordering pizza from a favorite restaurant represent such decisions, as they entail little risk and the outcomes are predictable. You may or may not get wet minus an umbrella and the pizza is likely to be comparable to previous pies. Some decisions, however, embody risk along with uncertain outcomes, for example, stock market investments or foregoing a child's vaccinations as earnings and the youngster's health are influenced by future events (Maule & Svenson, 1993b).

Kunreuther and colleagues (2002) refer to such decisions as "high stakes." More specifically, the authors indicate that high stakes decisions are characterized by "the existence of large financial and/or emotional loss outcome(s) and the presence of high costs to reversing a decision once it is made" (p. 261).

Regardless of the decision type, some decisions inevitably generate a need for information, and thus deciders proceed to carry out one or more forms of information behavior: creating, seeking, sharing, using, avoiding, managing or destroying information. Moreover, each manner of information behavior requires that a choice be made, and these choices can be shaped by numerous factors (Fisher & Julien, 2009). Of specific interest to this study are such factors as time pressure and emotion. Although literature indicates that researchers have examined the influence of emotion on information behavior (for example, Kuhlthau, 1988; Matthews, Sellergren, Manfredi, & Williams, 2002; Nahl & Bilal, 2007), and literature has discussed the notion of time pressure (cf. Nahl, 2004; Savolainen, 2006; Wilson, 1997), there is little evidence

that the interaction of these two elements has been explored, particularly with a focus toward high stakes decision-making.

This study was motivated by the absence of research addressing the interaction of emotion and time pressure on the information behavior of people making high stakes decisions. The domain of inquiry was the home buying experience, and a naturalistic methodology was used to explore the phenomena under study. Research was grounded in two conceptual frameworks: Chatman's Theory of Normative Behavior (Burnett, Besant, & Chatman, 2001; Chatman, 2000) and Fisher's Information Grounds (IG) (Fisher, Durrance, et al., 2004; Pettigrew, 1999). Iterative pattern coding (Miles & Huberman, 1994) was used to conduct data analysis.

This introduction outlines the literature overview, the research objective, conceptual frameworks, research questions, research design, study contributions and chapter summary.

## **1.1 Overview of the Literature**

Literature indicates that decision-making is widespread. Within information behavior, Schamber (1994, 2000) and Barry and Schamber (1998) investigated criteria used to influence relevance judgments. Similarly, Spink, Grisdorf and Bateman (1998, p. 606) examined the "fuzzy, middle region of relevance" to learn that partial relevance is often more useful than highly relevant material as it takes information seekers in new directions. Others have examined the decisions behind selected information sources as part of broader information behavior studies (Casey, Miller, & Johnson, 1997; Kim & Sin, 2007; Landry, 2006; Matthews, et al., 2002). Kari (2009) explored the use of spiritual information for making decisions, while Berryman (2006)

investigated how public sector workers decided they had enough information for work-related tasks.

Additionally, decision-making studies have a long history in such fields as economics, management science, policy analysis and psychology (Gilboa & Schmeidler, 1995; Kahneman & Tversky, 1979; Lipshitz, Klein, Orasanu, & Salas, 2001; Shafir, Simonson, & Tversky, 1993; Simon, 1955; Simon, 1997; Tversky, 1972). Over the years, various approaches were derived to explain decision-making, for example, elimination by aspects (Tversky, 1972), bounded rationality (Simon, 1955; 1997), naturalistic decision-making (Lipshitz, et al., 2001), heuristics (Hammond, Keeney, & Raiffa, 1998) or cased-based decision theory (Gilboa & Schmeidler, 1995). Yet, despite these different perspectives addressing choice, information behavior and decision studies share common strategies when coping with information. These can range from filtering for relevant information (Bawden & Robinson, 2009; Ellis, 1989; Souren, Saunders, & Haseman, 2005; ZaKay, 1993), satisficing or choosing alternatives that are "good enough" (Agosto, 2002; Simon, 1955), or avoiding information altogether (Janis & Mann, 1977; Matthews, et al., 2002). I discuss these concepts in depth in the Literature section of this dissertation.

Emotion, too, has emerged as a noteworthy topic in both information behavior and decision-making literatures. Exemplifying this notion within information behavior is the publication *Information and emotion* (Nahl & Bilal, 2007), which discusses emotion's influence on the information behavior of various populations, contexts and cultures. From decision research, literature suggests that people employ emotion as a source of information when making

decisions (Finucane, 2008), that emotional cues help us to make the "right" choice (Kunreuther, et al., 2002), and that we would not be able to make good choices without emotional guidance (Bechara, Damasio, Tranel, & Damasio, 1997).

Like emotion, time pressure is recognized as a compelling factor in both information behavior and decision-making. Information behavior theorists suggest that time is a resource and, when in short supply, people limit their information choices to that which can be attained quickly and easily (Savolainen, 2006; Wilson, 1997). *Time pressure and stress in human judgment and decision-making* (Svenson & Maule, 1993) present a persuasive discussion on people's behavior when faced with time constraints associated with decision-making. For example, decision makers may trade effort for accuracy when working under time pressure (Busemeyer, 1993). As information behavior encompasses decision-making, which can be shaped by emotion and time pressure, this inquiry explored how information behavior associated with high stakes decision-making is shaped by the interaction of emotion and time pressure.

## **1.2 Research Objective**

The objective of this study is to contribute to and expand the body of knowledge on information behavior by providing insights into how the interactions of time pressure and emotion affect people's information behavior when making high stakes decisions. To test these fundamental propositions, I conducted an exploratory study within the context of the home buying experience. Purchasing a home is typically the largest monetary commitment most people make during their lifetimes. For a first time homebuyer, the process can be fraught with unknowns and uncertainties, and although repeat buyers have experience with the process, such a thing as a

routine real estate transaction does not exist since each home purchase has its own character. Some transactions present little twists and turns whereas others introduce issues of greater consequence.

Furthermore, given the large financial obligation associated with buying a home, I anticipated that purchasers experienced myriad emotions during the process, for example, anticipation, fear, excitement, frustration or joy. Additionally, I expected that time constraints were likely to attend some aspects of the decision process such as having mere minutes to decide to make an offer on a house. In a like manner, real estate agents can experience emotion and time pressure associated with the home buying process, as clients' expectations may be unrealistic and demanding.

Disappointment and frustration are possible when a sale fails to close, yet happiness or a sense of accomplishment are felt when all facets of a sale fall into place. Moreover, rapid decision-making helps make a sale when competition or a down market stressors complicate the job.

According to Kunreuther and colleagues (2002, p. 261), a high stakes decision involves the "the existence of large financial and/or emotional loss outcome(s) and the presence of high costs to reversing a decision once it is made." The home buying experience embodies both aspects of a high stakes decisions, thereby, making it a fitting context for this study

### **1.3 Conceptual Frameworks**

Two conceptual frameworks provided theoretical guidance for this study. Chatman's (2000, p. 13) Theory of Normative Behavior, or behavior "which is viewed by inhabitants of a social world as most appropriate for that particular context" furnished one concept. Fisher's (Pettigrew, 1999 [now writing as Fisher]) Information Grounds theory, wherein people go to a place for a

specific purpose but end up sharing information with those present provided the second framework. Both theories are discussed in depth in Chapter 3.

#### **1.4 Research Questions**

Using the Theory of Normative Behavior (Chatman, 2000) and Information Grounds theory (Pettigrew, 1999), research was guided by the following questions:

1. To what extent does the interaction of time pressure and emotion influence people's information behavior when engaged in high stakes decision-making?
  - a. How do high stakes decision makers experience information when the decision is made under time pressure?
  - b. How do high stakes decision makers experience information when a decision is emotionally charged?
2. How effectively does Chatman's (2000) Theory of Normative Behavior explain people's information behavior when making high stakes decisions?
3. How do Information Grounds (Fisher, Durrance, et al., 2004) emerge and support people's information behavior when making high stakes decisions?

The theoretical foundations inspiring these research questions include work originating from information behavior and emotion, information behavior and time pressure, decision-making and emotion, and decision-making and time pressure. The literature associated with these foundational areas is discussed in Chapter 2.

## **1.5 Research Design**

The exploratory nature of this study and the newness of the phenomenon under investigation suggested the use of a natural, real world and flexible approach. For these reasons, naturalistic inquiry was used as the research paradigm (Erlandson, Harris, Skipper, & Allen, 1993).

Naturalistic inquiry strives to understand a phenomenon or problem based on the meanings that people assign to them and the social contexts in which they occur (Klein & Myers, 1999), thereby allowing for a deeper understanding of the information behavior associated with high takes decision-making made under time pressure and the role that emotion plays in this behavior.

To prepare for data collection, I participated in an ersatz home buying experience to gain a deeper understanding of home buying concerns. Further, the exercise permitted me to discover the rich, multiple perspectives embraced by homebuyers, real estate agents, lenders and escrow agents, which contributed to the holistic character of the study. To elicit data regarding the home buying experience, I conducted a field study using qualitative methods and purposive sampling. Using a timeline strategy, I employed in-depth semi-structured interviews to explore and describe participants' information behavior. The method enabled the reconstruction of the past and the means to explain the present, thus placing the phenomena under study into a broader interpersonal, social and cultural context (Erlandson, et al., 1993). Finally, participant observation was used to collect firsthand, open-ended information regarding the experiences and interactions of real estate agents with their clients and other stakeholders involved in the home buying process.

Interview transcripts and observation notes were analyzed using iterative pattern coding (Miles & Huberman, 1994). Atlas.ti, a qualitative software program, assisted with the data coding and analysis process.

## **1.6 Contributions**

This investigation contributes to the field of information science empirically, theoretically and methodologically.

Empirically, the study extended the knowledge base for information behavior, as findings indicate that "information use" generates emotion, creates time pressure and triggers interaction between both factors. Conversely, "non-use" information behaviors (e.g. seeking, sharing, needing, etc.) are activated by the presence of time pressure and emotion. The study also identified the emergent theme "information use by proxy," wherein emotions like fear and uncertainty prompt deciders to forgo information responsibility and enlist trusted surrogates to use information for making a decision on their behalf. Furthermore, findings revealed that emotion and time pressure have the ability to alter one's information behavior. For example, time urgency can induce one to forgo systematic information-seeking and use in favor of a more impulsive or arbitrary approach, whereas emotionally devastating news can shift one's active use of information to that of blunting or avoiding information. In the case of intimate couples, the effect can result in shared dyadic information behavior (Papadopoulou, Lee, Fisher, 2013). By expanding our understanding of how people think and feel, systems and tools can be developed to assist high stakes deciders, while concomitantly making it easier for them to work with other stakeholders in the decision process. Finally, empirical findings allow for transferability and

demonstrate relevance to other contexts, both high and low stakes, for example, the discipline of emergency and disaster management or shopping for bargains on daily deal websites.

The study contributed theoretically to the field by having tested Chatman's (2000) Theory of Normative Behavior, which had yet to be used in a wide-ranging inquiry. Findings determined that the theory does explain the information behavior of high stakes decision makers; however, results also show that the "information behavior" aspect of TNB has limitations with regard to deciders' information behavior. As a result, theory building eventuated with the expansion of this facet of Chatman's theory in which I define information behavior more holistically as *the totality of human behavior associated with information, wherein information is defined as that which is experienced through all human senses and sensations*. This definition embraces every form of information and current areas of IB study as well as those yet to be uncovered. Additionally, the study ascertained that Fisher's Information Grounds provide helpful information for most but not all high stakes decision makers with reasons ranging from insufficient time to socialize, information was not relevant or trustworthy or that sharing information with strangers went against one's nature. However, social information used for light conversation was valuable to stakeholders as such information helps to build and maintain relationships in the competitive field of residential real estate.

Methodological contributions stem from the study's broad, holistic approach to understanding the information behavior associated with high stakes deciding by investigating the many stakeholders and homebuyers involved in the process rather than focusing on one specific category of people. In addition, the study adopted a deep reflective methodology by employing

an ersatz home buying strategy. This tactic facilitated understanding home buying concerns, highlighted likely perspectives and educated the researcher on the language of home buying. Further, the strategy proved a critical tool in preparing the researcher for work in the field. Once in the field, data were collected using semi-structured interviews. Key to collecting rich data was the use of a timeline that, in turn, enabled participants to provide worthwhile and reliable material. Because interviews rely on autobiographical memory and are prone to error, timelines established their effectiveness as a qualitative instrument by resurrecting home buying memories and their attendant emotions and feelings of time pressure.

## **1.7 Chapter Summary**

In this introduction, I have presented an overview of the literature relevant to this dissertation and I have introduced the research objective, conceptual frameworks and research questions. I have provided an overview of the methodology, discussed the contributions of the research. The second chapter of this dissertation includes an in-depth discussion of the relevant literature. I review material pertaining to information behavior and decision theory. In particular, I devote significant discussion to literature addressing the issues of time pressure and emotion. Chapter 3 covers Chatman's (2000) Theory of Normative Behavior and Fisher's (2004) theory of Information Grounds, the conceptual frameworks guiding the dissertation, as well as how these concepts apply to the research questions. In Chapter 4, I discuss the study's research design and explain why it is appropriate for answering the research questions. Additionally, I address data analysis and how data trustworthiness is achieved. Chapter 5 examines findings with regard to the information behavior of high stakes decision makers with a focus on the interaction of time pressure and emotion, time pressure and information behavior, and emotion an information

behavior. Chapter 6 looks at how the Theory of Normative Behavior explains the information behavior and how Information Grounds support high stakes deciders. Finally, Chapter 7 presents a discussion of the major findings, study contributions and limitations, implications and future research.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

Information behavior is about decisions. For example, we can choose whether to create, seek, share, use, avoid or destroy information. When not imposed by others, we decide on the information sources that we use and judge the relevance of the information that we receive. Moreover, decisions may involve routine, well-defined issues or they can pertain to novel, ill-defined problems. High stakes decisions fall under the umbrella of the later. With an eye to informing people's information behavior associated with high stakes decisions, this section explores the theories, models and empirical research that informed and guided this dissertation.

The section is divided into four parts with each segment presenting key literature underpinning the theoretical foundation of the study. To date, no research has investigated how the interaction of time pressure and emotion shape information behavior, particularly with regard to high stakes decision-making. Therefore, subsection 2.2 examines the background of information behavior studies, the characteristics of information behavior, and information behavior and emotion literature. Subsection 2.3 reviews decision-making theory, time pressure and decision-making research, and decision-making and emotion literature. Finally, subsection 2.4 explores the parallels between information behavior and decision-making studies.

### **2.2 Information Behavior**

#### **2.2.1 User-Centeredness, Constructivism and Constructionism/Context**

Previously known as "use studies," "information-seeking and gathering" studies or "information needs and uses" studies, the notion of information behavior (IB) arose from multiple channels

such as librarians' desire to understand library users, government agencies need to know how engineers and scientists used technical information, and social scientists basic interest in the social use of information (Bates, 2010). Early information research reflected the scientific advances of the 1940s and 1950s as government officials sought to improve the distribution of new scientific information, while studies during the 1960s and 1970s examined library use and the social aspects of scientific communication and information use (Bates, 2010). Additionally, the 1970s witnessed a major shift in the thinking, assumptions and the approaches to studying information behavior. Prior to this change in thinking, a "system-centered" perspective was embraced by researchers and system designers, wherein information search strategies were dictated by the system; moreover, system designers believed they were better equipped to understand what users needed than the users themselves (Dervin, 1992). Bates (1989) criticized the systems approach for its requirement that a query be presented as a one-time problem when, in fact, real life searches frequently change as new information is acquired and evaluated. Alternatively, a "user-centered" approach was suggested. This new perspective is characterized by a focus on such attributes as emotion, context, holistic experiences, everyday life and qualitative methods (Fisher & Julien, 2009).

In acknowledgement of this paradigm shift, the concept of constructivism was adopted during the 1970-1980s as an information behavior epistemology. The concept examined both the cognitive and the affective motivations that propelled information behavior, and it assumed that “the individual mind generates knowledge by creating knowledge structures and mental models which represent and mediate—filter—information” (Talja, Tuominen, & Savolainen, 2005, p.

83). Pettigrew, Fidel and Bruce (2001, p. 47) echo this perspective, stating that knowledge structures are used to “perceive, interpret, modify, or transfer information.”

Taylor (1968) presents as the first information behavior researcher who employed a user-centered approach to study information behavior. In his groundbreaking paper, *Question Negotiating and Information Seeking in Libraries*, Taylor illustrated his constructivist approach when discussing the decision points an individual uses to arbitrate his or her choices when considering whether to ask a colleague for help, search the literature for oneself or ask for assistance at the library. Like Taylor, Belkin (1978) constructed a framework to cognitively explain information behavior with regard to information retrieval. His Anomalous State of Knowledge (ASK) model describes a user’s recognition that an anomaly exists within his or her state of knowledge, and this anomaly can only be resolved by communicating this information need to an information system. An anomaly is seen as insufficient knowledge needed to achieve a goal. By acknowledging this discrepancy, a user can take deliberate steps to remedy the situation. Belkin’s model clearly demonstrates his belief that cognitive processes are an intricate part of information behavior.

In the 1990s, researchers continued the user-centered approach to information behavior; however, they moved from a cognitive viewpoint to one focusing on information in context, which is also referred to as a constructionist epistemology. Constructionism grounds itself in language (Talja, et al., 2005). With language, we construct notions of ourselves, our social worlds and our knowledge. Yet the meanings that are derived from language are inherently unstable, therefore, constructionists underscore the significance of context as a means to bring

meaning to language and, concomitantly, our knowledge (Talja, et al., 2005). The inaugural meeting of the Information Seeking in Context (ISIC) conference in 1996 established the importance of context in information behavior. One influential member of the social constructionist community was Elfreda Chatman. Her ethnographic examination of the information worlds of the poor demonstrated that situational relevance was a contributing factor in how this population sought information (Chatman, 1996). Community settings, too, can provide the necessary context to encourage informal information sharing as they offer people the opportunity to socially interact with others present (Pettigrew, 2000). Additionally, context encountered in the everyday and other life situations can influence information seeking for example, a mature college student's hobby may inform his or her academic studies (Given, 2002). Case (2007) suggests that the categories of *occupation*, *social roles* and *demographics* provide the contextual background for exploring information behavior.

Language, like context, is a significant part of constructionism, as it allows us to construct meanings associated with ourselves and our social worlds. For example, studying the language of women who were pregnant with twins revealed their understanding of informational barriers encountered during patient care (McKenzie, 2002a). Language also illustrated how the pregnant women positioned themselves as active or passive information seekers (McKenzie, 2002b). Moreover, by analyzing language or discourse, researchers can attempt to distinguish cultural regularities at the "macrosociologic level" (Talja, 1999, p. 459). As a strong supporter of constructionism, Talja (1996, p. 67) employed the discourse analytic viewpoint to argue that the "theory of knowledge formations" presented a viable alternative to the cognitive view of "the information as man-theory." In other words, researchers should examine socio-cultural aspects of both the user and information systems

If we assume that the boundaries of social knowledge are set by discourses that categorize the social world and bring phenomena into sight, it follows that information, information systems and information needs are all constructed within existing discourses. Information needs are linguistic and cultural constructs, as are information systems (p. 76)

Literature reveals the dynamic and changing nature of information behavior research. This dissertation adopted the current user-centered paradigm for information behavior research. Further, the inquiry was guided by the notions of language and context and allowed participants to construct meanings associated with themselves and their social worlds, as this approach helped to understand how people create, seek, share, use and manage information. Next, I examine the various elements that comprise information behavior.

### **2.2.2 Information needs, creating, seeking, using, sharing and managing**

Wilson (2000, p. 49) defines information behavior as "the totality of human behavior in relation to sources and channels of information, including both active and passive information-seeking, and information use."

Fundamental to information behavior is the notion of "information needs." Over the years, various attempts were made to define this concept (Dervin, 1992; Dervin & Nilan, 1986; Taylor, 1968; Wilson, 1981), yet it remains elusive. Given their exploration of the issue, Naumer and Fisher (2009) determined that a definition is dependent on one's perspective rather than on a specific meaning. For example, information needs may be unexpressed, (Taylor, 1968), imposed by others (Gross, 2001), motivated by emotion (Fisher & Landry, 2007), anticipated for a future purpose (Bruce, 2005), or disregarded when perceived as too risky to pursue (Chatman, 1991,

1992). Regardless of perspective, what is certain is that information needs frequently represent the motivation or tipping point for information-seeking and subsequent information behavior. Information-seeking is a significant component of information behavior and, as such, has been widely studied by researchers in the field (cf. Bates, 1989; Carey, McKechnie, & McKenzie, 2001; Lu, 2010; Marchionini, 1997; Nicholas, Huntington, Williams, & Dobrowolski, 2004; Tardy & Hale, 1998; Von Seggern, 1995). Information-seeking can be influenced by many factors such as communication barriers (Harris & Dewdney, 1994; McKenzie, 2002a) or issues pertaining to access (Julien, 1999; Lorence, Park, & Fox, 2006; Peña-Purcell, 2008). Emotion, too, can propel information-seeking (Fisher & Landry, 2007) or hinder it (Case, Andrews, Johnson, & Allard, 2005; Matthews, et al., 2002; Savolainen, 2007). Seeking information can be viewed as a task conducted on one's own behalf or a task imposed by others, for example, a student's school assignment (Gross, 2001). Moreover, information can be sought to benefit another (Abrahamson & Fisher, 2007). These lay information mediaries (LIM) seek information with or without being asked and typically do so for people they care about (Abrahamson, Fisher, Turner, Durrance, & Turner, 2008), but information is also sought on behalf of strangers (Becker et al., 2010). Examples of LIM behavior include seeking diabetes information for a parent or looking for information on worm boxes for a neighbor.

Information-seeking is noted for being an active behavior such as deliberately seeking the current temperature on one's outdoor thermometer, or passive as in hearing the reported temperature while listening to the radio (Wilson, 1997). Another form of passive information acquisition is "information encountering" (Erdelez, 1999). More specifically, information encountering occurs when seeking information for one purpose but finding useful information

for an unrelated topic. Erdelez likens this to "bumping into" information. For instance, one can bump into information for one school project while researching another or a person might find information for an upcoming vacation while seeking material for work-related task.

When actively seeking information, however, people turn to one or more information sources and researchers are interested in what or who they use (cf. Bernhardt & Felter, 2004; Kwekkeboom & Frese, 2009; Talosig-Garcia & Davis, 2005). Literature indicates that "people" are the preferred source for information (Agosto & Hughes-Hassell, 2005; Hogan & Palmer, 2005; Johnson, 2004), which supports Harris and Dewdney's (1994) principle that people tend to turn first to other people when needing information. Moreover, a set of criteria is employed when choosing sources. For some, "ease of use" and "familiarity" are essential (Kim & Sin, 2007), while "convenience" and "accessibility" are important to others (Dee & Blazek, 1993; Landry, 2006). Finally, "trustworthiness" presents as a significant criterion as it indicates the source is a provider of reliable information (Agada, 1999; Guillaume & Bath, 2004; Hertzum, 2002; Stavri, Freeman, & Burroughs, 2003).

Information-seeking is pervasive in our everyday lives. We seek information today; we will seek information tomorrow; we sought information yesterday. However, the nature of information-seeking has changed over the years due to such external forces as wars, government regulations and the transformation of media technology. Aspray and Hayes (2011) examined this information-seeking evolution through a collection of essays in their book, *Everyday Information*. Essays cover such diverse topics as car buying in the days of the Model T to

planning airline travel online, from using the family Bible as an ancestral record to searching Ancestry.com.

Perhaps the most social aspect of information behavior is information sharing. The theory of Information Grounds (Fisher, Durrance, et al., 2004) addresses this notion as key concepts of the theory include social types, social interaction along with informal and formal information sharing. Information Grounds are created when people come together for one purpose, (e.g. shopping) and end up sharing information with others present. If there is no social interaction then no Information Grounds exist. The theory of Information Grounds is discussed in greater detail in Chapter 3 of this dissertation. Information sharing is also viewed as a solicited or unsolicited act. Harris and Dewdney (1994) point out that when people seek information, they are inclined to ask interpersonal sources. Those who are solicited, in turn, share information with the individuals' requesting it. Unsolicited information sharing, on the other hand, is evident with lay information mediary behavior, as lay mediaries take it upon themselves to find and share information without being asked to do so (Abrahamson, et al., 2008). Voluntary information can be obtained in other arenas as well, for example, listserves, guestbooks and web pages carry a rich source of unsolicited material for individuals (Robinson, 2001). At the most basic level, however, the people in our everyday lives voluntarily offer information like sharing a software shortcut, revealing the location of newly found restaurant or mentioning that a particular store is having a great sale.

Information is typically obtained to meet an information need, which in turn is used for a purpose such as satisfying a curiosity, answering a question or making a decision. Information use is an area of information behavior that has meagre research devoted to it. When discussed,

information use presents as part of a larger theory (Fisher et al, 2004; Chatman, 2000; Dervin & Nilan, 1986). In a review of models representing information behavior, Wilson (1999) noted that information use had received scant attention by information researchers but similarly included the concept in his 1981 and 1996 models of information behavior. Spink and Cole (2006) echo Wilson's viewpoint of scant attention and have proposed a Modular Thinking approach that suggests that information use begins with pre-conscious data foraging. Data collected in such a manner is then used for human adaptation and survival.

Before information is shared, sought or used, it must be created; yet, this aspect of information behavior has largely been overlooked within library and information science (LIS) (Trace, 2007). When spoken of, information creation has been presented as transforming existing "information into something new and different" (Ojala, 2004, p. 5), digitizing existing material or simply creating new electronic products (Lougee, 1998). Trace (2007, 2008) approaches the notion from the perspective that information creation is a process and that it reflects the context within which the information is created. For example, homework-related documents created by pre-adolescent children mirror the procedural norms established in the context of the classroom. In a like manner, scientific recordkeeping, created in the form of daily laboratory records, must adhere to the practices of the profession as they serve as researchers' scientific memory and, as such, should be maintained and managed (Shankar, 2009). Notwithstanding these few studies, one may presume that information is created on a much larger scale than classroom documents or laboratory records. For this reason, additional research should be undertaken to broaden our understanding of this understudied facet of information behavior.

Following the creation or acquisition of information, managing the material or making it accessible for reuse is typically necessary. The need to manage information can occur on a large scale, as is the case for such entities as business enterprises, libraries or government agencies. For the purposes of this dissertation, however, literature pertaining to information management on the individual or personal level is discussed.

Information management at the individual level is referred to as "personal information management" or PIM, and it reflects the strategies that people employ to organize and manage newly acquired information and personal collections for reuse. Personal collections can take many forms such as books, photos, articles or correspondence. They can be in print, electronic or both types of media. Personal collections also represent sources of information, which is significant as people willingly return to sources that have effectively met their information needs (Turner & Durrance, 2005). For example, one may return to a particular cookbook or a specific alternative medicine website because they were useful in the past. However, being able to return to one's information generally requires a management strategy.

In the days preceding widespread computer use, "filing" and "piling" informational documents were common strategies for PIM. Piling information served as a temporary strategy to address short term or immediate information needs, while filing attended to future or long term needs (Malone, 1983). Hardcopy informational documents continue to be valued in an age of pervasive digital materials (Whittaker & Hirschberg, 2001), yet digital information, too, requires management. To address digital information found on the Internet, Jones, Bruce and Dumais (2001) found that people favored such approaches as emailing web addresses with contextual

comments to themselves, printing out or saving web pages to their hard drives, pasting web addresses into a document or personal websites, whereas bookmarks and favorite places, tools built to support PIM, were seldom used. Electronic folders and subfolders, on the other hand, were employed to manage digital documents such as emails, PDFs or photos as folders both summarized and organized the information held within (Jones, Phuwanartnurak, Gill, & Bruce, 2005). Additionally, the folders and subfolders strategy was preferred for its ability to group items in a desired manner as well as allowing one to see and understand the relationship between folder content. Yet, despite existing investigations into information management practices, gaps remain in our understanding of people's methods for managing materials in their personal collections as well as the motivations behind their chosen management methods (Williams, John, & Rowlands, 2009).

In sum, researchers have explored the various facets of information behavior. The relevant literature discussed above was employed inductively to aid understanding of the information behavior associated with the home buying experience. Next, I review literature addressing information behavior and emotion.

### **2.2.3 Information Behavior and Emotion**

Emotion is a part of our everyday lives. We laugh and cry, become angry or feel joyful many times throughout our daily activities. Experts in the presentation of information such as authors, marketers and filmmakers know this, and they "want us to 'feel' their message" (Preece, 2007, p. xv). Because emotion is such a presence in our daily lives, it is conceivable that emotion also appears within the scope of our information behavior.

Before embarking on a discussion of literature pertaining to information behavior and emotion, I will first clarify and define the terms "emotion" and "affect." Although both expressions are used in association with information behavior, they are not synonymous. Emotion signifies specific states (e.g. fear, anger or happiness) that are "more intense, short-lived and usually have a definite cause and clear cognitive content" (Forgas, 1992, p. 230). Examples of such states include the joy one experiences when given a bouquet of roses or the feeling of dread associated with an upcoming dental appointment. Affect, on the other hand, is defined as "the specific quality of goodness or badness (a) experienced as a feeling state (with or without consciousness) and (b) demarcating a positive or negative quality of a stimulus" (Slovic, Peters, Finucane, & MacGregor, 2005, p. S35). Supporting this viewpoint, Zeelenberg and colleagues (2008, p. 19) state that affect is characterized by a "valence dimension," wherein an experience is noted as positive or negative, good or bad, pleasant or unpleasant, like an immediate like or dislike reaction to a Salvador Dali painting. While emotion can be seen as affective given the goodness or badness aspect to it, it is also much more. By focusing exclusively on affect, the whole story regarding emotion's influence cannot be fully told nor understood. For this reason, this dissertation employs the concept of emotion in its totality; yet for the purpose of this review, literature encompassing both affect and emotion are discussed below.

Affect and emotion have not always been a significant component of information behavior. In the 1980s, a cognitive approach informed information behavior research (Bates, 1989; Belkin, 1980). During the 1990s, a focal shift to information in context was noted (Chatman, 1991, 1992, 1996; Savolainen, 1995), but it was not until the new decade of the 21st century that affect

and emotion came into their own, as evidenced by Nahl and Bilal's (2007) book, *Information and Emotion*. Nevertheless, information behavior research was not completely devoid of references to emotion. Kuhlthau (1988) incorporated feelings into her information search model (ISP). Based on a study involving students doing research for a high school term paper, Kuhlthau revealed that students experienced feelings of uncertainty, anxiety and confusion during the early search stages of research, while optimism, confidence and satisfaction were common during later phases. Wilson (1997), on the other hand, recognized that emotional characteristics could create barriers that impede one's ability to obtain needed information. Consequently, he included this concept in his revised general model of information behavior, which is a comprehensive framework outlining such facets of information behavior as information needs, barriers, motivating factors, information-seeking patterns, information processing and use and the context surrounding the person and his or her information need. Additionally, Wilson placed emotion within the realm of the "stress/coping" aspect of the model, thus acknowledging that such emotional coping methods as "monitoring" and "blunting" can occur in association with information needs. Monitors seek information to cope with stressful situations whereas blunters cope by avoiding information (Miller & Mangan, 1983). This behavior is frequently associated with health information-seeking as fear is a strong deterrent to obtaining medical information (Case, et al., 2005; Matthews, et al., 2002).

Like Kuhlthau and Wilson, Nahl (1998b) suggests that affect is significant to information behavior since it provides the motivations to satisfy an information need and it functions as a filter to exclude unwanted material while simultaneously bringing useful information to one's attention. Furthermore, Nahl (2004) identified fourteen affective variables (Table 1), developed

the theory of "affective load," and noted the importance of user coping skills when seeking information.

**Table 1 Affective Measures Used (Nahl, 2004, p. 195)**

<b>Variable and Symbol</b>	<b>Definition (maximum for each scale = 10)</b>	<b>Mean (N=73) and (Range)</b>
Acceptance (Acc)	Search engine support + ease	11 (5 to 20)
Affective Load (AL)	Uncertainty intensified by time pressure (U x TP)	123 (18 to 369)
Evaluation (Ev)	Acceptance + Satisfaction (Acc + S)	19 (7 to 30)
Expected Effort (Ex Eff)	Expected effort at beginning	6 (1 to 9)
Felt Effort (Felt Eff)	Felt effort at end	5 (1 to 9)
Optimism (Op)	Keep trying + Good search engines + Lots of info	25 (16 to 30)
Relevance (Rel)	Rating of results	8 (2 to 10)
Satisfaction (Sa)	Worthwhile + Relevance (W + Rel)	9 (-1 to +16)
Self-Efficacy (SE)	Sure of success + Getting good at + Good luck	25 (18 to 30)
Task Completion Motivation (TCM)	Importance + Getting upset	13 (4 to 20)
Time Pressure (TP)	Expected Length – Felt Length	10 (2 to 19)
Uncertainty (U)	Irritation + Anxiety + Frustration + Rage	12 (4 to 27)
User Coping Skills (UCS)	Self-efficacy + Optimism (SE + Op)	50 (35 to 60)
Worthwhile (W)	Expected effort at start – Felt effort at end (Ex Eff - Felt Eff)	0.49 (-7 to +6)

The concept of affective load (AL) is defined as uncertainty (U) multiplied by time pressure (TP) or  $AL = U \times TP$  (Nahl, 2004, p. 193). Nahl proposed that time pressure is an affective component of information behavior as time pressure intensifies the negative forces associated with uncertainty. Therefore, low time pressure equals uncertainty at a level of irritation or anxiety, while high time pressure equates to uncertainty at the frustration or rage level. Given the

emotional effect of time pressure, it is notable that Nahl found a positive correlation between affective load and time pressure. To experience successful information behavior, however, one must address his or her affective load. This is accomplished by engaging one's affective coping skills, wherein the negative forces of affective load are neutralized by positive ones (Nahl, 2005). Affective coping skills are distinguished as a combination of self-efficacy and optimism (SE + O), and those who exhibit high coping skills benefit by experiencing less affective load. Low coping skills, on the other hand, result in higher affective load and more feelings of irritation and frustration. Such negative feelings, in turn, can initiate a sequence of quitting such as repeated postponement of an information-seeking task.

While Kuhlthau, Wilson and Nahl's theoretical concepts suggest compelling support for an information behavior and emotion connection, other information behavior investigations strengthen the association. For example, a student's age is irrelevant to experiencing feelings while engaging in information behavior. In the case of middle school users of Yahoo!igans, self-confidence was felt when using the search engine, but confusion and frustration were experienced regarding their inability to find relevant results (Bilal & Kirby, 2002). Young and mature undergraduate students found that macro and micro emotional contexts shaped their information behavior (Given, 2007). In the macro context, students felt frustrated when newly instituted fees impeded access to resources, yet they experienced pleasure when young children helped to retrieve library books on a Sunday afternoon (micro). Emotion, too, can influence one's engagement in information behavior, as was evident with members of a disadvantaged community who were afraid to seek information from outsiders due to privacy concerns (Hayter,

2007), whereas making an emotional connection with others provided the motivation for using blogs (Kao & Lin, 2008).

Emotion clearly has a bearing on information behavior, and the information behavior associated with high stakes decisions would likely illuminate numerous instances of the emotion experienced. As Clore (1992, p. 133) stated, "One can have an emotion without doing anything or saying anything, but not without feeling anything." The next section reviews literature pertaining to information behavior and time pressure.

#### **2.2.4 Information Behavior and Time Pressure**

Like emotion, time pressure has become a presence within the field of information behavior (Julien & Michels, 2004; Nahl, 2004). Defined as the discrepancy between what one would like to do and what one can actually do before time runs out (Svenson & Maule, 1993), researchers have approached the notion of time pressure as a significant contextual factor to information behavior (Berryman, 2006; Julien & Michels, 2004; Kuhlthau, 1991; Nahl, 2004; Savolainen, 2006; Wilson, 1997). Within the concept of context, time is considered both a resource (Savolainen, 2006; Wilson, 1997; Wilson, 1999b) and a stressor (Berryman, 2006).

Wilson (1997; 1999b) incorporates the notion of time as a resource in his general model of information behavior under the concept of "intervening variables," or the barriers that exist between recognizing a need for information and seeking needed information. This perspective is supported by findings from an investigation of Kuwaiti journalists, in which lack of time created the greatest problem to information-seeking (Anwar, Al-Ansari, & Abdullah, 2004). Under the

"economic" variable of Wilson's general model (1997; 1999b), time is a resource that has value. The cost in time varies with the ease or difficulty of finding needed information. Savolainen (2006, p. 116) posits that time is a qualifier of access to information given that "time is a scarce resource for information seekers." Consequently, people are limited in their choice of information sources to that which can be attained quickly and easily. This applies to objective, external deadlines as well as subjective deadlines created in one's own mind. Deadlines also act as a stressor as people can feel less capable assessing whether they have obtained enough information (Berryman, 2006). Moreover, time pressure increases uncertainty (Nahl, 2004), and uncertainty contributes to such stressors as confusion and frustration when seeking information (Kuhlthau, 1993). Conversely, when time is not an issue, people approach information-seeking in a different manner, for example, looking at websites for fun or pursuing information that is not urgently required (Slone, 2007).

Given that time pressure can influence one's information behavior, the question of how time pressure shapes information behavior when making high stakes decisions is of interest and a focus of this dissertation. The next section discusses literature pertaining to decision theory.

## **2.3 Decision-making**

### **2.3.1 Traditional Decision Theory**

Decision-making has a long history in such fields as economics, management science, policy analysis and psychology. Over the years, various approaches have been used to study choice theory, with the notion of "risky" and "riskless" conditions being fundamental to the concepts (Maule & Svenson, 1993ba). Riskless decisions encompass known outcomes while risky

decisions engender uncertainty. Within the context of the home buying experience, decisions can entail risk and therefore, uncertainty. For example, von Neumann and Morgenstern (1944, as cited by Camerer, 1998) generated the Expected Utility Theory to explore risky decisions using gambles or choices based on the probability of winning or losing money. This multi-attribute theory "consists of evaluating different options by decomposing the criteria into separate dimensions, sometimes weighting each dimension for importance, rating the extent to which each option satisfies each criterion, tabulating the results and identifying the stronger option" (Klein, 1999, p. 89). Kahneman and Tversky (1979) considered this normative model for rational choice to be inadequate as people violated its principle of weighing outcome probabilities when their preferences were involved. As an alternative, they proposed their two-phase Prospect Theory to explain risky decisions. Their initial editing phase involves simplifying how one views his or her prospects while the subsequent phase evaluates the gains, losses and weighting of uncertain outcomes.

Elimination by Aspects (Tversky, 1972) theory of choice, on the other hand, uses as strategy of elimination to arrive at a decision, wherein each choice option is regarded as a collection of aspects. A critical aspect is selected and all choice alternatives that do not include this aspect are alternatives to be purged. The process is repeated until all but one choice remains. When considering a choice theory, a strategy of elimination may be easier than rational deliberation as there are no numerical computations, and it is easier to explain or justify one's decision.

However, Tversky (1972) noted that an uncritical application of the theory can lead to poor decisions. For example, a person may convince oneself that owning a set of encyclopedias will lead to personal edification, but once acquired the buyer never explores the information bank.

Such rational choice theories like those above proved unsatisfactory to Simon (1955; 1997) as pure rational choice assumes that people possess perfect knowledge for every decision (March, 1994). Since this is an unrealistic expectation, Simon (1955; 1997) constructed a modified version of rational theory known as Bounded Rationality. He explains that decision makers are limited or bounded by the degree to which rational deliberation can guide behavior. As a result, decision makers engage in "satisficing" or recognizing that one option is "good enough." That is, one or more criterion is deemed adequate to achieve a specific decision goal. Anything falling below this measure is rejected, while anything meeting or exceeding the criterion is accepted (Simon 1955, 1997). When constrained by incomplete information and cognitive limitations such as attention, memory and inability to comprehend relevance, satisficing offers a workable decision method (March, 1994).

Using a different approach to address the complex tasks of assessing probabilities and predicting values of classical decision theory, Tversky and Kahneman (1974) suggested that people employ heuristics or mental short cuts when deciding about uncertain events. These subjective assessments are often viewed as "distortions in logical reasoning" (Klein, 1999, p. 91), or they are relied on because of one's poor understanding of probabilistic phenomena and insufficient information processing ability (Tversky & Kahneman, 1974). As such, heuristics can result in sub-optimal decisions. To illustrate this point, Tversky and Kahneman (1974) proposed three judgment heuristics, which are used to assess probability and value along with their associated errors.

- The "representative" heuristic evaluates the degree to which A resembles or is representative of B. If A closely resembles B, then the probability that A comes from B is

high. A typical representative error in judgment with this heuristic includes an "insensitivity to prior probability of outcomes," wherein people ignore prior probability information (p. 1124) .

- The "availability" heuristic draws upon known occurrences of an event (e.g. the number of heart attacks that people you know have had) when assessing a risk. Additionally, larger groups are recalled more readily than smaller groups. A characteristic bias of this heuristic is found with the "effectiveness of a search set," such that when searching for occurrences, the frequency of particular items or events in a search set will influence decisions regarding how often such events will occur (p. 1127).
- The "adjusting and anchoring" heuristic occurs when anchoring is the initial starting point or formulation of a problem. Often the initial value is adjusted to attain the final answer. An associated bias for this heuristic is "insufficient adjustment," in which people are anchored to the original information and refuse to make adequate adjustments regarding new information (p. 1128).

Continuing with the heuristics theme, Hammond, Keeney and Raiffa's (1998) work diverges from Tversky and Kahneman's (1974) as they lack references to rational choice. Hammond et al (1998) indicated that bad or poor decisions lie in the decision makers mind, that the "human brain works to sabotage our decisions" (p. 47). Heuristics are not always reliable and they engender invisible traps. Such traps are dangerous because they are embedded into our thinking process and we are unaware of their existence. These traps are referred to as psychological traps. Similar to Tversky and Kahneman's (1974) adjusting and anchoring heuristic, Hammond and

colleagues "anchoring trap" represents one's reliance on the first information received, but the trap also includes events in history, or stereotypes to make decisions. The "status quo" trap is comfortable and psychologically safe. By doing nothing or maintaining the status quo, we do not risk criticism or experiencing feelings of regret. In a like manner, the "sunk cost" trap typically results in an escalation of commitment, throwing good money after bad, in hopes that a poor decision will recover, for example, one's investment in devalued stocks. The "confirming evidence" trap, however, is more proactive. People look for information to support their views while simultaneously avoiding contradicting information. This bias is significant as it affects how we interpret information and results in too much weight being given to supporting evidence and too little to contradicting evidence. With the "framing" trap, decisions can be influenced by how a question is framed, thereby, resulting in positive or negative outcomes.

In addition to the above traps, there exists three "estimating and forecasting" traps (Hammond, et al., 1998). These include "overconfidence" in our ability to estimate accuracy, excessive "prudence" in our approaches to decision-making, and the use of "recallability" of dramatic/traumatic events which distort one's thinking while concomitantly influencing decisions. Car accidents and earthquakes are such event examples. Hammond et al (1998, p. 58) state that "The higher the stakes, the higher the risk of being caught in a psychological trap." Our brains are always working, often to our detriment when it comes to decision-making. Throughout the decision process, misperceptions and biases can present to influence the choices we make; hence, there is no such thing as a "no-brainer" decision.

Traditional decision theory has dominated decision research with its probabilistic and heuristic approaches. Next, I will discuss alternate views regarding decision-making.

### **2.3.2 Alternatives to Traditional Decision Theory**

Traditional decision theory has been criticized for its failure to reflect real world decision-making, as statistics and probability do not appear to be a part of people's intuition (Tversky & Kahneman, 1974). Furthermore, decision studies conducted in the laboratory lack the context associated with everyday life deciding. To address these concerns, the naturalistic decision-making (NDM) framework was developed (Lipshitz, et al., 2001). During a 1989 conference, themes of time pressure, uncertainty, ill-defined goals and high personal stakes emerged as significant decision characteristics, which are not considered replicable in the laboratory. As a consequence, NDM researchers have strived to understand decision-making in real world contexts while simultaneously focusing on experienced, rather than novice, decision makers operating in their work environments.

Fundamental to NDM is the recognition-primed decision (RPD) model as it represents an attempt to describe decisions made under such conditions as time pressure, ambiguous information, changing conditions and ill-defined goals (Klein, 1997). The model illustrates how people utilize their experience to reach quality decisions without having to compare strengths and weakness of the various options. Experts see one option to a problem because they are familiar with the situation (Klein, Calderwood, & MacGregor, 1989). Recognition or "situational awareness" implies decision makers are familiar with important cues, know feasible goals, understand causal dynamics and can identify courses of action and expected outcomes. Gladwell (2005, p. 23) refers to this as "thin slicing." Novice decision makers, however, gain less

information from situational "cues" due to inexperience, and thus effect poor decision outcomes (Endsley, 1997).

Like NDM, reason-based choice considers context along with the conflict and uncertainty surrounding decisions (Shafir, et al., 1993). Originating in such disciplines as history, the law, business and political discourse, "reason-based choice" was offered as an alternate to traditional decision theory as it is believed to echo the way "normal" people think and discuss their choices. Reason-based analysis examines the disparate reasons and arguments employed to make decisions, and it explains the reasoning behind one's choice of a particular alternative over another. Although reason is used when arguing "for" or "against" an option choice, assigning the numerical values and weights typically associated with traditional theory does not occur. This approach is reflected in the theory's use for non-experimental data analysis, for example, historic or legal decisions.

Gilboa and Schmeidler (1995) suggested that expected utility theory has its place in decision theory, yet also recognized that the theory is too restrictive in many situations. Therefore, they proposed a cased-based decision theory (CBDT), which is considered complementary to expected utility rather than a substitute for it. Cased-based theory centers on the notion that one's "memory contains only those cases that actually happened. Each case provides information only about the act that was chosen in it, and the evaluation of this act is based on the actual outcome that resulted in this case" (p. 610).

Each case is the combination of a problem, the act or decision, and the result. For example, when a problem presents frequently, such as the need to stop at a red light, then the decision associated

with the problem becomes "rule-based," and "a rule can be thought of as a summary of all cases" (p. 622). Like NDM, a person uses one's history and experience as a means to decide about future outcomes; however, the consequences of the decision are weighted numerically based on their similarities to the past.

Although traditional and alternate decision theories provide explanations for the decision-making process, alternate theories differ from the traditional with their "real world" approach. In the next segment, I examine the role of emotion in decision-making.

### **2.3.3 Decision-making and Emotion**

At this time, I reiterate that affect and emotion are not interchangeable terms (Forgas, 1992), and that this dissertation subscribes to the notion that affect is simply one aspect of emotion's totality. However, literature discussing both affect and emotion is reviewed, as both aspects are relevant to decision studies.

Although emotion and affect have been disregarded by rational choice researchers (Marcus, Neuman, & Mackuen, 2000), others have recognized them as important elements in the decision process (Janis & Mann, 1977; Zajonc, 1980). Yet, despite this reluctance to consider emotion in decision theory, it has become mainstream in decision research. Illustrating this point, in 2006 the *Journal of Behavioral Decision-making* devoted an entire issue to the "hot" topic of affect (as opposed to the "cold" topic of cognition) (Peters, Vastfjall, Garling, & Slovic, 2006).

Disillusion with classic decision theories is seen with the introduction of dual system decision concepts. For example, "affective intelligence" was proposed to illustrate how emotion and reason interact during the decision process (Marcus, et al., 2000). Within this framework,

emotion is purported to play two roles. First, the stronger a person feels for an issue, the greater the commitment to that issue; and secondly, the less informed one is on an issue, the likelier he or she will use emotion in place of reason to make decisions. In the case of political judgments, for instance, a campaign ad featuring Willie Horton, a black convict, created havoc for Massachusetts Governor Dukakis' presidential campaign, as the ad raised racial fears among voters rather than illustrating that the Governor was soft on crime (Farhi, 2004). This particular campaign ad was based on Horton's brutal attack of a couple while he was free under a prison furlough program supervised by Governor Dukakis. This appeal to people's emotion rather than reason likely contributed to the Governor's defeat.

Additionally, a basic tenet of affective intelligence is the concept of habits. People learn habits to get through everyday life and recurring situations. Habits accumulate over time, and previously learned emotional responses drive habit development. Consider the time you first burned yourself on a stove. The experience created an emotional response that resulted in the habit of protecting yourself from hot surfaces. Similarly, habits are used when deciding, principally with repetitive decisions. The theory of affective intelligence places emotion at the center of decision-making, where facilitating emotions represent the "disposition system" that engages habit and memory while the "surveillance system," monitors for novel and threatening stimuli (Marcus, et al., 2000; Marcus, Sullivan, Theiss-Morse, & Stevens, 2005). The surveillance system is responsible for interrupting habitual routine and prompts one to seek additional information. This system activates deliberate, rational thought. Humans are guided by habits (disposition system), but habits only work for the familiar. Cognitive functions (surveillance system) are employed when we need to learn and deliberate over fresh material as a means to address new threats.

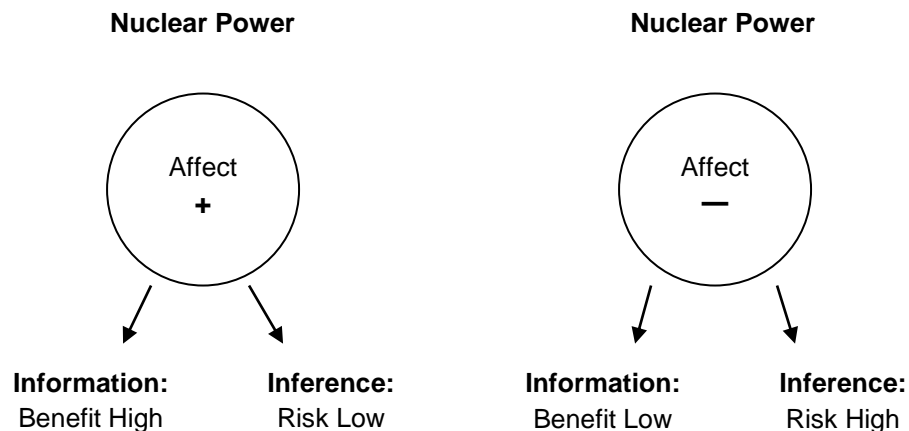
Alarm due to threats is often associated with anxiety, and anxiety rather than calm speaks to rational choice as it pushes habits aside. "People need to find a way to make sense of their worlds without always having to think hard and long about it. Accordingly, they develop standard repertoires that work well most of the time. And here emotions play a central role for habits have an emotional foundation" (Marcus, et al., 2000, p. 124).

In a like manner, Epstein (1994) proposed the dual process theory of "cognitive-experiential self-theory" (CEST) which encompasses both a rational system and an emotion driven system that exists in parallel with one another. The experiential system is emotional and allows for more rapid information processing than the rational, analytic system. People intuitively understand that there are two ways of processing information, which can result in a conflict between the head and the heart. The heart represents the experiential and the head symbolizes the rational. "The experiential system automatically searches its memory banks for related events, including their emotional accompaniments. The recalled feelings influence the course of further processing and reactions...If the activated feelings are pleasant, they motivate actions and thoughts to reproduce the feelings" (Epstein, 1994, p. 716). Unpleasant feelings, on the other hand, prompt us to avoid actions that create them. Furthermore, the experiential system is the default system for automatic or unconscious processing of decision information since this system is quicker and more efficient than a rational one.

Approaching affect from a different direction, Finucane, Alhakami, Slovic and Johnson (2000) drew on elements from previous research to suggest that people use positive and negative feelings to guide their judgment and decision-making. Researchers suggests that

representations of objects and events in people's minds are tagged to varying degrees with affect. People consult or refer to an 'affective pool' containing all the positive and negative tags associated with the representations (consciously or unconsciously) in the processes of making judgments (p.3).

Finucane and colleagues refer to this propensity as the "affect heuristic." Like other heuristics (Hammond, et al., 1998; Tversky & Kahneman, 1974), use of the affect heuristic may be easier and more efficient than weighing the pros and cons of a situation, particularly when time pressure limits the cognitive resources needed for this purpose (Finucane, et al., 2000). Moreover, judgment regarding an item's risks or benefits can be influenced when information raises or lowers the favorability of one's affective impression of that item (Finucane, 2008; Finucane, et al., 2000). Figure 1 illustrates the phenomena with regard to nuclear power.



**Figure 1 Information Benefit and Risk Model (Finucane et al, 2000, p.9)**

Affect also plays a major role in the concept of "affect as information" (Clore, 1992; Clore, Gasper, & Garvin, 2001; Clore & Storebeck, 2006; Gasper & Clore, 1998; Schwartz & Clore, 1983). Seen more as an "approach" to affect and cognition rather than a theory (Clore, et al., 2001), the notion of affect as information was derived from a study on moods, wherein happier people experienced greater life satisfaction (Schwartz & Clore, 1983). People pay attention to

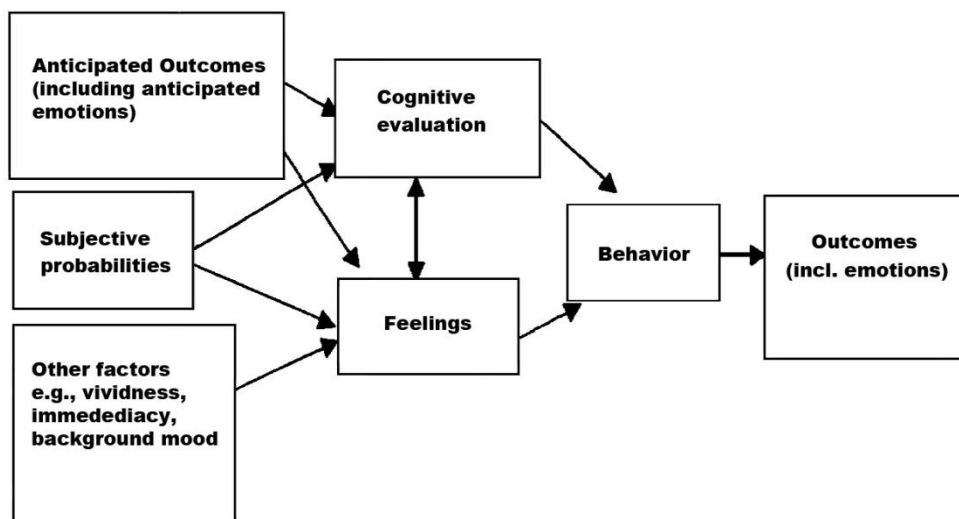
their feelings when making judgments, often asking "How do I feel about this?" This affective experience of "liking" or "disliking" informs by providing information about value such as the goodness or badness of things. Moreover, the theory suggests that affective processes occur unconsciously, yet informs our conscious selves. "Affective feelings thus allow us to learn about our own implicit judgments and decisions" (Clore & Storebeck, 2006, p. 2). In sum, it is not so much about the feelings as it is about the "compelling nature of the evaluative information that such feelings convey" (p. 4).

Affect as information is relevant to objects, problems and tasks (Clore, et al., 2001). This basic assumption is outlined in the "Affective Judgment Principle," one of the ten principles forming the basis of the affect as information concept (Clore et al, 2001). The Affective Judgment Principle speaks of affect's ability to inform with regard to objects like a new car or the latest credit card bill, but it also conveys how affect may be experienced as feedback regarding one's ability to solve a problem or complete a task. If positive feelings are experienced, then confidence is high that a problem will be resolved, while negative feelings engender doubt about one's abilities. Simply put, "if it feels good, it is good," however, when it comes to problem solving and task completion, "if it feels good, just do it" (Clore & Storebeck, 2006, p. 5).

Lowenstein, Webber, Hsee and Welch (2001) present the "risk-as-feelings" hypothesis to explain a variety of decision-making phenomenon. This theoretic perspective underscores the role of affect *at the moment* of decision-making, where emotional reactions are primary to cognitive assessments when people are faced with risky decisions. With their focus on the moment of decision, Lowenstein and colleagues make a distinction between

- Anticipatory emotions—immediate visceral responses to risk (e.g. fear, anxiety, dread) and uncertainties and
- Anticipated emotions—wherein emotion is expected to be experienced in the future rather than the immediate present

When traditional decision researchers do consider emotion, they view it as anticipated or the consequence of an outcome. Lowenstein et al (2001) recognize that emotion and cognitive evaluation generally work in tandem to guide decision-making. However, anticipatory emotional reactions occasionally diverge from the cognitive analysis of risk and become the dominant influence on behavior, which led to the risk-as-feelings hypothesis. The aim of this hypothesis is to explain risk-related phenomena that cannot be accounted for by traditional decision models. The theory "postulates that responses to risk situations (including decision-making) result in part from (i.e. not cortically mediated) emotional influences, including feelings such as worry, fear, dread or anxiety" (p. 270). Figure 2 graphically illustrates how feelings can bypass cognitive evaluation, thereby, becoming the overriding influence on behavior and subsequent outcomes.



**Figure 2 Risk-as -feelings perspective (Lowenstein et al, 2001, p. 270)**

It is the emotional divergence that distinguishes the risk-as-feelings hypothesis from the theory of affective intelligence and the affective heuristic; concepts wherein emotion and cognition work jointly to guide decision-making. This divergence also makes the hypothesis a controversial decision framework in the judgment and decision-making field.

Predating the risk as feeling hypothesis, Lowenstein (1996) proposed that the notion of visceral factors be considered in decision theory, as they create a disjunction between perceived self-interest and behavior. This disjunction or gap has been an ongoing theoretical challenge in decision theory. Since behavior is interpreted as an outcome of a decision, visceral factors and their influence should be attended to. For instance, phobias are representative of visceral factors. Even though one can rationalize that a grasshopper is harmless, visceral fear interferes with the person's "rational" judgment regarding the insect. Visceral factors can also range in levels of intensity. When levels are low, we can make rational decisions; but when visceral factors reach intermediate levels, we generate sub-optimal decisions and exhibit negative behaviors. High intensity levels, on the other hand, can prevent decision-making altogether. For example, the powerful influences of high intensity visceral factors may cause one to fall asleep at the wheel, which is not really a decision at all. Furthermore, people sacrifice non-associated items such as food, family or money to attain even small amounts of desired items like drugs or alcohol when levels are high. These decisions are irrational and counter to one's self-interest.

Lowenstein (1996) suggests that traditional decision theory models do not sufficiently explain or predict such disparate decisions as one's job choice, participation in criminal activity or neglecting to take preventive health measures such as practicing safe sex. He ascribes this discrepancy to a "poor fit" between empirical analysis and theory (p. 285). Visceral factors,

however, do go a long way in explaining how people "tick" (p. 280). They help to explain negative behavior and the decisions associated with it.

Perhaps the most compelling argument for the influence of emotion on decision-making comes from neurologist Antonio Damasio. In his ground breaking book, *Descartes' Error*, Damasio (1994) questioned the traditional belief that emotion held little connection to rationality. Using a card game gambling task, Damasio and colleagues (Bechara, et al., 1997) studied patients with prefrontal brain damage and "normal" non-patients. Within a short period of play, non-patients began to "choose advantageously before they realized which strategy worked best" to attain the optimal gamble payoff (p. 1293). Perspiring or the skin conductance response (also known as the galvanic skin response) demonstrated that non-patients considered risky choices. This response is notable as sweat glands are controlled by the autonomic nervous system, and a relationship exists between this system and emotional arousal. Psychophysicologists have studied skin conductive response extensively, but the measurement is best known to the layperson due to its use in lie detector or polygraph tests. Unlike the non-patients, the prefrontal brain damaged patients lacked a skin conductive response. Patients repeatedly made unfavorable choices resulting in high gamble losses despite knowing the better card strategy, and these findings suggest that emotion was guiding decision choices before conscious knowledge or cognition became involved.

In addition to experiments with prefrontal brain damaged patients, Damasio (1994) used case studies to investigate the role of emotion in decision-making. In one case, a patient with ventromedial prefrontal damage was asked to choose between two alternative dates for his next appointment. Referring to his appointment book and a calendar,

The patient enumerated reasons for and against each of the two dates: previous engagements, proximity to other engagements, possible meteorological conditions, virtually anything that anyone could think of...he was now walking us through a tiresome cost-benefit analysis, and endless outlining and fruitless comparison of options and possible consequences (Damasio, 1994, p. 193).

This episode continued for almost half an hour with no date selected. The issue was finally resolved when the patient was told to return on the second of the two days.

Given that emotion is a component of decision-making, the question of its influence on information behavior associated with high stakes deciding is of interest and a focus of the dissertation. Next, I review the effects of time pressure and decision-making.

#### **2.3.4 Decision-making and Time Pressure**

Time pressure is accepted as a significant factor in decision-making. Illustrating this point is Svenson and Maule's (1993) book, *Time Pressure and Stress in Human Judgment and Decision-making*, a collection of essays that examine time pressure, time stress and time constraints' effect on judgment and decision-making. Decision researchers have defined time pressure as a discrepancy "between what a person would like to do or feels he/she should do, and what he/she actually believes can be done before a deadline runs out" (Svenson & Maule, 1993, p. 157).

Additionally, time pressure involves two considerations: making the right decision and doing so in a limited amount of time (Johnson, Payne, & Bettman, 1993).

Like information behavior, time is considered a stressor (MacGregor, 1993). Stressors are the environmental factors present in decision-making; people feel strain when exposed to stressors and this is typically referred to as stress (Rastegary & Landy, 1993; ZaKay, 1993). Time stress

can be produced by real-time, objective constraints or perceived stress as in self-imposed, subjective limitations (Rastegary & Landy, 1993; ZaKay, 1993). Moreover, individuals react to time stress differently wherein some perform better when challenged by a deadline, while others find a deadline debilitating. For example, type A personalities thrive under imposed time constraints and manage them by speeding up activities like information processing or by employing heuristics to inform decisions (Rastegary and Landy, 1993). Yet, regardless of how people respond to time stress, an understanding of time pressure in decision-making cannot be fully appreciated without some discussion of uncertainty.

Uncertainty is considered a cognitive characteristic and results from limited understanding (March, 1994), inadequate information and conflicted alternatives (Lipshitz & Strauss, 1997). When associated with a decision, uncertainty acts as a stressor as it encompasses both a degree of complexity and a degree of novelty (Rastegary & Landy, 1993). How uncertainty is then perceived can vary with the individual. For example, a person possessing experience in one situation, say buying a car, is less likely to suffer high levels of uncertainty in another situation, such as buying a scooter, as experience allows for information transference across situations. Time pressure, however, contributes to uncertainty as it reduces the length of time available for information acquisition, and thus results in uncertainty intensification. This is particularly notable with novel decisions that do not permit information transference (Rastegary & Landy, 1993).

Several approaches have been used to cope with decision-making under time pressure. Trading effort for accuracy is one such approach (Busemeyer, 1993). When a decision strategy requires less time and effort, it is also less accurate. Consequently, decision accuracy is reduced under

time pressure. This notion is supported by Johnson, Payne and Bettman's (1993) exploration of accuracy and the following seven decision strategies used to cope with time pressure.

1. Weighted additive - attributes are weighted and then summed. The alternative with the highest weight is selected
2. Equal weight - attribute values are summed but the weights are ignored. The alternative with highest value is selected
3. Elimination by aspects (Tversky, 1972) - determine the most important attribute and set a cut off value for it. Alternatives with values below cut off are eliminated
4. Majority of confirming dimensions (Russo & Doshier, 1983) - processing alternatives in pairs. The most favorable alternative is selected and then compared to yet another alternative until all have been considered
5. Satisficing (Simon, 1955) - selecting alternative criteria that is good enough and eliminating alternatives that do not meet or exceed criteria
6. Lexicographic - first identify the most important attribute and select the alternative that is best on this attribute. In the case of ties the tied alternatives are compared on the next most important attribute and so on
7. Random - select an alternative at random to provide a baseline for measuring accuracy and effort (Johnson, et al., 1993, p. 105)

Researchers determined that all decisions suffer under time pressure, but those strategies with the ability to evaluate information quickly fared better in terms of accuracy. For example, alternatives based on a single attribute such as elimination by aspect and lexicographic proved to

be the most accurate. Conversely, the weighted additive method fared the worst (Johnson et al, 1993).

Other techniques for coping with time pressure include "filtration," wherein information used for deciding is filtered by avoiding what is contrary to one's purpose, by engaging stop rules when one perceives additional information will weaken one's intentions, and by controlling one's emotion in an effort to facilitate reaching one's goal (Stiensmeier-Pelster & Schürmann, 1993). Similar to filtration, the "maximum rule" strategy narrows time pressure choices by assessing the most important attribute of a decision alternative and then selecting that alternative (Edland, 1993). Maximum rule is considered superior to the "minimum rule" as it requires one less cognitive step. The minimum rule involves selecting the least important attribute of an alternative and then switching to the opposite alternative. Finally, "acceleration" or speeding up information processing that is associated with a decision is used to address time pressure (Maule & Svenson, 1993a; Stiensmeier-Pelster & Schürmann, 1993; Wallsten, 1993).

Although people find ways to cope with time stress and the pressure it places on their decision-making abilities, it nevertheless affects the decision process (ZaKay, 1993). Listed below are eight consequential effects of time pressure

- A reduction in information search and processing
- An increased importance of negative information
- Defensive reactions such as neglect or denial of important information
- Bolstering of the chosen alternative

- A tendency to use a strategy of filtration, that is, information that is perceived as most important is processed first, and then processing is continued until time is up
- Increased probability of using non-compensatory choice strategies instead of compensatory ones
- Forgetting important data
- Wrong judgment and evaluation (ZaKay, 1993, p. 60)

In sum, "decision-making under time stress may lead to the utilization of simple, nonlinear decision strategies resulting in suboptimal decisions" (ZaKay, 1993, p. 60). Next, I will discuss concepts that are comparable to information behavior and decision-making.

## **2.4 Parallels between Information Behavior and Decision-making**

Information behavior is decision making. We decide whether or not to seek information, what information is relevant, what information to use, what information to keep for reuse and how to organize said information. Similarly, decision-making encompasses information behavior, as we seek information to inform choices and we develop strategies to assist with information processing and use. Given these propensities, it is not surprising that parallels between information behavior and decision-making exist.

Following a review of information behavior and decision-making literature, parallel methods for addressing the various aspects of information have been identified (Table 2). "Filtering" is largely shared by both disciplines. Within information behavior, filtering is used to differentiate material based on its type and quality (Ellis, 1989), to extract relevant data sets from information systems (Belkin & Croft, 1992), to judge information relevance based on cultural norms and

expectations (Nahl, 1998a), while also serving as a method of information management (Bawden & Robinson, 2009). Ultimately, filtering helps us to weed out useless information.

Similar to that of information behavior, filtering serves multiple purposes for a decider. For example, filtering can streamline the decision-making process as less time is required to eliminate irrelevant information while allowing the most important information to be processed first (Souren, et al., 2005; ZaKay, 1993). Filtering also functions to uncover information that supports a decision while simultaneously sidestepping information that is counter to it (Stiensmeier-Pelster & Schürmann, 1993). People also filter for positive (Edland, 1993) and negative information (Ben Zur & Breznitz, 1981), as good or bad news can impact the direction of a decision.

An alternative to filtering is "accelerating." Rather than limiting one's information through filtration, a person processes the same amount of information but at a faster rate (Edland, 1993). While not discussed within information behavior literature, accelerating can be viewed as a method used to cope with information overload or simply a strategy for addressing information processing and use. Acceleration is similarly used to manage time pressure (Ben Zur & Breznitz, 1981; Rastegary & Landy, 1993; Stiensmeier-Pelster & Schürmann, 1993), however, this approach creates more strain as additional cognitive resources are required to process information over that of filtration and may result in suboptimal decisions (ZaKay, 1993).

A different technique used to address information requirements is bounded rationality's "satisficing" (Simon, 1955). Although the concept originated in the decision-making discipline, information behavior researchers have since embraced it. Unlike rational choice theory, where

deciders evaluate all possible alternatives and select the best possible one, bounded rationality allows deciders to focus on what is "good enough" or satisficing (March, 1994). March (1994) suggested that satisficing is more of a search rule than a decision rule, and thus makes it a good fit with information behavior. If search results fall below a minimum target, search efforts are increased. Should results meet or exceed the target, they are determined good enough. The effect of satisficing is that people are generally more pleased with decisions (Schwartz et al., 2002).

Within information behavior, satisficing is practiced to address information abundance (Agosto, 2002; Bawden & Robinson, 2009). Since information overload involves too much information and too little time, it is not unexpected that satisficing is employed when one faces time constraints (Agosto, 2002; Prabha, Connaway, & Olszewski, 2007; Zach, 2005) such as running out of time to complete assignments or meeting deadlines for lectures or presentations.

Satisficing also occurs when external stressors like time and overload are not a factor. For instance, satisficing stop rules are enacted when a certain comfort level with results is attained or a specific question has been answered (Prabha, et al., 2007; Zach, 2005). For these reasons, satisficing presents as a significant information behavior for meeting one's information needs. In sum, "Satisficing is essential to most information-seeking because all pertinent information for open-ended problems can seldom be assembled and assimilated optimally" (Marchionini, 1997, pp. 63-64).

Similar to satisficing, one may consider Zipf's (1949) "principal of least effort" (PLE) as a component of information behavior, for it speaks to the that element of human nature in which people attempt to minimize the effort needed to accomplish a task. In other words, if multiple

choices are available, people are likely to select the easiest option. As with satisficing, "PLE may ignore the need to have optimal results on every occasion" (Case, 2005, p. 291). Emanating from linguistics, PLE has since found its way into computer science, bibliographic work and has been recommended as a framework for exploring the nonuse of libraries and library materials (Case, 2005). Further inroads into information behavior were forged when Harris and Dewdney (1994, p. 21) drew upon PLE to develop their third principle of information behavior, which states that "People Tend to Seek Information That is Most Accessible." Least effort studies indicate that private collections and informal communications were preferred to materials available from the library (Von Seggern, 1995), and that asking for information in person was easier than requesting information in writing (Anderson, Glassman, McAfee, & Pinelli, 2001). Recognizing that people tend to take a least effort approach to information is an important step in library and information science research. For this reason, libraries have been urged to improve their online search systems so that users will eagerly use them (Matthews, 1997).

Whether filtering, accelerating, satisficing or using the least effort, these concepts involve seeking, processing or using information to make decisions or meet an information need. In addition, another concept relevant to both information behavior and decision-making is information avoidance. With regard to information behavior, people avoid information that will cause mental or emotional distress (Case, et al., 2005). Not knowing can ease anxiety as much as obtaining information has the ability to calm. Miller and Mangan (1983) coined the terms "monitors" and "blunters" to describe the stress response to uncertain situations. Monitors seek information as a coping mechanism while blunters avoid it. Matthews et al (2002) echo Miller and Mangan's (1983) perspective in that the stress associated with emotion, stigma and cultural

values engendered information avoidance. For example, fear can provide a strong deterrence to seeking medical information. Embarrassment and shame can supply similar barriers, while the stigma surrounding mental health services or the cultural mistrust that African Americans feel toward the medical profession—a legacy of the Tuskegee experiments—can contribute to information avoidance. Likewise, when perceived as too risky, information is avoided since it may cause one to lose face in his or her social world (Chatman, 1992, 1996, 1999). Given the significance of this behavior, Wilson (1997) included information avoidance in the stress/coping aspect of his general model of information behavior. Yet, despite the various reasons for avoiding information, it is still considered a normal aspect of information behavior (Burnett, et al., 2001).

Although not as pervasive as in information behavior, information avoidance is also found in decision-making literature. Janis and Mann (1977) have emphasized the role of conflict and affect in the decision-making process. This, in turn, can lead to suboptimal decision-making as one adopts such information acquisition and processing strategies as looking for information to bolster one's position and to avoid that which does not. Hammond and colleagues (1998) echo the notion of bolstering and avoidance with their "Confirming Evidence Trap/Bias." In this instance, one looks for information to support his or her view and avoid any that contradicts it. They go on to say that such a bias affects how we interpret information, as we give too much weight to supporting evidence and too little or no weight to contradicting evidence.

In sum, all strategies presented in the information behavior and decision-making literature address information-seeking, acquisition and use. Next, a summary of relevant literature is provided.

**Table 2 Information coping strategies**

	<b>Information Behavior</b>	<b>Decision-making</b>
<b>Filtering</b>	Ellis (1989); Belkin and Croft (1992); Nahl (1998a); Bawden and Robinson (2009); Miller (1960 from Psychology)	Souren, Saunders and Hasemen (2005); Zakay, (1993); Stiensmeir-Pelster and Schürmann (1993); Edland (1993); Ben Zur and Breznitz (1981)
<b>Accelerating</b>		Ben Zur and Breznitz (1981); Stiensmeir-Pelster and Schürmann (1993); Rastegary and Landy (1993)
<b>Satisficing/Principle of least effort</b>	Agosto (2002); Mansourian and Ford (2007); Zach (2005); Bawden and Robinson (2009); Pabha, Connaway, Olszewski and Jenkins (2007); Warwick et al (2009); Zipf (1949 from Linguistics); Anderson, Glassman, McAfee and Pinelli (2001); Von Seggern (1995)	Simon (1955); Schwartz et al (2002); Hullermeier (2005); Parker et al (2007)
<b>Avoidance/Blunting</b>	Matthews et al (2002); Case and colleagues (2005); Wilson (1997); Godbold (2006); Chatman (1992, 1996, 1999); Savolainen (1995); Miller and Mangan (1983 from Psychology)	Janis and Mann (1977); Hammond and colleagues (1998)

## 2.5 Chapter Summary

This section reviews the theories, models, and empirical studies that informed this dissertation.

The review focused on four relevant themes: information behavior, decision-making, time pressure and emotion. These topics represent important aspects of this study.

Information behavior theories and models were explored to inform the research in areas associated with information behavior: needs, seeking, sharing, using, avoiding, creating and managing. The literature illustrated that information needs propel subsequent information

behavior. A need can be acted on or not (Naumer & Fisher, 2009), and should one choose to address it, seeking can move forward in an active or passive manner (Wilson, 1997). A need may also be resolved by way of shared information (Abrahamson, et al., 2008) or the serendipity associated with finding information (Erdelez, 1999). Information is also created (Trace, 2007), however, once information is found or created, it must be managed (Jones, 2008). All or some of these behaviors were present during this inquiry.

Numerous decision-making theories were also examined with the intent to inform information behavior regarding high stakes decisions. Traditional decision research such as expected utility and prospect theory reflect their origins in mathematics with the use of probability and statistics for decision-making. With regard to high stakes decision, the theories appear time consuming and impractical for real life decision-making since people generally disregard probability and statistics (Tversky & Kahneman, 1974). Bounded rationality's satisficing (Simon, 1955; 1997) assists decision makers in determining what is "good enough," whereas elimination by aspect (Tversky, 1972) has the potential for rapid decision-making, just as heuristics do. Heuristics, however, are subject to biases and can lead to poor decision outcomes (Hammond, et al., 1998). Naturalistic decision-making (NDM) is worthwhile in its ability to enlighten, as it examines decision-making under real world conditions (Lipshitz, et al., 2001). NDM recognizes that problems may be ill-defined, that information is often incomplete and situations change, which is reminiscent of problems regarding information behavior. However, NDM studies reflect only decisions made in work environments and those made by experts in the field. High stakes decisions do not present often, if at all, in one's lifetime. Consequently, when one does

materialize, the decision maker would likely face a new problem situation, thereby making him or her a novice decider under those conditions.

In addition to literature regarding information behavior and decision-making, materials discussing the effects of time pressure were considered. From information behavior, literature illustrates that time pressure has become a presence in the field, for example, influencing information-seeking (Julien & Michels, 2004) or intensifying the uncertainty associated with seeking information. Additionally, time is viewed as a significant contextual factor (Kari & Savolainen, 2007), as well as a stressor (Berryman, 2006) and a resource (Wilson, 1997). For decision-making, time pressure is also a factor (Svenson & Maule, 1993), since it can lead to speeding up the decision-making process, to using fewer pieces of information or to being more selective about the information used (Maule & Svenson, 1993b). Heuristics or mental shortcuts may be employed for decisions made under time pressure as well (Finucane, et al., 2000). Moreover, time constraints can induce stress states that can engender changes in one's decision strategies and, thereby, reduce his or her decision-making efficiency (Janis & Mann, 1977).

Literature pertaining to emotion (and affect) illustrates how emotion can influence information behavior and guide decision makers as they move through a high stakes decision process. Emotion is seen as a significant component of information behavior (Fisher & Landry, 2007; Kuhlthau, 1993), as emotion can act as a motivator that drives the information process (Nahl, 1998b; Peters, Lipkus, & Diefenbach, 2006) while affective coping skills can facilitate information acquisition (Nahl, 2004). For example, those with high coping skills are less likely to abandon a search when feeling frustrated and discouraged over poor results. Finally, Wilson

(1981) argued that emotion must be considered along with cognition if one is to develop a holistic model of information behavior.

Early decision researchers did not acknowledge the role emotion played in decision-making (Zajonc, 1980). Today, however, literature suggests that people employ emotion as a source of information when making decisions (Epstein, 1994; Finucane, 2008; Loewenstein, et al., 2001; Marcus, et al., 2000), and that "affective cues" offer an efficient means to choosing over the rational alternative of weighing options (Slovic, Finucane, Peters, & MacGregor, 2007). Emotional cues help us to make the "right" choice (Kunreuther, et al., 2002). Schwartz and Clore (1983) contend that people use emotion as information in a manner similar to other judgment criterion by determining the information value of their affective reaction with regard to the impending judgment. Finally, Bechara and colleagues (1997) assert that we would not be able to make good choices without emotional guidance.

This dissertation is informed by the literature reviewed. Information behavior involves decision-making, and both information behavior and decision-making are influenced by time pressure and emotion. In the next chapter, I discuss the theoretical frameworks that guided this study.

## **Chapter 3: Conceptual Frameworks**

Many studies have been conducted with concomitant conceptual frameworks constructed to explain information behavior (Byström & Järvelin, 1995; Dervin, 1992; Ellis, 1989; Hepworth, 2004; Kuhlthau, 1991; Taylor, 1968; Wilson, 1981). For the purpose of this dissertation, however, research was theoretically grounded in two conceptual frameworks: Chatman's Theory of Normative Behavior (TNB) (Burnett, et al., 2001; Chatman, 2000) and Fisher's Information Grounds (IG) (Fisher, Durrance, et al., 2004; Pettigrew, 1999). The Theory of Normative Behavior provides a framework with which to examine the interaction of people and information within the context of their social or small worlds. For this reason, TNB was an appropriate conceptual strategy for exploring the affects of time pressure and emotion on people's information behavior in relation to the high stakes decisions associated with the home buying experience. Complementary to the Theory of Normative Behavior is the notion of Information Grounds, as both concepts are dependent on the co-presence of people and the context surrounding information-seeking and sharing in everyday life. However, what distinguishes one concept from the other is that people inhabit social worlds, whereas they visit Information Grounds.

### **3.1 Theory of Normative Behavior (TNB)**

Chatman's Theory of Normative Behavior was useful for examining the information behavior of high stakes decision makers in the home buying process as it provided a framework to explain information behavior from a social perspective. At its core, the theory can be articulated as

behavior which is viewed by inhabitants of a social world as most appropriate for that particular context. Essentially driven by mores and norms, normative

behavior provides a predictable, routine, and manageable approach to everyday reality. Aspects of interest are those things that serve to legitimize and justify values, and which embody social existence (Burnett, et al., 2001, p. 538).

Further, the theory embraces four key concepts: social norms, worldview, social types and information behavior (Burnett, et al., 2001; Chatman, 2000).

- **Social norms** allow people to know what is considered normal and right within specific contexts by providing guidance to appropriate standards of conduct. Social norms delineate boundaries that people are typically unwilling to cross.
- **Worldview** is an awareness of what is important or insignificant that is shared by members of a social world. People learn what they should know from the collective sense of members in their social world.
- **Social types** refer to the classification given to one or more individuals in a social world. Specific social types adhere to social norms, for example, how they speak dress or interact with others. Moreover, they can assist or hinder one's access to information.
- **Information behavior** denotes one's choosing whether or not to act on the information offered. Information may be rejected despite its usefulness.

It should be noted, however, that the Theory of Normative Behavior is a conceptual framework for information behavior. Given this, it is odd that Chatman incorporated "information behavior" as a key concept. Her narrow definition of information behavior is more suggestive of "information use" and "information avoidance" rather than the totality of one's interaction with information. Wilson (1997) recognized that "use" and "avoidance" were merely two of the many facets of information behavior in his 1996 general model of information behavior. Clearly, this aspect of the theory calls for a broadening or redefinition of the concept.

In addition to the four concepts, the notion of a "small world" or social world is associated with the Theory of Normative Behavior. A small world describes "a world in which everyday happenings occur with some degree of predictability," and it allows for the presence of legitimized others or those who share similar cultural values (Chatman, 2000, p. 3). Legitimized others, in turn, can help to change or shape information that comes into the small world. The small world concept evolved out of studies involving marginalized populations such as janitors, women living in a retirement center, and female inmates, wherein people did not seek information beyond their social settings (Chatman, 1991, 1992, 1999). When sought, people turned to trusted and accessible sources for practical information that helped with immediate, everyday problems. The presumed risk of seeking information, too, factors into the information behavior of those living in a small world. For example, specific health information would be avoided if it suggested that a retiree had become incapable of maintaining her independence (Chatman, 1992), or when concerns of privacy prevented one from seeking information for such deeply personal issues as depression (Hayter, 2007). For female inmates held in a maximum security prison, the small worldness of the institution shaped normative behavior (Chatman, 1999). More specifically, inmates serving long term or life sentences were inclined to avoid information of the outside world and focus on information pertaining to the everyday reality of prison life. Outside information had scant relevance to one's life in an institutionalized world. In essence, trust and a safe setting "must exist before persons will engage in the interpersonal process of sharing information" (Chatman, 1992, p. 1)

Building on Chatman's work (1991, 1992, 1999), Burnett and colleagues (2001) used the Theory of Normative Behavior to examine larger, more geographically dispersed populations such as the

online worlds of virtual communities and the world of feminist booksellers associated with the Women in Print Movement. From their studies, researchers determined that the TNB provides "a reasonable conceptual strategy for examining and evaluating both the place of information within a social world and the socially valued interactions between people and individuals and information in that world" (Burnett, et al., 2001, p. 545). The theory is a valuable tool in that it permits exploration of complex information behaviors in a specific social context by allowing one to see how cultural norms influence information flow while also showing how information sharing can create possibilities within a community. Illustrating this point are the readers of the *Formula As* magazine. Comprised of expatriates and resident citizens of Romania, the readers hold a specific worldview, social norms, social types and information behavior in common regardless of their geographic locations (Burnett & Nocasian, 2008). Moreover, a small world's normative behavior can impede the use of information for a group (Jaeger & Thompson, 2004). For example, when a social group's worldview holds that it is not worth the effort to obtain or use e-government information, the group effectively creates social norms that convey a message of nonuse. In turn, one's information behavior devalues e-government information and, therefore, the information will likely go unused.

Not only is TNB an effective framework for exploring normative behavior, it also works to reveal multiple small worlds with overlapping, but distinct worldviews, as was the case with the Live Music Archive (LMA) of archive.org (Burnett, 2009). The archive functions as an online library providing digital materials, including a collection of the Grateful Dead's concert recordings. In November 2005, the archive made a controversial decision to limit access to this collection, which brought to light three discrete small worlds: the Deadheads or the users of the LMA content, the archive and the archivists and the Grateful Dead band itself. Each small world,

in turn, presented specific worldviews and information behavior. Of particular interest is that the small worlds experienced a degree of overlap with one another regarding "information" or the archive's collection, the perception of "community," and the technology employed to access the information. Despite these shared aspects, however, their worldviews diverged around them "because of the different ways in which members of the worlds understand their meaning" (p. 707), hence the ensuing dispute over access to the LMA.

Normative behavior within a small world represents the micro-level of information behavior, yet a macro-level also exists. Seeking to bridge these two levels of information behavior, Burnett and Jaeger (2008) brought together Chatman's (1992, 1996) notion of small worlds and Habermas' concept of information lifeworlds and the public sphere (Buschman, 2003). Small worlds represent the way people address information in the context of their social groups, whereas the public sphere indicates a space where information can flow freely without interference from state or corporate entities. Closely associated with the public sphere is the lifeworld, which is "the collective information and communication environment—the social tapestry—of a society" (Burnett & Jaeger, 2008). Although each concept addresses information behavior at a specific level, Burnett and Jaeger suggest that they are interrelated and when information is restricted in the small world or the lifeworld, then the public sphere cannot function effectively. Jaeger and Burnett's (2010) book, *Information Worlds*, advances this perspective with the development of the "theory of information worlds." The researchers conceptualize an information world as containing all the small worlds and the lifeworld of a society. The theory accounts for all the parts that work to influence the role information plays within a society, and like the Theory of Normative Behavior, the theory of information worlds

includes the concepts of social norms, social types and information behavior. Worldview has been renamed to "information values," as the former term represents many different meanings among disparate disciplines. However, its incorporation of Habermas' notions of public sphere and lifeworlds that sets it apart from TNB. For this reason, the Theory of Normative Behavior guided the study rather than the broader theory of information worlds. Next, I discuss how the Theory of Normative Behavior applies to the research questions.

### **3.1.1 Research Questions Revisited**

Because the Theory of Normative Behavior provides a theoretical framework to explain information behavior within the social context of a small world, and that "information behavior is intrinsically socially embedded, and the values of information are socially determined" (Burnett, 2009, p. 696), it is an appropriate framework for the proposed study.

1. To what extent does the interaction of time pressure and emotion influence people's information behavior when engaged in high stakes decision-making?
  - a. How do high stakes decision makers experience information when the decision is made under time pressure?
  - b. How do high stakes decision makers experience information when a decision is emotionally charged?
2. How effectively does Chatman's (2000) Theory of Normative Behavior explain people's information behavior when making high stakes decisions?

Within the home buying experience, one may conclude that numerous small worlds exist, with each representing the various stakeholders present. For example, realtors and mortgage brokers

embrace their own worldviews, which are shaped by such organizations as local, state and national associations (NAMB, n.d.; National Association of Realtors®, n.d.). Respective codes of ethics inform stakeholders of proper standards of behavior, while various social types can be found in the workplace, professional associations, through online forums and even blogs.

Homebuyers' small worlds, on the other hand, can consist of family and friends who hold the belief that homeownership is desirable. Johnson, Katimin and Milczarski (1997) found that immigrants were more likely to own a home if their parents were homeowners. Work-related small worlds can similarly influence the homebuyer as fellow professionals may assert that homeownership conveys the right message about one's standing "in the eyes" of a given profession. This perspective is similar to the notion that a person's car says a great deal about the individual. In addition to influencing one's decision to purchase a house, social norms and social types may also affect choices involving a home's location, the type of broker used (full service versus discount) or one's determination to approach a seller on Craigslist. For Korean and Dominican immigrants in Queens, New York, kin networks exemplified normative behavior as they provided members of their small worlds with information, advice, social support and possibly even financial assistance (Johnston, et al., 1997). Moreover, their worldviews embraced a distrust of governmental and formal institutions, thereby, contributing to the immigrants' need for informal social networks.

The Theory of Normative Behavior provided the means to address the information behavior associated with time pressure and emotion, since one's small world offers a worldview that speaks to the context of the home buying experience and lets members know what is important or insignificant to their community. Social norms provide appropriate standards of conduct. With

regard to emotion, for example, norms may communicate that one be self-sufficient and not burden others for information or emotional support (Matthews, et al., 2002). Time pressure may induce the use of a broker rather than the Internet, as broker assisted searching concludes more quickly than home searchers conducted without one (Zumpano, Johnson, & Anderson, 2003). Additionally, older and local homebuyers are less likely to rely on the Internet for information than younger homebuyers are and thus this tendency may well reflect the norms and social types of each small world's demographic.

Regarding the "information behavior" aspect of Chatman's theory, the study broadens the definition beyond the existing premise—choosing whether to act or not act on the information offered. As noted in the literature review, information behavior involves more than use or avoidance of information. Rather, information can be sought actively and from a variety of sources (Wilson, 1997), like the Internet, social networks, experts or friends and family. Information may be encountered (Erdelez, 1999), shared by lay information mediaries (Abrahamson, et al., 2008) or obtained at an Information Ground (Fisher, Durrance, et al., 2004). Once obtained, however, the information must be managed (Jones, 2008). To be sure, home buying generates a great deal of information. So, what information is to be retained? Is it filed or piled or maintained electronically? People's experience with information can take many twists and turns and this perception is missing from Chatman's definition of information behavior.

The discussion above demonstrates that the Theory of Normative Behavior was useful for answering the research questions, as people occupy many small worlds (e.g. workplace, school, place of worship, neighborhood or ethnic community). Moreover, their shared values influence

behavior like wearing "appropriate" clothing, showing respect for elders or seeking information from proper sources.

In the next section, I discuss the second and complementary conceptual framework that was used to guide this study.

### **3.2 The Theory of Information Grounds (IG)**

Complementary to the Theory of Normative Behavior, the theory of Information Grounds (IG) provided a theoretical framework to explore the information behavior of people in places that they visit, particularly people who are faced with making high stakes decisions during the home buying process.

Stemming from work at community foot clinics in Canada (Pettigrew, 1999 [now writing as Fisher]), the theory of Information Grounds is a significant contribution to information science, for it goes beyond the traditional research focus on information needs and seeking by including the notion of information "use" and "sharing" as well as the role context plays in one's information behavior (figure 1). Notably, an Information Ground is defined as synergistic "environment[s] temporarily created when people come together for a singular purpose but from whose behaviour emerges a social atmosphere that fosters the spontaneous and serendipitous sharing of information" (Pettigrew, 1999, p. 811). To this definition, seven propositions were added (Fisher, Durrance, et al., 2004, p. 756) and are represented in the Information Grounds model below (Figure 3).



**Figure 3 Information Grounds (Fisher, Naumer, Durrance, Stromski, & Christiansen, 2005)**

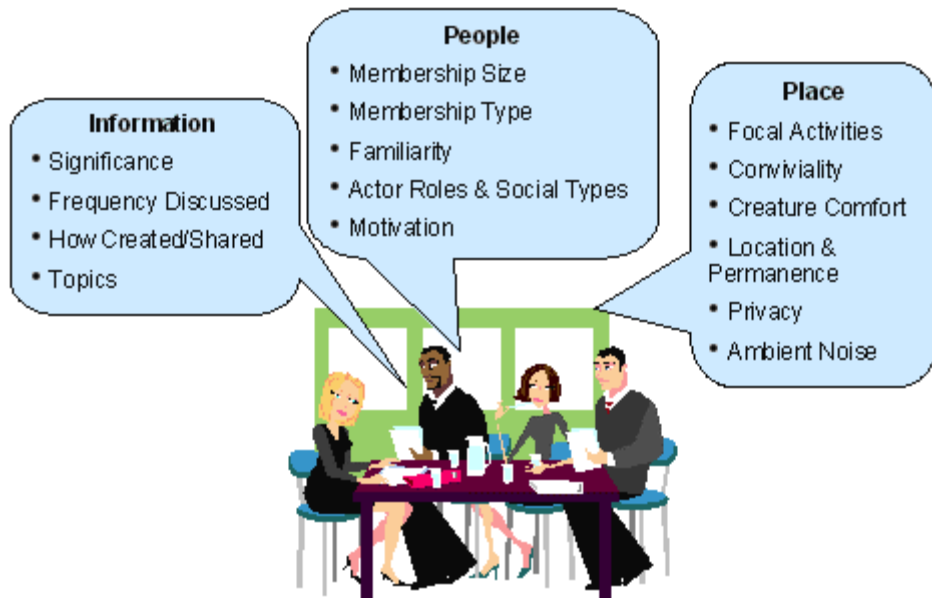
Simply stated, an Information Ground can occur at any place, such as a grocery store, coffee shop or school, and it can occur at any time (Fisher, Durrance, et al., 2004). People frequent an IG for a specific purpose (e.g. to attend services at a place of worship) but end up sharing or receiving information with those present. For example, social interactions taking place at a hair salon can occur with such social types as other clients or hairdressers, and information flow can take numerous directions and forms. Finally, a grand context can be created when multiple contexts are considered collectively (Fisher, Durrance, et al., 2004).

Since its conception, the theory has been tested with various population including Hispanic farm workers from the Pacific Northwest (Fisher, Marcoux, Miller, Sanchez, & Cunningham, 2004), new immigrants to Queens, New York (Fisher, Durrance, et al., 2004), residents of King County, Washington (Fisher, et al., 2005), students at a large university (Fisher, Landry, & Naumer, 2007), stay-at-home mothers (Fisher & Landry, 2007) and users of a mobile device-based social

networking service (Counts & Fisher, 2008). From these inquiries, it was determined that most people have at least one Information Ground and that places of worship, work, activity groups (e.g. fitness centers), personal service locations such as hair salons and restaurants were most common (Fisher & Naumer, 2006). Among college students, however, one's school or the campus was listed as the primary IG (Fisher, et al., 2007). Given these findings, I hypothesized that home buying stakeholders are likely to visit at least one Information Ground during their home buying experience.

In addition to the above findings, researchers identified the "hostage phenomena" associated with some Information Grounds (Fisher & Naumer, 2006). Such an occurrence comes about when a person has "little choice but to be present" at a specific place (p. 101). For example, medical waiting rooms, store checkout lines or public transportation can be experienced as hostage Information Grounds.

To further theory understanding, Fisher and associates (2007) augmented the Information Grounds concept by proposing a people-place-information trichotomy (Figure 4). The triumvirate grouping is comprised of fifteen categories, and each can influence how information is created and exchanged. In the case of **people**, "familiarity" with those present can facilitate making connections with others, whereas "creature comforts" such as comfortable chairs and pleasant music create a **place** that is conducive to sharing information. On the other hand, loud "ambient noise" can discourage conversation. With regard to **information**, its "significance" determines whether information is useful for making big, small, or trivial decisions.



**Figure 4 Information Ground people-place-information trichotomy (Fisher, et al., 2007)**

Dr. Fisher has devoted significant effort to developing the Information Grounds theory and research program. Along with the research projects discussed above, she has collected a wide variety of anecdotal Information Grounds from contributors to the *Information Behavior in Everyday Context (IBEC)* website (<http://ibec.ischool.washington.edu/>). Examples include such diverse offerings as the Australian Breastfeeding Association, Tribal Belly Dance Classes, the Burning Man Festival, the Stitch and Bitch craft group, elevators, physical therapy, the streets of Iran and the World of Warcraft electronic gaming environment. These cases illustrate that the notion of Information Grounds is not restricted to the realm of academics but is relevant in the lives of real world people—high stakes deciders included.

Like the Theory of Normative Behavior, the social nature and contextual relevance of the theory are significant aspects of Information Grounds. Unlike the TNB, however, an Information Ground does not shape behavior through social norms or legitimized others, as people meet

others who are unlike themselves or encounter new and unexpected information. Finding that unanticipated tidbit of information from an unknown person in an unlikely place cannot be discounted even when making a high stakes decision. For this reason, the theory of Information Grounds was an appropriate conceptual framework for this dissertation while also providing a complementary approach to the Theory of Normative Behavior.

### **3.2.1 Research Questions Revisited**

The theory of Information Grounds presents the exchange of information as a social activity tied to people, place and information. Given this approach to information, the theory was a suitable framework to explore the study's research questions.

1. To what extent does the interaction of time pressure and emotion influence people's information behavior when engaged in high stakes decision-making?
  - a. How do high stakes decision makers experience information when a decision is made under time pressure?
  - b. How do high stakes decision makers experience information when a decision is emotionally charged?
3. How do Information Grounds (Fisher, Durrance, et al., 2004) emerge and support people's information behavior when making high stakes decisions?

Seeing as people turn to others for information, that they seek the most accessible information (Harris & Dewdney, 1994), and that they have a least one Information Ground (Fisher, et al., 2005), it was conceivable that Information Grounds play an important role in providing information when time constraints are involved. Information Grounds provide a place for

decision makers to access information and that information could be used for making important decisions (Fisher, et al., 2007). Decisions associated with home buying qualify as important decisions.

Moreover, long-standing IG relationships lend themselves to the emotional support that stressed decision makers may seek (Harris & Dewdney, 1994). Morrill, Snow and White (2005) refer to these as "anchored" relationships, and well established Information Grounds offer the kind of permanence that fosters such relationships (Fisher, et al., 2005). In a like manner, "fleeting" relationships or onetime events can encourage an emotional connection with others, like chatting with seatmate on an airplane (Morrill, et al., 2005). This aspect of an Information Ground is significant as these relationships can present the channels through which coping strategies or coping information is shared.

Using Information Grounds as a theoretical framework also helped to enlighten how IGs emerge and support high stakes deciders' information behavior. Within the sphere of the home buying experience, people find Information Grounds budding in, for example, home buying classes. One can presume that all attendees hope to learn the buying process as well as mistakes to avoid. Yet, coming together with people like themselves, information may be shared that extends beyond the focal activity of the class. Similarly, virtual Information Grounds may materialize online through home buying-related chat rooms and forums, and social media like Facebook and Twitter.

The social nature of Information Grounds made it a worthy framework for understanding the information behavior associated with high stakes decision-making and the concomitant time pressure and emotion, as a home buying experience does not occur in a vacuum. There are

people and place(s) and information in this type of situation. The next section will present the dissertation's research design.

## **Chapter 4: Research Design**

To understand how emotion and time pressure affected the information behavior of high stakes deciders within the home buying experience, a naturalistic and qualitative study was conducted. To accomplish this, triangulated methods were employed to collect data including an ersatz home buying experience, semi-structured interviews using a timeline approach and participant observation.

### **4.1 Naturalistic Inquiry**

This dissertation is exploratory in nature, and the newness of the phenomenon under investigation suggested the use of a natural, real world and flexible approach. For this reason, naturalistic inquiry (Lincoln & Guba, 1985) was used as the research paradigm.

To examine the phenomenon of time pressure and emotion's influence on the information behavior of high stakes decision makers in the home buying domain, I conducted a qualitative field study. This approach was appropriate as naturalistic inquiry embraces real world conditions (Guba & Lincoln, 1982). Moreover, the paradigm recognizes that "the world and reality are interpreted by people in the context of social practices" (Rowlands, 2005, p. 83). Naturalistic inquiry assumes that knowledge is gained through social constructions, for example, language, documents, and shared meanings (Erlandson, et al., 1993; Klein & Myers, 1999; Lincoln & Guba, 1985), and that people's experiences of the world are subjective; that they understand the world through their subjective meanings rather than the objective definitions imposed by a researcher (Rowland, 2005). Naturalistic inquiry strives to understand phenomena or problems

based on the meanings that people assign to them and the social contexts in which they occur rather than predefining dependent and independent variables or testing hypotheses (Klein & Myers, 1999). Guba and Lincoln (1982) suggested that manipulating conditions made little sense, and contended that if naturalistic inquiry did not exist as an alternative to the rationalistic/scientific paradigm, something similar to it would have needed to be invented. Findings will inform future studies, and are not intended to create generalizations to a larger population.

In sum, Guba and Lincoln (1982) proposed that naturalistic inquiry is suited for social and behavioral research, and that field studies conducted in natural settings work best to investigate intangible and multiple realities. By understanding the interactions of these realities, one can begin to comprehend the whole. Moreover, naturalistic inquiry allowed for a deeper understanding of people's information behavior associated with high stakes decision made under time pressure and the role that emotion played in this behavior.

#### **4.1.1 Domain of Inquiry**

The housing market has changed dramatically since the heady beginning of the 21st century when U.S. home prices soared nearly 90% during the first six years of the decade (Trumbull, 2007). As annual gains on property value surpassed the interest cost of a loan, people jumped into the market. Furthermore, with the loosening of loan underwriting standards, financing was easily attainable (Rabideau, 2008). One's bad credit, inadequate income documentation or lack of a down payment was not a problem as these high-risk borrowers were extended nontraditional mortgages in the form of subprime and near-prime loans. Subprime mortgages asked the highest

interest rates and were offered to the least creditworthy and those most likely to default. Scarcely better than subprime, near-prime mortgages were given to borrowers who qualified for credit but were unable to fully document their income (DiMartino & Duca, 2007). Prime mortgages, on the other hand, are traditional, lower interest loans extended to those with good credit and income verification. In 2007, 80 percent of mortgages fell into the prime category, while 14 percent were subprime and 6 percent near-prime (Zelman, McGill, Speer, & Ratner, 2007). More compelling, however, is the volatile rise in nonprime loans. From 2001 to 2006, subprime and near-prime mortgages grew by 40 percent (Goldman Sachs Economic Research, 2007). In other words, people who could not afford homes were given loans that were unsustainable in the long term.

In 2006, residential asking prices exceeded new buyers' available resources and the "housing bubble" burst (Trumbull, 2007). Housing prices declined and defaults on subprime loans rose. In the two-year period since 2007, home values dropped an estimated 54 percent (Adkins, 2011). Moreover, the housing crisis combined with an economic downturn led to record foreclosures. The second quarter of 2009 saw the highest number of U.S. foreclosures ever recorded: 1.9 million filings (RealtyTrac, 2009). Foreclosure filings include default notices, auction sale notices and bank repossessions. As of March 2011, Washington State had 35,613 homes in foreclosure, King County counted 11,371 or 1 in every 607 homes and Seattle showed 3,840 or 1 in every 839 homes in foreclosure (RealtyTrac, n.d.).

In 2012, however, the state of residential real estate began to change, as low interest rates and a recovering economy reawakened Seattle metropolitan homebuyers' interest in the market (Bhatt, 2013). Demand for houses increased and competitive situations arose due to a record-low

inventory. On December 31, 2012, 46 percent fewer homes were available than the year before (Pryne, 2013). As a result, undesirable homes now looked attractive and were highly sought after. According to the Northwest Multiple Listing Service, multiple offers on a house is "the new normal" for Seattle residential real estate (Van Sant, 2013).

In addition to the real estate market itself, home buying is a complex process. Numerous stages present and, depending on whom you talk to or the website you visit, home buying stages can range from 3-12 in number. MSNBC's Schoen (2011) suggests the following steps for those serious about buying a home.

1. Go shopping for a mortgage
2. Find a good lawyer
3. Find out what houses are selling for in your area—not the asking price
4. Come up with a down payment
5. Find a real estate agent, although this is not a required step
6. Find a house and make an offer
7. Wait for a reply
8. Once the offer is accepted, put down a "binder" deposit or "earnest" money
9. Call your lawyer to review contract
10. Sign contract
11. Submit mortgage application
12. Show up at the closing and sign the papers

In its 9-step list to buying a home, however, the U.S. Department of Housing and Urban Development (2011) recommends that a prospective buyer get a home inspection once an offer is made.

Closely associated with the process are such stakeholders as lenders, real estate agents, home inspectors, escrow agents, title insurance agents or attorneys. Because stakeholders are vital to home buying but can also help or hinder one's experience, they are required to meet and abide by Washington State regulations regarding training, licensing, background checks and finger printing (Washington State Bar Association, 2010; Washington State Department of Financial Institutions, 2011; Washington State Department of Licensing, 2011).

Home buying represents a multifaceted domain of inquiry involving a changing market place, a complex process and various stakeholders. Given these disparate factors, the home buying experience represented an intriguing area of study.

#### **4.1.2 Participants**

In order to investigate the interaction of time pressure and emotion on the information behavior associated with high stakes decision-making, participants were drawn from the home buying domain.

##### **4.1.2.1 Sampling**

To explore the information behavior of high stakes decision-making within the home buying experience and to understand how time pressure and emotion shape this behavior, I used a

purposive sampling strategy to recruit study participants. Purposive sampling is central to naturalistic research, as it allows the researcher to maximize discovery of patterns and problems and to take into account social norms and contextual conditions (Erlandson, et al., 1993).

The logic and power of purposeful sampling lies in selecting *information-rich* cases for study in depth. Information-rich cases are those from which one can learn a great deal about the issues of central importance to the purpose of the research, thus the term *purposeful sampling*. For example, if the purpose of an evaluation is to increase the effectiveness of a program in researching lower-socioeconomic groups, one may learn a great deal more by focusing in depth on understanding the needs, interests, and incentives of a small number of carefully selected poor families than by gathering standardized information from a large, statistically representative sample of whole programs. The purpose of purposeful sampling is to select information-rich cases whose study will illuminate the questions under study (Patton, 1990, p. 169).

Sample size is also a part of purposive sampling, yet "there are no rules for sample size" in naturalistic inquiry (Patton, 1990, p. 184). Sample size is determined by quality and depth of collected data rather than quantity and statistical generalizability, which is associated with probability studies. Simply stated,

The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size (Patton, 1990, p. 185).

Morse (2000) echoes this perspective, noting that some participants reflect on the given topic and express themselves more effectively than others. Moreover, an appropriate sample size is the one that answers the research question(s) (Marshall, 1996). Complex questions may require a larger sample, while simple questions may involve a small sample. Data saturation or redundancy of themes, categories and explanations determine that the appropriate sample size has been attained.

Within information behavior, the number taking part in a given study has ranged between 12 and 45 participants (Brendon, 2003; Foster, 2005; Hughes, 2009; Landry, 2006; Savolainen, 2009b; Stavri, et al., 2003). Data saturation determined the sample size for this inquiry, and saturation was reached with 33 interview and 8 observation participants.

#### **4.1.2.2 Stakeholders**

As noted above, various stakeholders present during the home buying process, and to gain a better understanding of the home buying experience, it was necessary to talk with these stakeholders. For this dissertation, stakeholder criteria included that a participant be over the age of 18 and that he or she had recently helped someone to buy a house. Recent is defined as six months or less. Various approaches were used to recruit stakeholders such as asking real estate agents and lenders running home buying classes to participate, as were agents hosting open houses. Additionally, I asked real estate agents to refer me to other stakeholders, for example, lenders or escrow agents. This method was successful since real estate agents maintain strong social networks and develop social capital (Crowston, Sawyer, & Wigand, 2001; Sawyer, Crowston, Wigand, & Allbritton, 2003). Soliciting participants based on work-related websites was unproductive as that technique resulted in non-responses. By connecting in person with stakeholders at home buying classes and open houses, as well as obtaining referrals, I recruited real estate agents, lenders and escrow agents who offered relevant data regarding their home buying experiences.

#### **4.1.2.3 Homebuyers**

Homebuyers buy homes for myriad reasons, for example, needing a starter home, buying for another person, trading up or downsizing, relocating, making an investment, accommodating a

growing family, undergoing a divorce or death of a loved one. The average time a homeowner is expected to remain in a home is thirteen years (Anily, Hornik, & Israeli, 1999), therefore, home buying is a common occurrence. For this dissertation, specific criteria were used to select home buying participants. First, homebuyers had to be 18 years of age or older. Secondly, they must have purchased their homes recently or were well into the process of purchasing their homes. A recent purchase denoted buying a home no more than six months prior to an interview, and "well into the process" of purchasing a home was operationalized as having engaged in the process to the point of making at least one offer on a house. Prospective homebuyers who had just begun their home buying research, recently contacted a real estate agent or simply had been attending open houses were disqualified from the study as they had not progressed far enough in the process and, therefore, were less likely to provide significant data with regard to time pressure, emotion, information behavior and high stakes deciding.

Homebuyers were recruited from the Seattle metropolitan area. Initial attempts to recruit homebuyers by way of their real estate agents or lenders met with minimal success, since the majority of these stakeholders were concerned with client confidentiality and elected not to help in this manner. I also asked friends, family, colleagues and acquaintances for homebuyer referrals. This, too, was ineffectual, as most people did not know any recent homebuyers. However, one surprising source presented in San Francisco, wherein a new acquaintance put me in touch with two recent homebuyers in the Seattle area. Due to privacy concerns, I did not contact suggested homebuyers directly. Rather, the referrer asked homebuyers if they would be interested in helping with this dissertation, and when responses were positive, homebuyers then contacted me to set up an interview.

To address the lack homebuyers, I modified my recruiting strategy. With the consent of the University of Washington Human Subjects Division, I offered homebuyers \$40 as an incentive to be in my study. The incentive was listed on recruiting flyers posted around the University of Washington campus and on an advertisement placed on Craigslist (Appendix IV). With the combined assistance of referrers, flyers and Craigslist, I was able to recruit homebuyers who met study criteria and provided information-rich data regarding the phenomena under study.

#### **4.1.3 An Ersatz Home Buying Experience**

In preparation for fieldwork, I gathered background information regarding the home buying process in today's environment. To accomplish this, I conducted an ersatz home buying experience, which included online research. For material regarding homes for sale, I explored such websites as Redfin.com, Zillow.com, Forsalebyowner.com. To understand about financing, I examined E-loan.com, Bankrate.com and Mortgages for Dummies at Dummies.com. Since many homebuyers engage the services of a real estate agent, I looked at how to find a suitable agent. In a like manner, I investigated home inspections and the services offered by escrow agencies and title insurers. To augment online research, I attended two home buying classes. These classes permitted interaction with professionals in the field as well as prospective homebuyers. Finally, I attended 15 open houses to learn how real estate agents interacted with house shoppers, how shoppers interacted with agents and houses, and to observe how houses were shown. By taking these steps, I learned and adopted the language of study participants,

which improved the efficiency of the study, increased data trustworthiness and represented an important aspect of the dissertation's methodology.

#### **4.1.4 Semi-structured Interviews**

Semi-structured interviews, a qualitative method, were used to answer the research questions. Qualitative methods are appropriate to a naturalistic field study when the researcher is the primary data collection instrument (Guba & Lincoln, 1982). Interviews allow the researcher and participant to reconstruct the past, explain the present and envision the future (Erlandson, et al., 1993). Moreover, an interview helps to place the phenomena under study into a person's broader interpersonal, social and cultural contexts, while simultaneously allowing one to express his or her thoughts, feelings and opinions regarding the topic of the inquiry. To address data quality concerns related to a participant's self-report, a timeline approach was incorporated into the interview protocol. A timeline serves to "establish a shared awareness of the 'facts of the case'" from the participant's perspective (Klein, et al., 1989, p. 466), while detailing the step-by-step nature of a situation (Dervin, 2003). In addition, a timeline acts as an event history calendar as it relies on "thematic and temporal" information, which is key to obtaining high quality autobiographical data (Belli, 1998, p. 385).

Semi-structured interviews are widely used in information behavior studies. For example, the technique was employed to explore the accessibility and use of health information by healthcare workers in rural Uganda (Musoke, 2000), to learn about the information needs of people who worked to provide services for those with mental illness (Blackburn, 2001), to investigate the information-seeking behavior of biblical studies researchers (Kari, 2007), and to understand how

virtual world Second Life users found needed information (Ostrander, 2008). Semi-structured interviews are an accepted qualitative method for a naturalistic inquiry, are useful for answering research questions and represent one aspect of the triangulated methodology for this dissertation.

#### **4.1.5 Participant Observation**

In addition to interviews, participant observation was used to learn about the phenomena under investigation. Observation is a qualitative method for collecting firsthand, open-ended information about people and places within the context of their situations (Creswell, 2005).

Unlike interviews, which permit a researcher to travel back and forth in time, observation allows a researcher to discern "the here-and-now interworkings of the environment via the use of the five senses" (Erlandson, et al., 1993, p. 94). For this reason, participant observation is a suitable method for a naturalistic inquiry.

Since it is not possible to observe and record every aspect of a given setting, it is necessary to have a plan. Merriam (as cited by Erlandson et al 1993, p. 97) suggested that the following elements are typically present when conducting observation:

1. The setting: What is the physical environment like? What is the context? What kinds of behavior does the setting promote or prevent?
2. The participants: Describe who is in the scene, how many people, and their roles. What brings these people together? Who is allowed here?
3. Activities and interactions: What is going on? Is there a definable sequence of activities? How do the people interact with the activity and with one another? How are people and activities connected or interrelated?

4. Frequency and duration: When did the situation begin? How long does it last? Is it a recurring type of situation or is it unique? If it recurs, how frequently? How typical of such situation is the one being observed?

These guidelines formed the basis of my observation checklist (Appendix III).

Although participant observation has its origins in anthropology (Iacono, Brown, & Holtham, 2009), it has since found its way to information science and has been recommended as an unobtrusive means for librarian researchers to collect valid and reliable data regarding their organizations (Newhouse, 1989). The method has been used to learn about specific populations' information behavior (Fisher & Landry, 2007; McKnight, 2006), and participant observation has been integrated into numerous multi-method studies to understand such diverse issues as the "dark side" of information management (Chua, 2009), the information sources used by home-care health workers (Cooper & Urquhart, 2005), how information and communication technologies develop in Central Asia's technology-emergent societies (Johnson, Kolko, & Salikhbaeva, 2009), and to identify problems encountered by novice searchers (Puttapithakporn, 1990). Participant observation is a well-established method for eliciting data and is a fitting approach for understanding the information behavior of high stakes decision makers in the home buying experience.

#### **4.1.6 Pre-Implementation Activities**

In preparation for the data collection stage of this dissertation, two discrete interview guides and one observation guide were (Appendices I, II, III) developed and approved by the Human

Subjects Division of the University of Washington. Subsequently, the interview protocols were pretested for question clarity, timeline effectiveness and interview length with two volunteers. The observation checklist was tested to evaluate its guidelines for identifying information sharing activities while observing a willing real estate agent.

For the stakeholder interview, I arranged to meet with a real estate agent. The interview lasted 90 minutes. During the interview, I asked the agent to think about a recent instance where she helped someone to buy a house and went on to say that I would like her to recreate the experience using a chronological, timeline perspective—and if sufficient time, a second instance would be discussed. She was to begin from the point where she first met the client and then continue discussing the process until she closed the deal. A blank timeline was given to the stakeholder for the purpose of creating a linear representation of the experience; however, she was disinclined to use it. To obtain an illustration of timeline data, I filled out the form as the agent shared her experience. Following the interview, the stakeholder was asked for input regarding the interview questions and the timeline. She had no recommendations regarding the questions. Probing questions revealed that time pressure and emotion did influence this agent's information behavior, the Theory of Normative Behavior explained her information behavior while Information Grounds also supported her information behavior. For example, anger was identified when the agent's body tensed and she exclaimed with emphasis that dealing with the listing agent was *so appalling* that she had difficulty hiding her anger when sharing new information with her clients. With regard to time stress, pressure was experienced when trying to schedule the completion of a home inspection within the required timeframe (using information). Normative behavior was identified when the agent expressed a worldview that she *hated*

Facebook as it makes compromising statements and photos publicly available to others. Moreover, Facebook friends could also compromise a person. For these reasons, she would not use Facebook in her business. Her office's *resource room* served as a stable Information Grounds for her as it represented a place for the agent to talk informally with others regarding issues or situations in which she needed more information. Given the results of this pretest, the stakeholder interview questions remained unchanged; however, since covering one instance used most of the 90-minute interview timeframe, the notion of discussing a second instance was removed.

Although the semi-structured guide demonstrated its effectiveness for eliciting relevant data, the timeline did not work as successfully as planned given the stakeholder's was reluctant to use it. Further, filling the timeline out as the interview progressed was counter to its intended function, which was to act as an event history calendar for obtaining high quality autobiographical data. This difficulty required rethinking the timeline presentation to participants and discussion of its purpose.

Next, I met with a homebuyer to test the homebuyer's interview guide. The interview lasted 70 minutes. I instructed participant to think about her home buying experience and then walk through the process, beginning with the decision to buy a house and concluding with closing the deal. A blank timeline was given to the homebuyer for the purpose of delineating the major steps occurring in her experience. Upon concluding the interview, I asked the homebuyer for input regarding the probing questions and the timeline. She indicated that there were no difficulties with or confusion surrounding the questions. Pertinent data regarding emotion, time pressure, normative behavior and Information Grounds were revealed. For example, the homebuyer stated

that she was very apprehensive about losing her home because of witnessing more than one episode of people being evicted when rent or mortgages were not paid. For this reason, she sought detailed information regarding her financing package, and finally obtained the assurance that she could handle the mortgage. Her real estate agent represented a social type who assisted her with information such as online links to potential houses and educating her about the physicality of houses (e.g. do stairs creak, how does garage door open, etc.). Time pressure was also evident for this homebuyer as her apartment lease was running out and she had an urgent need to find a home. Because of this, she spent many evenings looking for houses when she preferred to be *vegging out* in front of the television. The homebuyer, too, indicated that the break room at work served as an Information Grounds as she was able to seek information from colleagues regarding such things as septic systems or home buying in general.

The timeline, however, was once again a problem. The homebuyer noted that it was difficult to fill out the timeline while simultaneously talking, and this finding was instructive. Consequently, I found it necessary to modify the timeline instructions. Rather than have participants fill out the timeline as the interview moved along, I would instruct them to do a quick sketch of the entire process and then we would return to each stage and discuss it in greater depth. In this way, the timeline could work as an event history calendar and allow for the collection of high quality autobiographical data. Moreover, this approach would help me to obtain a "heads up" awareness of what each homebuyer's experience entailed and identify points warranting greater exploration.

To test my observation guide, I attended a home buying class. Four homebuyers and the facilitator, a real estate agent, were present. The setting of this observation was the agent's office,

and attendees gathered informally in a circle. The purpose of the class was principally for the agent to share information about the home buying process such as the needs, the wants and the pitfalls homebuyers could experience. Although the facilitator was the primary speaker, participants did initiate information exchanges with their questions. Numerous exchanges resulted in additional information sharing and further questions like requests for information on FHA loans, and follow-up questions regarding Freddie Mac and Fannie Mae. Emotion also presented as participants reacted with surprise, such as exclaiming *Oh, no!* for example, to stories about home buying instances gone wrong. Again, surprise was noted with regard to information that would be applied to future needs like having to improve credit history and credit scores. This was observed in the form of people's wide-eyed expressions or sharp inhaling of air. Happiness was seen when participants smiled and nodded positively at the news that no mortgage insurance was required for homes purchased through HomePath.com by Fannie Mae. Attendees also responded to information with disbelief with the statement *you're kidding* when informed that banks could thwart short sale purchases by not responding to offers or when property appraisals come back for less than a homebuyer's offer. Given these findings, no changes were made to the observation checklist.

A preliminary coding scheme was developed prior to interview and observation protocol testing. Codes are reflective of the larger thematic schemes relevant to this dissertation. Table 3 is representative of codebook elements.

**Table 3 Preliminary Coding for Information Behavior and High Stakes Decision-making**

Information Behavior (IB)		
IBIN	Information need	Person needs for information
IBSK	Information-seeking	Person seeks information resolve a need
IBSH	Information sharing	Person shares information with another
Emotions Experienced		
EMEAN	Anger, annoyed, frustrated	Emotion felt when engaging in IB (giving, receiving, using, needing, seeking, etc.)
EMEAP	Appreciative, thankful	Emotion felt when engaging in IB (giving, receiving, using, needing, seeking, etc.)
EMEDR	Love, desire, like	Emotion felt when engaging in IB (giving, receiving, using, needing, seeking, etc.)
EMEFF	Fear, nervous, worried	Emotion felt when engaging in IB (giving, receiving, using, needing, seeking, etc.) Emotion felt when engaging in IB (giving, receiving, using, needing, seeking, etc.)
Time Pressure's and IB		
TPRIB	Time pressure and IB	Time pressure affects IB
Interaction of Time Pressure and Emotion		
INTPE	Interaction of TP and IB	Emotion is experienced when decision made under TP, which affects IB
Information Grounds (IG)		
IGGTP	Type of IG	Work, gym, restaurant, play date
IGGHP	How IG helps	Can obtain useful information for making decision about home buying
Normative Behavior		
NRBSN	Social Norms	<b>Social norms</b> allow people to know what is considered normal and right within specific contexts by providing guidance to appropriate standards of conduct. Social norms delineate boundaries that people are typically unwilling to cross.
NRBST	Social Type	<b>Social types</b> refer to the classification given to one or more individuals in a social world. Specific social types adhere to social norms, for example, how they speak dress or interact with others. Moreover, they can assist or hinder one's access to information.
MRNWW	Worldview	<b>Worldview</b> is an awareness of what is important or insignificant that is shared by members of a social world. People learn what they should know from the collective sense of members in their social world.

## 4.2 Data Collection

Three types of data were collected in this exploratory investigation pertaining to time pressure and emotion on the information behavior of high stakes decision makers:

- transcribed audio recordings of semi-structured interviews with homebuyers and stakeholders
- observations of real estate agents interactions with clients and other stakeholders
- field notes recorded the researcher's thoughts regarding interviews, observations and the ersatz home buying experience

Further discussion of data collection activity is presented below.

#### **4.2.1 The Ersatz Home Buying Experience**

I am a homeowner, which means that I personally experienced the home buying process. Despite this history, my house was purchased more than 25 years ago. Given the tumultuous changes that have occurred in the residential real estate market in recent years, my familiarity with home buying was akin to that of a novice buyer rather than an expert. As such, I needed to learn about home buying again. To educate myself, I examined various real estate-related websites like Realtor.com, Zillow.com, Redfin.com, Windermere.com and Forsalebyowner.com. Such sites showed homes for sale, home prices and size of the property. Not all websites offered the same level of usability. Redfin updated information on homes more frequently. It was not useful to see a house listed for sale when, in fact, it sold and people had already moved in. Further, Redfin's site interface allowed sorting of homes by type (single family, duplex, condo), size, number of bedrooms, price, foreclosed, location and more. Information regarding, utilities, schools, parking, property size, heating and cooling, equipment and property features was also provided. Pictures showing the interior and exterior of the home supplemented textual data. These sites informed about listed homes so that knowledgeable choices could be made regarding houses of interest.

Finding a house of interest illustrates one-step in the process of home buying, but unless a person can put together an "all cash" deal, a crucial stage for many homebuyers is financing. To understand this step, I investigated mortgage information online. E-loan.com as well as real estate-related websites offered tools and calculators for determining how much home one can afford as well as mortgage term comparisons. This was useful for comprehending principal and interest options, but a poor resource for learning about different loan types, for example, FHA loans, Veterans Affairs (VA) loans or traditional loans. Furthermore, loan specific websites requested more personal information than I was comfortable giving, so the type of information accessible to me had limited value. Mortgages for Dummies at Dummies.com offered information regarding fixed-rate and adjusted-rate mortgages and shopping for mortgages in general. Moreover, the site discussed mortgage preapproval letters and the advantage that such a letter has for a homebuyer. Included in this discussion was the importance of one's credit history and credit score. Such information added to my understanding of financing in today's environment, but still did not inform about various loan options such as FHA or VA.

Unlike financing where a lender is necessary, having a real estate agent is not required to buy a home. Homebuyers can go to Craigslist to find property or approach a home seller who is marketing his or her property on sites like Forsalebyowner.com. However, when an agent's assistance is desired, information is available online, yet online websites like HGTV FrontDoor suggest using word of mouth recommendations from friends, family and acquaintances to find an agent rather than reaching out to a person lacking known references (Nelson, 2013). Websites also advised interviewing prospective agents to see if they are a good fit for the homebuyers. Suggested interview questions varied, but typically included the area an agent worked in, how

much business was devoted to helping buyers, who made up the agent's team, and if the agent or an assistant will be showing homes (Apartment Therapy, 2013; Nelson, 2013). Because a real estate agent may spend considerable time with a homebuyer, this step is worthwhile for learning that an agent will have his or her client's best interest in mind. Another option for homebuyers was to check prospective agents on review sites such as Yelp.com, Zillow.com Trulia.com, Angieslist.com or Redfin Forums. Yet, prudence is needed with anonymous reviews as competitors or customers could post damaging or fake material on the site (McDermott, 2012).

Like real estate agents, home inspectors represented an important aspect in the home buying process. Although home inspections can be waived, it is recommended that one be conducted once a home buying offer was accepted (U.S. Department of Housing and Urban Development, 2011). Many home inspectors advertise their service online, and they provide basic information that addresses the need for an inspection (protect the buyer from expensive surprises), what is inspected (e.g. roofs, plumbing, foundation, windows, electrical systems, furnaces, etc.), the type of inspection report given and the cost of the service (Full House Inspection Services, n.d.; The Complete Inspection Company, 2011). Again, homebuyers could evaluate the quality of a home inspectors work by looking at review sites like Yelp.com or Angieslist.com but should keep in mind that not all reviews are reliable.

The final stage for buying a home is signing legal documents. Washington State is an escrow state, wherein an escrow agent acts as a neutral third party for the purpose of closing the sale/purchase and transferring the requisite funds, title and real property in a real estate transaction. Escrow services are provided by attorneys, banks and lenders, independent escrow companies and title companies (Washington State Department of Financial Institutions, n.d.).

Agents are found on such sites as Zillow.com or through individual office websites. Title insurance, on the other hand is procured from a title insurance company and it serves two purposes. First, it protects a homebuyer's lender from loss should there be unidentified title defects and, secondly, it protects the homebuyer from problems such as forged documents, missing heirs to the property or faulty legal descriptions (Washington State Department of Financial Institutions, n.d.). Homebuyers pay a onetime premium for a title policy, and an escrow agent disperses these funds at closing. Like other stakeholders in the home buying process, reviews of escrow agents or title insurers can be found at such sites as Yelp.com or Angieslist.com.

Online research was a good start toward learning about home buying, yet I felt the need for a deeper understanding of the complexities and nuances of the process. Therefore, I continued to educate myself by attending two free home buying classes. The class meeting on March 31, 2012 lasted for four hours and was held at a real estate office, while the other met on May 12, 2012, lasted for two hours and was situated at a local bank. Seven attendees were present for the first class and five gathered for the second. Facilitating each class were a real estate agent and a bank lender, with each person speaking to his or her area of specialty. I introduced myself to the facilitators and informed them of my dissertation work on home buying. With regard to the real estate agents, they echoed Internet material in that homebuyers should interview agents for finding an agent that is a good fit. Agents went on to suggest that buyers avoid dual agency, which denotes an agent representing both buyer and seller, as the dual agent's primary responsibility is to the home seller. Open houses, short sales and foreclosures were discussed for both their advantages and disadvantages. With an eye toward mortgages, agents emphasized the

need to get one's financing in order. This included such issues as checking and correcting credit history, improving credit scores and obtaining a loan preapproval letter. Agents stressed that it was important for people to understand how much home they could afford, but also to know how much their monthly payments would be. Handouts were presented to attendees. A buyer's timeline illustrated what homebuyers could expect during the process by detailing what occurs while shopping for a home and what transpires when an offer is made and the homebuyer comes under contract. With regard to the topic of escrow, a guide to typical closing costs outlined what a buyer and seller can expect to pay. Additionally, there were conversations pertaining to title insurance, standard home inspections, sewer inspections, septic tanks, leaking oil tanks, and the presence of mold, asbestos or lead in a home. Each topic was covered in depth, and when material was not understood, attendees asked for clarification. Moreover, real estate agents pointed out that there were always contingencies for backing out of a deal should one experience a change of heart after successfully bidding on a house.

Lenders also offered significant and detailed information regarding home buying. To begin, they mirrored real estate agents' recommendations that homebuyers put time into finding a lender. A prospective lender should be interviewed to ensure competency and that a homebuyer is willing to work with him or her. Once a lender is selected, homebuyers need to start working on the preapproval process, which involves an application, income verification, credit reports and other assorted documentation. Further, expect lenders to examine one's debt to income ratio (DTI), which influences the amount of a loan. Lenders also discussed down payment requirements, cash reserves, and private mortgage insurance (PMI). What set the home buying class apart from online information was the conversation pertaining to loan types. How fixed-rate loans differ

from adjustable rate loans (ARM) and why a person would choose one over the other? The protections built into ARMS are Caps or limiting how much a rate can increase, the index that determines how much rates can go up and the Margin, which is added to the index, were also covered. Government loans such as FHA, VA and House Key were discussed with reference to the size of down payments and maximum loan amounts. House Key loans targeted first time homebuyers and require a 30 year fixed loan and a higher rate of interest than other government loans. Finally, the lenders talked about loan pricing, which included such factors as the interest rate on borrowed money, the points or loan fee that is optional but helps to lower the monthly payment, closing costs and the prepayment of property taxes and home insurance.

Although there was overlap between the two classes, the common themes reinforced important elements of the home buying process. Moreover, learning from experts in the field was a good method for augmenting what I had discovered online. Class information was intense and fast paced due to time limitations, so handouts were useful tools to refer back to when examining my ersatz home buying experience.

The third and final piece of my ersatz home buying experience involved attending open houses. Although online research and home buying classes were instructional, looking at homes that were for sale was necessary to round out the experience. Open houses were the chosen venue as they are open to the public. I visited 15 open houses from August 16 through October 28, 2012. Houses were selected based on their proximity to my neighborhood, and Redfin.com made this information easily attainable. Additionally, I dropped into homes that displayed an open house sign on the property. Houses varied in size, price, age, and condition of the property. For

example, a four-year-old, 3900 square foot home was selling for \$985,000 while an 87 year old, 650 square foot plus basement house listed at \$309,000. Two homes were completely remodeled and one house needed work. All homes were move in ready. Some houses were staged for showing, others remained occupied by the owners and a few were empty. Food and beverages were offered at several homes. Listing agents or their representatives were present at all the properties. I introduced myself to agents and informed them of my dissertation work on home buying. I observed that some agents actively engaged visitors by greeting them and asking if they had questions. Others remained aloof, eating lunch or using electronic devices. The number of visitors varied with each house as well. The fewest ranged from 2-3 people and ran as high as too many to count. I estimated 40-50 people toured these houses while I was present. Some attendees were neighbors expressing curiosity about the homes, others were homebuyers visiting on their own and a few attended with their real estate agents. All properties offered flyers. These too differed in quality, style and level of proffered information. One flyer was simply black and white with one picture and extensive textual data about the house, most were colored and presented multiple photos and descriptive text, and a few laminated flyers showed pictures but little textual information. Attending open houses was a valuable part of the ersatz home buying experience, as it allowed me to look at properties in a manner similar to homebuyers. I could visually inspect homes and note which properties seemed to appeal more to me as an ersatz homebuyer. Additionally, I could observe how engaging agents were with prospective buyers. Moreover, this piece of the experience allowed me to incorporate material that I had learned from online research and home buying classes like determining value, which made the experience more understandable from a homebuyer's perspective.

The ersatz home buying experience was a worthwhile methodology for this dissertation as it armed me with the language of home buying such as dual agency, being under contract, documentation, loan preapprovals, and credit histories. Moreover, the experience helped me to understand the complexities of competitive bidding, meeting the myriad financing requirements, and learning that home buying is as much about educating oneself about the process as it is enlisting the aid of industry professionals. Finally, each aspect of this exercise complemented the others, for example, the home buying classes augmented online research and visiting open houses reinforced the teachings of home buying classes such as properly priced homes generate greater interest, which in turn can engender competitive situations.

#### **4.2.2 Semi-structured interviews**

Thirty-three interviews were conducted from April to November 2012. The semi-structured interviews allowed participants to comment on their respective home buying experiences, whether buying a home for oneself or helping someone to buy a home. Interviews were completed in person with twenty-two homebuyers with one interview consisting of a husband and wife. Of the twelve stakeholders interviewed, three were lenders, seven were real estate agents and two were escrow agents. Participants were recruited through flyers posted on the University of Washington campus, an ad on Craig's List, referrals from acquaintances, referrals from stakeholders, and through home buying classes. People chose the location of their interviews based on such factors as convenience, work schedules, or the presence of small children with eleven interviews occurring at workplaces, nine at participants' homes, four at library meeting rooms, six at university conference rooms and three at my place of residence.

Interview duration ranged from 32 - 96 minutes, with the average being 67 minutes long.

Interviews were audio recorded for later transcription and analysis.

Questions asked in interviews were primarily open-ended and were intended to elicit data surrounding the home buying experience with a particular emphasis on information behavior, time pressure and emotion. The timeline aided the discussion by delineating the order of events that transpired during the process. Homebuyers and stakeholders were presented with a blank timeline wherein they were asked to complete a quick sketch of the major events in their home buying experiences. They were to include both success and failures. For example, a timeline might include making the decision to buy a house, conducting research, finding a lender, finding a real estate agent, house shopping, find a house, make an offer, offer rejected, make a counter offer, counter offer accepted, house inspection, renegotiate offer based on inspection, escrow signing and closing the deal. At more than one point in the home buying process, it was anticipated that deciders experienced both time pressure and emotion that, in turn affected their information behavior. Below, I explain how each research question was investigated.

1. To what extent does the interaction of time pressure and emotion influence people's information behavior when engaged in high stakes decision-making?

To learn how interaction of time pressure and emotion's influenced participants' information behavior, people were asked *What else was going on at the time of home buying?* and *Who were the major people to be considered in this decision?* These questions were significant as they provided situational factors associated with high stakes deciding and that could contribute to

emotional and time pressure-related issues like an expiring lease or concern over moving young children from a familiar neighborhood. In turn, the factors could compromise available time and exacerbate one's emotional condition while pursuing information behavior. Additional interview questions regarding information behavior and time and emotion's effect on this behavior included:

*What helped you make your decision?*

*Was time a factor?*

*How did that make you feel?*

*How did time influence your ability to find what you needed?*

*How did your feelings affect your ability to get what you needed?*

The probing questions were repeated for each stage of the home buying experience.

- a. How do high stakes decision makers experience information when the decision is made under time pressure?

To understand how time pressure affected high stakes deciders' experience of information behavior, interview questions included:

*What helped you make your decision?*

*Was time a factor?*

*How did time influence your ability to find what you needed?*

Like RQ1, the probing questions were repeated for each stage of the home buying experience.

- b. How do high stakes decision makers experience information when a decision is emotionally charged?

To obtain data regarding the experience of information and emotion, interview questions included:

*What helped you make your decision?*

*How did that make you feel?*

*How did your feelings affect your ability to get what you needed?*

As with RQ1 and RQa, the probing questions were repeated for each stage of the home buying experience. However, to further understanding of emotion of high stakes deciders, additional interview questions were asked:

*Are there things that made it difficult to go through this?*

*How did that make you feel?*

*Are there things that made it easier for you?*

*How did this make you feel?*

*Were there other things that would have helped you?*

*What was the most stressful for you?*

2. How effectively does Chatman's (2000) Theory of Normative Behavior explain people's information behavior when making high stakes decisions?

The Theory of Normative Behavior encompasses four elements: social norms, social types, world view and information behavior (Chatman, 2000). Social norms inform people of what is considered normal and right within specific contexts, as well as providing guidance to appropriate conduct in that context. Social types represent classifications given to people in our social world and social types can help or hinder access to information. A worldview is an awareness of what is important in a social world, and people learn what they should know from its collective members. Information behavior is choosing whether to use information.

To investigate the Theory of Normative Behavior, participants were asked to describe their home buying experience. To reveal worldviews, social norms or social types and information behavior, the following interview questions were asked:

*What helped you to make your decision?* (worldview, social type, social norms, IB)

*How was this help obtained?* (worldview, social type, social norms, IB)

*Did you get faulty information?* (worldview, social type, social norms, IB)

*Were there things that made it difficult?* (social type, social norms, IB)

*Were there things that made it easier for you?* (social type, social norms, IB)

*Were there other things that would have helped you?* (worldview, social type, social norm, IB)

3. How do Information Grounds (Fisher, Durrance, et al., 2004) emerge and support people's information behavior when making high stakes decisions?

As Information Grounds can occur at any place and at any time, the potential for IGs to emerge is endless. They can popup in the classroom, on the sidewalk, across the fence, at night or in the early morning. IGs are moveable feasts for information. Fundamental to the Information Grounds theory, though, is social interaction. People must talk to one another for information to be shared. Moreover, it takes just two people to create an IG.

Questions asked at interviews to determine how Information Grounds emerged and supported the information behavior of high stakes deciders included:

*Aside from places that we talked about [while discussing the timeline], were there other places that you go and meet people?*

*How did information from this place help you with home buying?*

Interviewees were informed that participation in the study was voluntary and that they could withdraw at anytime. Signed consent forms and written permission to audio record the interviews were obtained. Moreover, participants were informed that recordings would be destroyed within six weeks of transcription to protect their privacy.

### **4.2.3 Participant Observation**

Eight participant observations were conducted for this study. Observation allows the researcher to collect firsthand, open-ended information about people and places within the context of their situations (Creswell, 2005). Therefore, real estate agents holding open houses and agents hosting home buying classes were recruited for observation. Eight observations were carried out with four agents from November 12, 2012 - March 23, 2013 and from 30 - 150 minutes length, with an average of 113 minutes. Permission to observe was granted for 1 open house, 2 property showings, 1 initial client meeting and 4 home buying classes.

Observations were employed to learn about emotion, time pressure, information behavior, the theories of normative behavior and Information Grounds. To accomplish this, observations included noting what was said during information exchanges, how it was said, whether one information activity engendered others, how people reacted to information, and how effectively documents or technology facilitated information activities. Moreover, observation of body language, tone of voice and nonverbal language were conducted for evidence of emotion and time stress as participants moved through their activities and interactions with others.

Real estate agents were informed that participation in this study was voluntary and that they could withdraw at any time. Signed consent forms allowing the observations were obtained from participants.

#### **4.2.4 Field Notes**

In addition to interviews and observations, extensive note taking was undertaken during the study and commenced with the first interview. Notes were used to augment interview and observation data by recording the researcher's thoughts and impressions stemming from data collection events. Field notes were written as soon as possible following interviews, observations and ersatz home buying activities. Adopting Chatman's (1992) theory building methodology as outlined in her *Information World of Retired Women*, field notes were divided into three categories. Observational notes reported the reality as perceived by the researcher, method notes delineated the various strategies used to collect data, and theory notes were used to record emerging themes and concepts emanating from the observed events as well as noting data that fell outside of a theoretical framework.

#### **4.3 Data Analysis**

In a naturalistic study, data analysis is inseparable from data collection since analysis begins with the initial data collection event, and it occurs between data gathering episodes and during the "data analysis" component of the research project (Erlandson, 1993). Based on this notion, data was analyzed as it was collected for this study.

Additionally, preceding field notes and transcripts were coded prior to the next data collection event since delays could produce sloppy or partial coding, and thereby damage the quality and robustness of the analysis. According to Miles and Huberman (1994), coding is analysis in that codes are tags assigned to units of measure or "chunks" of descriptive or inferential data. Codes can range from single words, to phrases, complete sentences or entire paragraphs. To analyze

data for this naturalistic study, I used Miles and Huberman's (1994) iterative pattern coding technique. To begin, a provisional "start list" of codes for first-level coding was created. The list included descriptive and interpretive codes based on the conceptual frameworks, research questions and key phenomenon under study. Moreover, I generated codes as needed, while revising or deleting others. Coding for emotion was representative of this approach. For example, initial coding for *Anger* included such defining terms as annoyed, frustrated, infuriated, irritated, vexed, indignant, outraged, and dismayed. As coding progressed, the code became cumbersome as feelings of intense anger were grouped with feelings of mild annoyance. To resolve this problem, I adapted Shaver, et al's tactic (2001) in which a single emotion is assigned three levels of intensity. For the purpose of this dissertation, all emotions were categorized as strong, medium or light in nature. Therefore, *Anger* became *Strong Anger*, *Medium Anger*, *Light Anger*. A dictionary and thesaurus were employed to help define the various levels of emotional intensity. Finally, as major themes or patterns emerged from the data, more inferential or pattern codes were created and assigned.

First-level coding summarized segments of data from interviews, observations and field notes. Pattern coding, on the other hand, combined these summaries into smaller groupings or patterns. Like first level coding, pattern coding was an iterative process where I reduced large amounts of data to smaller units such as themes, explanations, relationships and emerging theoretical concepts. Areas in which patterns emerged, for example, were information behavior, emotion and information behavior, time pressure and information behavior, time pressure and emotion and Information Grounds.

Data analysis also included memoing as it goes beyond coding. Memos record "the progress, thoughts, feelings and directions of the research and the researcher (Strauss & Corbin, 1998, p. 218). Memos are primarily conceptual in nature (Miles & Huberman, 1994; Strauss & Corbin, 1998) and help to distance the researcher from raw data since memos act as "powerful sense-making tools" (Miles & Huberman, 1994, p. 72).

Purposive sampling allowed for maximal discovery of categories and patterns. Data analysis continued throughout the data collection process, with recoding of material occurring until saturation transpired. When new categories ceased to emerge from the data, sampling was discontinued and data collection was determined complete.

#### **4.3.1 Intercoder Reliability testing**

Unique labels or codes were assigned to categories identified in the data analysis process and mirrored themes presented in the codebook. Once the codebook was developed, transcripts, coding instructions and the codebook were given to three independent coders. The codebook and coding instructions are included in Appendices V and VI. Coders were directed to assign codes as deemed appropriate based on the themes represented in the codebook while keeping in mind that multiple codes may be applicable in some cases. Atlas.ti was the coding software employed for the task.

A University of Washington employee with extensive research and qualitative coding experience tested codes for emotion and information behavior. This coder tested codes on two transcripts. To examine time pressure and information behavior as well as the interaction of time pressure

and emotion codes, a PhD student with research and qualitative coding experience tested these codes on two transcripts. Finally, a second PhD student with experience in research and qualitative coding tested codes for Information Grounds and normative behavior on two additional transcripts.

Subsequently, I compared my coding decisions with those of the independent coders. A reliability score was calculated by dividing the total number of agreements by the total number agreements plus the number of disagreements (Miles & Huberman, 1994). The initial intercoder testing produced poor consensus with the emotion and information behavior coder, poor consensus with the time pressure and information behavior and interaction of time pressure and emotion coder, moderate consensus with normative behavior coding and high consensus with Information Grounds coding. Because the level of replicability failed to achieve the 90% quotient recommended by Miles and Huberman (1994), I met with the coders to refine both the codebook and coding instructions. By discussing our discrepancies, we were able to identify problems and make necessary corrections. Using an amended codebook and coding directions, retesting of the same transcripts resulted in an acceptable level of agreement between coders (Table 4).

**Table 4 Intercoder Reliability Rates**

	Initial rate of Agreement		Final Rate of Agreement	
	# Decisions	# Agreed (%)	# Decisions	# Agreed (%)
Emotion and IB - 1	55	17 (30.9%)	38	36 (94.7%)
Emotion and IB - 2	60	17 (28.3%)	25	23 (92.0%)
Time Pressure - 3	9	3 (33.3%)	5	5 (100%)
Time Pressure - 4	11	3 (27.2%)	4	4 (100%)
TNB and IG - 5	32	21 (65.6%)	24	22 (91.6%)
TNB and IG - 6	53	26 (49.1%)	31	29 (93.5%)
<b>Total</b>	<b>220</b>	<b>87 (39.5%)</b>	<b>127</b>	<b>119 (93.7%)</b>

#### **4.4 Trustworthiness**

Establishing trustworthiness in a naturalistic study enables the researcher to assert methodological soundness and ensures that one's findings are worthy of attention. Guba (1981) suggested that four criteria deal with the question of trustworthiness in naturalistic inquiry. These include credibility, transferability, dependability and confirmability. To ensure data trustworthiness of this dissertation, I used measures outlined by Guba (1981), Lincoln and Guba (1985) and discussed by Shenton (2004).

Lincoln and Guba (1985) considered credibility (internal validity) the most important aspect of trustworthiness. As such, I established confidence in the "truth" or plausibility of my findings through the following actions:

- Triangulation through multiple data collection strategies in which observations and interviews of a wide range of participants were used to develop a rich picture of people's experiences, feelings and actions
- Prolonged engagement in the field permitted me to gain a fuller understanding of the people and the phenomena under study
- Peer debriefings sessions allowed me to test developing ideas and interpretations with my supervisors
- Reflective commentary was used to evaluate the study as it developed. I also discussed the effectiveness of techniques as well as emerging themes and patterns
- Thick description was used to convey actual situations and the context surrounding them

- Previous research was examined to see if study findings relate to existing studies (Shenton, 2004)

Naturalistic inquiries are context bound and thereby incapable of offering generalizations in the rationalistic tradition. Rather, the naturalist researcher strives for transferability (external validity) or demonstrating that findings can apply to other contexts (Lincoln & Guba, 1985). To attain transferability, I employed purposive sampling to maximize the range of data collected (Guba, 1981). Additionally, I used thick description of the context (Guba, 1981) and provided data collection methods (Shenton, 2004) so that others can ascertain if my findings can be compared to theirs.

Data dependability (reliability) is showing that findings are stable and replicable with a similar population and context (Lincoln & Guba, 1985). As recommended by Guba (1981) and Shenton (2004), I used overlapping methods, wherein two methods are used in tandem so that the weakness of one method is counterbalanced by the strength of the other. I also reported in detail on the study processes so researchers can understand both the methods and their effectiveness. Intercoder reliability (Miles & Huberman, 1994) and intracoder reliability checks (Bryman & Cramer, 2009; Shek, Tang, & Han, 2006) further enhanced data dependability.

Confirmability (objectivity) speaks to the neutrality of findings rather than the biases, motivations or interests of the researcher (Lincoln & Guba, 1985). To ensure confirmability, I used triangulation to reduce bias, maintained reflexive notes to record my beliefs and assumptions about the inquiry and to create an "audit trail" so that the study's course can be traced in a step-by-step manner (Guba, 1981).

To reduce observer effect, wherein people behave differently while being observed or interviewed (AQR, n.d.), I avoided extensive note taking and remained in the background during observation events. I asked real estate agents if their interactions with clients or potential clients deviated from any other day's typical activity. With participants' consent, interviews were audio recorded, and I noted if participants appeared distracted by the recording device or seemed excessively eager to provide the "right" answer to interview questions. During analysis, I coded for type of observer effect (e.g. equipment, researcher, study) and its duration (persistent or non-persistent).

By adopting these strategies, I ensured data trustworthiness for the dissertation study.

## **Chapter 5: Information Behavior of High Stakes Decision Makers**

### **5.1 Introduction**

This chapter provides a description of the study participants and study findings regarding emotion's influence on information behavior, time pressure's effect on information behavior and the interaction of emotion and time pressure on high stakes deciders' information behavior.

### **5.2 Description of Study participants**

The homebuyers in this study were diverse in nature. Of the twenty-two participants, ten were first time homebuyers, ten were repeat buyers purchasing second or third homes, while two bought houses for investment purposes. Demographically, ages ranged from 24 to 63 years with 35 years being the average age. Ten participants were male and twelve female. Sixteen people were white, five Asian and one African American.

Participants cited many reasons for deciding to buy a house, with low interest rates a major factor. Other motivations included the desire for a larger place, being "fed up" with renting and steep rent increases, needing to be closer to work, wishing to accommodate a growing family, fulfilling the dream of owning a home, investing in real estate to earn money, and planning to stay in the area long term. For many homebuyers, the home buying process did not occur in a vacuum, as life presented concurrent challenges and experiences. Selling a home while simultaneously buying a house represented one type of ordeal for some homebuyers, whereas starting a new job, changing careers, or working long hours characterized others. Exclusive to individual homebuyers were such life events as completing a PhD, starting school, planning an

international trip, obtaining a green card and coping with the jailing of a sibling or dealing with unfriendly neighbors. With the exception of a few homebuyers, the participants were obliged to consider others when making the decision to buy a house. By far, family and partners were the largest group, which included spouses, children, parents and in-laws. Buyers also considered their pets with a focus on the number of animals in the household, their ages, sizes and exercise needs.

Finally, homebuyers listed criteria to take into account when shopping for a home. Table 5 summarizes this information; however, location of the property (24.1%) and size of the house (12.9%) stood out as most important. Being close to a job, finding a view home, living next to a park or residing in a specific neighborhood are representative of location criteria. With regard to home size, most homebuyers' desired houses outfitted with a specific number of bedrooms and bathrooms, for example, 3-4 bedrooms and two baths. For others, a place with small square footage was sufficient. Price of the home mattered 8.3% of the time, as did amenities such as a deck, a porch, secure parking, or a kitchen *that had potential*. A house that could accommodate active or aging pets (6.2%) was as important as walkability or how friendly a neighborhood is for walking. The sellable/rentable (5.5%) criteria spoke to the expected ease of selling or renting a place when the homeowner needed to move, and sale type (5.5%) was important for buyers looking to acquire foreclosed or short sale homes. Condition of home (move in ready or fixer), schools (quality), house type (e.g. new construction, or condo), accommodating children or transportation requirements (near bus line) were typically less relevant criteria to participating homebuyers.

**Table 5 Home Buying Criteria**

<b>Criteria</b>	<b>% (#)</b>
Location	24.1% (26)
Size	12.9% (14)
Price	8.3% (9)
Amenities	8.3% (8)
Accommodate pets	6.2% (7)
Walkability	6.2% (7)
Sellable/rentable	5.5% (6)
Sale type	5.5% (6)
Condition of home	4.6% (5)
Schools	4.6% (5)
House type	4.6% (5)
Other	3.7% (4)
Accommodate children	2.8% (3)
Transportation	2.8% (3)
<b>Total</b>	<b>100% (108)</b>

In sum, homebuyers were prompted to buy homes for myriad reasons, were primarily concerned with family members when making their home buying decisions and employed various criteria while house shopping with the location of a property presenting as the most important attribute of prospective homes.

With regard to the twelve stakeholders participating in the study, the number of years practicing in their chosen professions extended from 4.5 to 27 years. However, the number of years working at their current offices ranged from three months to thirteen years. Seven stakeholders had college degrees with one holding an additional graduate degree. All stakeholders indicated that they participated in job-related training to either obtain credentials or stay current with continuing education requirements. In addition to such roles as escrow agent, lender or real estate agent, one participant was a business owner, another a member of a partnership, two were facilitators in training classes, and two held such administrative roles as branch manager and sales manager.

### **5.3 The Dimensions of Emotion and Information Behavior**

Emotion is relevant to information behavior (Fisher & Landry, 2007; Kuhlthau, 1988; Nahl, 2007; Wilson & Walsh, 1996), and it was no less significant to the participants in this study. To learn about emotion, participants were asked to discuss their decisions, disclose their feelings and reveal how feelings affected their ability to find what they needed. Data analysis identified ten information behaviors and nineteen emotions, which were further subdivided into strong, medium and light categories. Table 6 summarizes the co-occurring instances of information behavior and emotion, while subsequent tables delineate data associated with specific behaviors and accompanying tri-level of emotions. For participants, using information (70.7%) was the most prevalent information behavior linked with high stakes deciding. Moreover, information use accompanied such paralleling emotions as joyful, fear, love, hate and sadness. Information sharing (12.6%), information-seeking (8.0%) and information need (5.0%) were less prevailing with fear and anger the predominant emotions felt in each category. Remaining information behaviors exhibited nominal occurrences along with the attendant emotions of trusting and anger.

**Table 6 Co-occurring Information Behavior and Emotion Summary**

Emotion	Info Use # (%)	Info use by Proxy # (%)	Info Share # (%)	Info Seek # (%)	Info Need # (%)	Info Avoid # (%)	Info Security # (%)	Info Create # (%)	Info Mgmt # (%)	Info Monitor # (%)	Total # (%)
Joyful	120 (13.2%)	—	15 (1.6%)	8 (0.9%)	2 (0.2%)	—	—	—	—	—	145 (15.9%)
Fear	85 (9.3%)	—	17 (1.9%)	20 (2.2%)	22 (2.4%)	1 (0.1%)	—	1 (0.0%)	1 (0.1%)	—	147 (16.2%)
Love	69 (7.6%)	—	5 (0.5%)	5 (0.5%)	—	—	1 (0.1%)	1 (0.1%)	—	1 (0.1%)	82 (9.0%)
Anger	52 (5.7%)	—	22 (2.4%)	12 (1.3%)	10 (1.1%)	2 (0.2%)	1 (0.1%)	1 (0.1%)	—	—	100 (11.0%)
Confident	46 (5.1%)	1 (0.1%)	7 (0.8%)	7 (0.8%)	3 (0.3%)	—	—	—	—	—	64 (7.0%)
Hate	42 (4.6%)	—	8 (0.9%)	1 (0.1%)	—	1 (0.1%)	—	1 (0.1%)	1 (0.1%)	—	54 (5.9%)
Sad	39 (4.3%)	—	5 (0.5%)	2 (0.2%)	0 (0.0%)	1 (0.1%)	—	—	—	—	47 (5.2%)
Doubtful	30 (3.3%)	—	6 (0.6%)	3 (0.3%)	2 (0.2%)	1 (0.1%)	—	—	—	—	42 (4.6%)
Calm	29 (3.2%)	1 (0.1%)	4 (0.4%)	3 (0.3%)	1 (0.1%)	1 (0.1%)	—	—	—	—	39 (4.3%)
Indifferent	27 (3.0%)	—	2 (0.2%)	1 (0.1%)	—	—	—	—	—	—	30 (3.3%)
Surprised	25 (2.7%)	1 (0.1%)	—	1 (0.1%)	—	—	1 (0.1%)	—	—	—	28 (3.1%)
Trusting	25 (2.7%)	6 (0.6%)	4 (0.4%)	7 (0.8%)	1 (0.1%)	4 (0.4%)	2 (0.2%)	—	—	—	48 (5.3%)
Appreciative	17 (1.9%)	—	4 (0.4%)	1 (0.1%)	—	—	—	—	—	—	22 (2.4%)
Judgmental	9 (1.0%)	—	4 (0.4%)	—	1 (0.1%)	—	1 (0.1%)	—	1 (0.1%)	—	14 (1.5%)
Caring	8 (0.9%)	—	10 (1.1%)	2 (0.2%)	2 (0.2%)	—	—	—	—	—	22 (2.4%)
Ambivalent	7 (0.8%)	—	—	—	—	—	—	—	—	—	7 (0.8%)
Offended	7 (0.8%)	—	2 (0.2%)	—	—	—	—	—	—	—	9 (1.1%)
Shame	4 (0.4%)	—	—	—	—	—	—	—	—	—	4 (0.4%)
Helpless	2 (0.2%)	1 (0.1%)	1 (0.1%)	—	2 (0.2%)	—	—	—	—	—	6 (0.7%)
# (%)	643 (70.7%)	10 (1.0%)	116 (12.7%)	73 (8.0%)	46 (5.0%)	11 (1.2%)	5 (0.5%)	4 (0.4%)	2 (0.2%)	1 (0.1%)	910 (100%)
<b>Total</b>	<b>643 (70.7%)</b>	<b>10 (1.0%)</b>	<b>116 (12.7%)</b>	<b>73 (8.0%)</b>	<b>46 (5.0%)</b>	<b>11 (1.2%)</b>	<b>5 (0.5%)</b>	<b>4 (0.4%)</b>	<b>2 (0.2%)</b>	<b>1 (0.1%)</b>	<b>910 (100%)</b>

### 5.3.1 Emotion and Information Use

Based on interview and observation data, the dominant information behavior for high stakes deciders was information use and this behavior occurred in tandem with an assortment of emotions (Table 7). Furthermore, each emotion identified was experienced at least once and at virtually every level.

**Table 7 Co-occurring Emotion and Information Use**

Emotion	Total # Info Use	% Specific Emotion	% Total Emotion	Emotion	Total # Info Use	% Specific Emotion	% Total Emotion
<b>Strong Joyful</b> -Joyful, delighted, ecstatic, overjoyed, enthusiastic	31	25.8%	4.8%	<b>Strong Surprised</b> -Surprised, shocked	10	40.0%	1.6%
<b>Medium Joyful</b> -Happy, pleased, relieved	66	55.0%	10.3%	<b>Medium Surprised</b> -Amazed, astonished	6	24.0%	0.9%
<b>Light Joyful</b> -Gratifying, gratified	23	19.2%	3.6%	<b>Light Surprised</b> -Unexpected perplexed, marvel	9	36.0%	1.4%
<b>Strong Fear</b> -Fear, alarmed, panicky, frightened	14	16.5%	2.2%	<b>Strong Trusting</b> -Trusting	18	72.0%	2.8%
<b>Medium Fear</b> -Nervous, worried, anxious, distressed	36	42.4%	5.6%	<b>Medium Trusting</b> -Believing	5	20.0%	0.8%
<b>Light Fear</b> -Uneasy, cautious, wary, concerned, resentful, defensive	35	41.2%	5.4%	<b>Light Trusting</b> -Unquestioning	2	8.0%	0.3%
<b>Strong Love</b> -Love, desire	17	25.6%	2.6%	<b>Strong Appreciative</b> -Appreciative	10	58.8%	1.6%
<b>Medium Love</b> -Like	46	66.7%	7.2%	<b>Medium Appreciative</b> -Grateful	5	29.4%	0.8%
<b>Light Love</b> -Inclination for	6	8.7%	0.9%	<b>Light Appreciative</b> -Thankful	2	11.8%	0.3%
<b>Strong Anger</b> -Anger, outrage, furious	15	28.8%	2.3%	<b>Strong Judgmental</b> -Judgmental	2	22.2%	0.3%
<b>Medium Anger</b> -Annoyed, irritated, exasperated, mean-spirited	15	28.8%	2.3%	<b>Medium Judgmental</b> -Disapprove	6	66.7%	0.9%
<b>Light Anger</b> -Frustrated, dismayed, resentful, impatient	22	42.3%	3.4%	<b>Light Judgmental</b> -Frown upon	1	11.1%	0.2%
<b>Strong Confident</b> -Confident, positive, optimistic	24	52.2%	4.2%	<b>Strong Caring</b> -Caring, compassionate	4	50.0%	0.6%
<b>Medium Confident</b> -Hopeful, encouraged	14	30.4%	2.2%	<b>Medium Caring</b> -Sympathetic, kind-hearted	2	25.0%	0.3%
<b>Light Confident</b> -Reassured	8	17.4%	1.2%	<b>Light Caring</b> -Attentive, concerned, interested	2	25.0%	0.3%
<b>Strong Hate</b> -Hate, abhor	4	10.5%	0.6%	<b>Strong Ambivalent</b> -Ambivalent	5	71.4%	0.8%
<b>Medium Hate</b> -Dislike, distaste	31	73.8%	4.8%	<b>Medium Ambivalent</b> -Conflicted	2	28.6%	0.3%
<b>Light Hate</b> -Aversion	7	16.7%	1.1%	<b>Light Ambivalent</b> -Wavering	0	—	—
<b>Strong Sad</b> -Sad, depressed, hopeless, despair	13	33.3%	2.0%	<b>Strong Offended</b> -Offended, insulted	6	85.7%	0.9%
<b>Medium Sad</b> -Discouraged, dispirited, disheartened	9	23	1.4%	<b>Medium Offended</b> -Hurt	1	14.3%	0.2%
<b>Light Sad</b> -Disappointed, unhappy, let down	17	43.6%	2.6%	<b>Light Offended</b> -Wronged	0	—	—
<b>Strong Doubtful</b> -Doubtful	14	46.7%	2.2%	<b>Strong Shame</b> -Shame	0	—	—
<b>Medium Doubtful</b> -Uncertain	9	30.0%	1.4%	<b>Medium Shame</b> -Regretful, remorseful	1	25.0%	0.2%
<b>Light Doubtful</b> -Questioning	7	23.3%	1.1%	<b>Light Shame</b> -Embarrassed, guilt	3	75.0%	0.5%
<b>Strong Calm</b> -Calm, assuring, peaceful	6	20.7%	0.9%	<b>Strong Helpless</b> -Helpless, overwhelmed	0	—	—
<b>Medium Calm</b> -Comfortable, comforting	14	48.3%	2.2%	<b>Medium Helpless</b> -Inept, incompetent	1	50.0%	0.2%
<b>Light Calm</b> -Relaxed, at ease, patient	9	31.0%	1.4%	<b>Light Helpless</b> -Inadequate	1	50.0%	0.2%
<b>Strong Indifferent</b> -Indifferent	11	40.7%	1.7%	<b>Totals</b>	<b>643</b>		<b>100%</b>
<b>Medium Indifferent</b> -Unconcerned	14	51.9%	2.2%				
<b>Light Indifferent</b> -Reserved	2	7.4%	0.3%				

Of these emotions, joyful feelings were experienced more than all others (18.7%), with medium joyful (55% of joyful) occurring most of all. Illustrative of medium joy or emotions such as happy, pleased or relieved was Duke who experienced a sense of relief when using a geotechnical engineer's information regarding the need to test soil on one property's slope:

*So the geotech engineer that I talked to...the main things that he wanted to do was go through all the data and historical stuff that's online and available at city hall...He said the key thing is to figure out what's happened in the past. He goes 'I don't need to take samples' because they know exactly what these hills are made of.' So I felt better about that because I felt like the other companies were trying to get me to pay for services that I really didn't need.*

With this knowledge, Duke decided to hire this engineer to investigate the slope stability of his prospective home.

In a like manner, Phil, a PhD student, was both happy and relieved to learn that his employment as a research assistant would continue once he attained his Doctor of Philosophy degree, as this meant he could remain in Seattle:

*I have family that is close by...and since my wife is Japanese, Seattle has a good Japanese community, so that's really helpful for her. It would be a lot more difficult for her to live in the Midwest and also for her family living in Japan.*

Staying in Seattle, however, necessitated that *we became more serious about trying to buy a house...as we needed somewhere to move to*. University housing would no longer be an option for Phil. Consequently, news about his extended employment contributed to his home buying decision.

Although medium joyful represented the most frequent feelings experienced in conjunction with information use, homebuyers were also subjected to strong joyfulness (25.8% of joyful). Strong

joyful was operationalized as being delighted, ecstatic, overjoyed or enthusiastic. An example of this emotion comes from 30-year-old Lara. After having offers on multiple houses rejected, Lara experienced strong joyfulness when the real estate transaction closed and she was handed the keys to her new home.

*It was totally amazing....It felt really good. You know it was a little unreal to me, like I said at the beginning of this whole process, I half didn't think it would actually happen, so when it did and we had the key. Yeah, I just had completely positive, happy feelings about it. I wasn't nervous about things to come. I was really thrilled. Couldn't wait to go back to the house and run around a little.*

By learning that the house was actually hers, Lara used the information to make plans to renovate her new domicile.

Angie, on the other hand, felt ecstatic upon seeing her loan preapproval information.

*It was kind of wild....We were preapproved for well over \$400,000. That's like a lot of money! Half a million dollars, almost. We obviously didn't want to spend that much money, but it was kind of like "WOW!" That's amazing that someone wants to give us that much money. Both my husband and I, we've had some credit issues and neither of us had much money growing up for anything like that. It's been a big turnaround as far as our credit score, and we've worked really hard to clean up our finances. So, that was awesome. Wow!*

With the preapproval information in hand, Angie was then able to determine appropriate amounts to offer on subsequent houses of interest.

Of the three levels of joyful emotion, light joyful was experienced the fewest times (19.2% of joyful). Light joyful is delineated as gratifying or feeling gratified. Illustrating light joyfulness is Dillon, who has been in the banking industry for 18 years. He feels gratified when a client is referred to him, for such news informs him that he has treated previous clients well and that he

should continue the same level of service with current and future clients. David, a first time homebuyer, felt light joy after meeting his potential lender as the lender listened to David, he seemed knowledgeable and *I didn't get a weird salesman vibe from him*. This information eventuated in David choosing this lender for his mortgage.

Subsequent to joyful feelings, fear (13.2%) was the second most common emotion experienced in tandem with information use, with medium fear (42.4 % of fear) and light fear (41.2% of fear) a virtual draw. Medium fear denotes nervous, worry, feelings of anxiousness or distress.

Exemplifying medium fear was Ann, a 47-year-old mother of two elementary school-aged children. Ann was worried about moving her youngest daughter because *"he doesn't like change much, so I knew it would be harder for her*. Ann used the information regarding her daughter's personality when deciding to relocate. She chose a neighborhood filled with children so that her daughter could make new friends and be happy. However, David, a first time homebuyer experienced anxiety when looking at his personal finances. David wanted a house but his main concern was paying the mortgage, *I wasn't sure we were going to be able to do it*, yet despite his medium fear, David decided to move forward with his home buying experience.

Light fear or feelings of unease, caution, wariness, concern, resentfulness or defensiveness were encountered in numbers similar to medium fear. Brad, an experienced banker of 25 years, demonstrated light fear when he felt concern over required documentation from a client's father. *They were borrowing funds carried against his stock, which they had told me, but the terms of the repayment were different than what he had told me*, which could generate problems in financing. As a consequence, Brad decided to do some sleuthing on the Internet to learn about

the terms of the father's loan rather than requesting additional material from Dad. Angie suffered uneasiness when accepting the help of a second real estate agent, as it seemed *like we were cheating one realtor with another*. Nevertheless, Angie decided to use the information from this agent to help her find a home.

Strong fear (16.5% of fear) entailed more intense feelings like alarm, panic or fright. Duke, a repeat homebuyer, had observed the massive 1997 mudslide that damaged a Seattle area bridge. Based on this experience, Duke articulated the fear he felt regarding the house he hoped to buy. *It looked like a good, solid house, and it had all the things on our list that we really wanted. But what scared me was the slope. Just if we had any kind of slide, that house would fall down the hill.* As a result, Duke drew on his knowledge to engage a geotechnical professional to investigate the property. Lara, who was buying a home with her partner, used input from her real estate agent when determining the offer amount for a house. The sum engendered feelings of intense fear:

*It was really nerve wracking. I couldn't believe that we had found a house already that we were willing to buy. And I had never done anything so kind of adult before. If felt like we didn't know what we were doing, but let's just do it. So, yeah, it was really, my face was really hot. I was really nervous about it, just looking at those numbers on the offer.*

In contrast to fear, many participants felt a sense of love (10.7%) associated with information use during their home buying experience. Within the trichotomy of this positive emotion, medium love (66.7% of love) or liking occurred with the greatest frequency. Representative of liking is Ann, who described what was appealing about one location. *The neighborhood is lovely. It is kind of private. We have only the one way to get in...and there's security cameras. They have covenants and restriction....We wanted to live somewhere that the houses are similar, have a*

*neighborhood feel.* Ann used the information about the neighborhood when deciding to buy her house. In a like manner, Megan liked the lender her real estate agent recommended. *So we met him and we immediately loved him. He was exactly what we could have asked for.* As a result, Megan chose this person to finance her mortgage.

Strong love or feelings of desire arose 25.6% of the time within the love category. Steven, a 39-year-old father of two, is representative of how emotion affects information behavior. Having found a house that presented many of the characteristics that were perfect for his family, for example a deck, fencing, and a sunroom, Steven exclaimed, *It was just all of these things. We were like 'Oh my gosh, oh my gosh, oh my gosh!'* And so I was just loving the place.

Consequently, information surrounding the property's attributes in conjunction with the associated emotion propelled Steven's decision to make an offer on this house. Similarly, Giovanni found a house that he *fell in love with*. The combination of strong love and the news that he could save \$12,000 in closing costs if he worked with the builder's bank guided Giovanni home buying decision.

Co-occurrence of Anger (8.0%) and information use followed that of love and information use with levels of strong and medium anger equal in frequency (28.8% of anger). Strong anger encompasses outrage and feelings of fury. Rachel, an independent escrow agent, described her anger regarding a client who was both a reluctant home seller and homebuyer.

*I just felt bad in the reaction of the agents and it supported the fact that no one was really listening to him [homebuyer/home seller]. No one was really caring about what he wanted because this should have come up when he talked to his agent about putting his property on the market....I don't see how it could have just come up with me, and never have been raised with the agent. But I can see the agent being a little bit of a bully and saying 'It's time. Your house is too small for your family. Here's this other beautiful*

*house.' She was looking at two commissions...for the sale and then the commission for the purchase. So, it was a lucrative proposition for her. That's an agent's dream.*

Based on her feelings and the information provided by the client, Rachel decided to delay closing the deal until the client assured her that he wished to proceed with both real estate transactions.

Medium anger (28.8% of anger) is symbolic of annoyed, irritated, exasperated or mean-spirited feelings. Genevieve felt irritated with the news that her counter offer on a condominium was rejected. *I was a little bit irritated because I really liked it. It seemed such a hassle and it didn't seem like the homeowners were going to budge.* Therefore, Genevieve decided that she could find another house.

Light anger was most widespread among homebuyers (42.3% of anger). Light anger is characterized by feelings of frustration, dismay, resentment and impatience. Tarrah, who was buying a home with her fiancé, felt resentment when a house seller chose to accept the offer of a married couple rather than her offer. Despite this bias, Tarrah did not stop looking for a house. Twenty-four year old Veronica experienced feelings of dismay when her father *told me that no man would want to marry a woman who bought a house on her own.* Veronica noted his sentiment, but continued pursuing her dream of homeownership by embracing her mother's encouragement.

With regard to home buying and information use, confidence (7.6%) emerged as relatively common emotion. Homebuyers felt strong confidence (52.2% of confidence) particularly with the offers they made on houses. Exemplifying this emotion is Mark, who felt good about his offer. *I wasn't just grabbing a number. I had something to rely on, past experience, and I was getting more self-confident...I was getting smarter.* Although Mark's offer was rejected, he used

the information gained from the experience to make an offer on another house. On and Pon, recent transplants to Seattle, felt similarly with their offer. *We thought it was very good. It was very close to the listing price.* Like Mark, they used the information gleaned from the rejection experience to strengthen their offer on the next house.

Feelings of hope or encouragement describe medium confidence (30.4% of confident). An example of such emotion is Veronica, who dreamed of buying a home since she was 19 years old.

*One night I was sitting at a restaurant with a friend...and she was talking about how her and her husband were going to be buying a house...She told me about this app on their phone that told you what all the houses in the area were selling for....So I downloaded it, and there were houses on there for \$75,000, \$80,000. I'm like 'really!' and then I had a mortgage calculator and it was showing your mortgage will only be like \$500 a month. And so I was like 'Well, maybe I can really do this.'*

The digital information and Veronica's feelings of encouragement prompted her to email her real estate agent and ask for help buying a home. Light confident, however, was less of a presence for homebuyers (17.4% of confident).

Feelings of hate (6.5%) together with information use occurred somewhat less than feelings of confidence. Strong hate (10.5% of hate) and light hate (16.7% of hate) were felt fewer times than medium hate (73.8% of hate). Medium hate is representative of emotions such as dislike or distaste. Duke experienced distaste while interviewing a prospective real estate agent.

*I walked into a local office and met someone there, and once he discovered that I was interested in both selling and buying, and that I was in that sort of price range. He just sort of latched onto me and was just too, I wouldn't say aggressive, but it was this assumption that I was going to be his person. I was not ready to make that sort of commitment, but it just left me, 'No, that's not the right person.'*

Genevieve, on the other hand, disliked the lingering smell in one condominium, whereas Phil found the dead bugs lying on the floor of a house distasteful. In each case, emotion and information influenced each homebuyer's decision to meet with another person or view additional property.

Feelings of sadness (6.0%) followed those of hate in frequency, with strong sadness or feelings of hopelessness, depression or despair arising 33.3% of the time in the sad category. Typifying strong sad was Megan's feeling of hopelessness when learning that the bid on her dream house was rejected in favor of someone offering more money. *Our mood went from very high to hoooooh! We dropped a lot because we knew this is just like last year. We're never going to get this house.* Megan's despondency was somewhat tempered with the news that she and her husband were the backup offer for the property. As a result, she chose to put further home buying activities on hold until she learned the outcome for this house. On and Pon, too, experienced strong sadness after learning that their offer was rejected. *I know I was really sad about not getting this place because I was really picturing us there.* Despite their emotion, On and Pon decided to continue shopping for a home.

Medium sad or feelings of discouragement, dispiritedness or disheartened were less common (23.1% for sad) for homebuyers, while light sad or emotions of disappointment, unhappiness or feeling let down occurred most often in the sad group (43.6% of sad). Pasteur, an investment homebuyer, felt *a little disappointed because I think this is a reasonable offer for the house and they just don't see eye to eye with me.* As a result, he continued his search for a worthwhile investment. Roy experienced disappointment when learning the bank would not consider his wife's income, as this policy effectively limited choices of available homes. Nevertheless, Roy

chose to work within the limitations set by his lender. Finally, Tarrah was disappointed that she and her fiancé could not get a lower interest rate on their mortgage but decided to accept the available financing anyway.

Within the doubtful category (4.7%), strong doubtful was felt most frequently (46.7% of doubtful). For example, Steven expressed strong doubtfulness when contemplating the purchase of a great house. *There's no way we're going to get this house. Someone is going to put an offer in and it's going to be gone in two days....And I remember telling my wife, 'you're crazy...we can't do this...it's too crazy. It's not going to work out.* In spite of his doubts, Steven decided to pursue buying this particular home and successfully closed the deal. Medium doubtful was experienced less (30% doubtful) and light doubtfulness was felt least of all (23.3% doubtful).

Feelings of calm were experienced 4.5% of the time when participants used information, with medium calm or feeling comfortable or comforted occurring most often (48.3% of calm). Lara and her partner were comforted when learning that the bank preapproved them for a larger loan than they expected because *the option of getting a more expensive house was there for us.*

Strong calm, on the other hand, represented 20.7% of the calm group, while light calm registered at 31.0%. Somewhat less frequent than calm was the emotion of indifference (4.2%), and medium indifferent (51.9% of indifferent) or feeling unconcerned was experienced more than strong (40.7%) or light (7.4%) indifference. On and Pon were unconcerned when their offer on a condominium was rejected *because the place was too small anyway*, so they persisted in their search for a house. During observation of a house showing, the client expressed indifference to a house being located on a busy street, since he decided that he would rent the place after living there for a few years.

Next in line for emotion frequency and information use was surprise (3.9%). Of the three levels of intensity for this emotion, strong surprise (40%) presented more frequently than medium (24.0%) or light (36.0%). Exemplify strong surprise or shock is Pasteur who exclaimed, *Wow! I only need \$200,000* when he learned that he was preapproved for a \$600,000 loan. Pasteur decided not to use the full amount of the preapproval when finalizing the purchase of his investment home. Trusting fell in line with surprise at 3.9% of the emotion and information use instances. Strong trusting (72.0%) was experienced significantly more than medium (20%) or light (8.0%) trusting. Mark articulated the intensity of trust he placed in his cousin's recommendation regarding the amount to offer for a specific house.

*If my cousin said this is white [participant refers to black bag], I would look you in the eyes and pass a lie detector test because my cousin said this is white. So, seriously, I'm not trying any hyperbole, I'm just trying to say if this is what she tells me, this is what I'm going to do.*

Given his high degree of trust, Mark decided to bid the amount his cousin suggested.

The remaining emotions co-occurring with information use presented in nominal amounts, such as 1.7% for feelings of appreciativeness, 1.4% for judgmental, 1.2% for caring, 1.1% for ambivalence and for being offended respectively. Registering less than one percent were the emotions of shame (0.7%) and helplessness (0.4%).

### **5.3.1.1 Emotion and Information Use by Proxy**

As noted above, findings indicate that emotion can affect the use of information employed for high stakes deciding in the home buying domain. Moreover, the person using the information and subsequently making the decision is doing so for him or herself. In some instances, however, emotion prompted homebuyers to relinquished their information responsibilities and rely on

trusted surrogates to use information to make decisions on their behalf, or “information use by proxy.” Such conduct is not to be mistaken for lay information mediary behavior, wherein one person seeks information for another's use (Abrahamson & Fisher, 2007; Abrahamson, et al., 2008). For instance, a daughter finds Mom a fun eggplant recipe to use for Sunday dinner. Nor should it be confused with asking someone to complete a specific task once needed information is found like asking a friend to book an airline ticket based on flight information attained for a trip to Miami.

Information use by proxy for high stakes deciding was not a common practice for homebuyers, yet it did present 1.0% of the time (Table 6). An example is Veronica, the 24-year-old first time homebuyer who *didn't understand half of what she [real estate agent] was telling me. I just went along with it.* Trust was the motivating emotion behind this behavior. *Veronica felt that's what she did for a living, so I would trust her.* For this reason, Veronica accepted her agent's choice for a lender. *She gave me the name and said, 'Hey, this person is going to be calling you to set up an appointment.* In a like manner, Veronica accepted her lender's choice regarding the most appropriate loan for her mortgage. Genevieve, also a first time homebuyer, trusted her real estate agent to find property to view since *she had a better eye for what I like.* Strong trust was apparent when Genevieve and her agent were putting together a counter offer on a condominium. When asked how Genevieve determined the amount to counter with, she explained, *I didn't. My realtor did...She still asked for a lower price than what they were asking. Like I said, I don't know. It seemed reasonable...I didn't have too much to say in it, I guess. I just trusted her.* At age 63, Mark acknowledged his inexperience with buying a home. As a result, he turned to his cousin for help deciding the amount to offer on a house. *She's a millionaire. She's very wealthy and she has a business sense. Tell me exactly what to say, and I said exactly what she told me.*

Finally, Steven acknowledged that *I never made the decision to buy a house. Somebody made it for me*. Steven referred to his wife's use of information about a house that met their family's needs and her decision to start the home buying process for this property. Steven trusted his wife's judgment about the house.

### **5.3.2 Emotion and Information Sharing**

Of the remaining information behaviors, data shows that information sharing presented a distant second (12.6%) (Table 6) to the dominant information use category, and sharing was frequently attended by such strong emotions as anger, fear and joy. Table 8 delineates the three levels of emotion experienced in association with information sharing.

**Table 8 Co-occurring Emotion and Information Sharing**

Emotion	# Info Use	% Specific Emotion	% Total Emotion	Emotion	# Info Use	% Specific Emotion	% Total Emotion
<b>Strong Anger</b> -Anger, outrage, furious	4	18.2%	3.5%	<b>Strong Love</b> -Love, desire	2	40.0%	1.7%
<b>Medium Anger</b> -Annoyed, irritated, exasperated, mean-spirited	8	36.4%	6.9%	<b>Medium Love</b> -Like	3	60.0%	2.6%
<b>Light Anger</b> -Frustrated, dismayed, resentful, impatient	10	45.4%	8.6%	<b>Light Love</b> -Inclination for	0	—	—
<b>Strong Fear</b> -Fear, alarmed, panicky, frightened	2	11.7%	1.7%	<b>Strong Appreciative</b> -Appreciative	3	75.0%	2.6%
<b>Medium Fear</b> -Nervous, worried, anxious, distressed	8	47.1%	6.9%	<b>Medium Appreciative</b> -Grateful	0	—	—
<b>Light Fear</b> -Uneasy, cautious, wary, concerned, resentful, defensive	7	41.2%	6.0%	<b>Light Appreciative</b> -Thankful	1	25.0%	0.9%
<b>Strong Joyful</b> -Joyful, delighted, ecstatic, overjoyed, enthusiastic	4	26.7%	3.5%	<b>Strong Calm</b> -Calm, assuring, peaceful	0	—	—
<b>Medium Joyful</b> -Happy, pleased, relieved	7	46.6%	6.0%	<b>Medium Calm</b> -Comfortable, comforting	3	75.0%	2.6%
<b>Light Joyful</b> -Gratifying, gratified	4	26.7%	3.5%	<b>Light Calm</b> -Relaxed, at ease, patient	1	25.0%	0.9%
<b>Strong Caring</b> -Caring, compassionate	1	10.0%	0.9%	<b>Strong Judgmental</b> -Judgmental	2	50.0%	1.7%
<b>Medium Caring</b> -Sympathetic, kind-hearted	2	20.0%	1.7%	<b>Medium Judgmental</b> -Disapprove	2	50.0%	1.7%
<b>Light Caring</b> -Attentive, concerned, interested	7	70.0%	6.0%	<b>Light Judgmental</b> -Frown upon	0	—	—
<b>Strong Hate</b> -Hate, abhor	3	37.5%	2.6%	<b>Strong Trusting</b> -Trusting	4	100.0%	3.5%
<b>Medium Hate</b> -Dislike, distaste	2	25.0%	1.7%	<b>Medium Trusting</b> -Believing	0	—	—
<b>Light Hate</b> -Aversion	3	37.5%	2.6%	<b>Light Trusting</b> -Unquestioning	0	—	—
<b>Strong Confident</b> -Confident, positive, optimistic	5	71.4%	4.3%	<b>Strong Offended</b> -Offended, insulted	1	50.0%	0.9%
<b>Medium Confident</b> -Hopeful, encouraged	2	28.6%	1.7%	<b>Medium Offended</b> -Hurt	1	50.0%	0.9%
<b>Light Confident</b> -Reassured	0	—	—	<b>Light Offended</b> -Wronged	0	—	—
<b>Strong Doubtful</b> -Doubtful	3	50.0%	2.6%	<b>Strong Indifferent</b> -Indifferent	0	—	—
<b>Medium Doubtful</b> -Uncertain	2	33.3%	1.7%	<b>Medium Indifferent</b> -Unconcerned	2	100.0%	1.7%
<b>Light Doubtful</b> -Questioning	1	16.7%	0.9%	<b>Light Indifferent</b> -Reserved	0	—	—
<b>Strong Sad</b> -Sad, depressed, hopeless, despair	2	40.0%	1.7%	<b>Strong Helpless</b> -Helpless, overwhelmed	1	100.0%	0.9%
<b>Medium Sad</b> -Discouraged, dispirited, disheartened	2	40.0%	1.7%	<b>Medium Helpless</b> -Inept, incompetent	0	—	—
<b>Light Sad</b> -Disappointed, unhappy, let down	1	20.0%	0.9%	<b>Light Helpless</b> -Inadequate	0	—	—
				<b>Totals</b>	<b>116</b>		<b>100%</b>

With reference to the sixteen emotions experienced in conjunction with information sharing, anger was most prevalent (19.0%). However, within the anger group, light anger (45.4% of anger) occurred most frequently. Exemplifying light anger or frustration is Brad, a lender putting

together a loan package for a client who was obtaining financial assistance from her father. Brad shared the following information with his client:

*Still waiting for Dad's documentation. I got a series of statements on the assets...I think the statement was 27 pages long and we got 11 pages. I said that I need 27 pages. I don't want 1-11 of 27. If the last pages say that all of these are pledged assets for another loan, or if you have outstanding balances on other margin accounts that you can't afford, we need the whole statement. [Dad said] 'Well, you're not going to get it,' and so I had to call the client at that point and I said, I've got your dad's income. That's fine. It's all very stable income, but I need to know where the money is coming from. He's given me part of the information, and he's only given part of the information for a 30 day period, and I need two months and I need all the information. I am happy to call him again, but I think I'm really upsetting him. I don't think he has any tolerance at all for the kind of hoops that we're asking him to go through in order to get this loan.*

Medium anger such as feelings of irritation or exasperation showed 36.4% of the time for the anger category and information sharing. Dillon, a lender and sales manager, revealed his moderate anger when discussing his decision to fire a client. *If the client is rude, I don't tolerate that at all. I just simply suggest that we're not a values match and my advice is to find someone else that might be able to work with you easier.* Giovanni, a young professional, expressed strong anger (18.2% of anger) when asked to repeatedly share financial information with his lender. *It was fresh hell. I am not even exaggerating...they would ask for the same thing over and over again. I got to the point where I don't want the house anymore.* Despite experiencing such harsh emotion, Giovanni chose to remain with his lender.

Fear (14.6%) followed anger in the information sharing category, with medium fear (47.1%) or feelings like of worry, anxiety or nervousness taking the top position. David epitomized this emotion as he experienced anxiety when sharing information with his lenders: *I'm self-conscious about my ability to earn...I had to put on a face and tell the bank that everything would be fine and that we'd pay the mortgage and I wasn't totally sure that was the case.* The subject of

financing also produced light fear (41.2%) or feelings of wariness and discomfort for participants. Lara felt uneasy sharing information regarding income and debts *for some financial institution's judgment* while a home buying class attendee shared that she could not be at peace unless she was assured that her mortgage would not be sold to a large, impersonal institution. Strong fear (11.7%), however, was less of an issue for those sharing information.

Subsequent to fear were feelings of joy (13.0%) and within the joyful trichotomy, medium joyful (46.6%) or happy, pleased or relieved sentiments arose. Angie experienced medium joy after telling her real estate agent that she and her husband chose to back out of a home buying deal. *As soon as we did that, we both kind of felt so much relief...we just weren't ready but we knew we made the right decision.* Anna, a real estate agent for less than five years, stated that sharing the news that a client's offer was accepted is *wonderful*, and thus engendered feelings of happiness. Strong joyful and light joyful were experienced least when sharing information.

Participants who shared information also felt the emotion of caring (8.6%) with light caring (70%) prevailing over that of strong and medium caring. Scout, a real estate agent who teaches home buying classes, was symbolic of participants who experienced light caring or feelings of interest, concern and attentiveness while information sharing. For example, Scout felt concern for eager, first time homebuyers who were ready to jump into the competitive melee surrounding an underpriced house. Scout looked at them and said, *You guys are not ready for this process. You really aren't. You're not ready to get into a multiple offer situation on the first house that we've seen. Yes, it's a cute house, but we really need to do this process right and go out and look at more properties.* Scout's light caring influenced her decision to share information that would

help her clients obtain the best deal for their situation. Unlike light caring, strong and medium caring were minimally experienced

Although twelve additional emotions were experienced with regard to information sharing, the number of instances in which hate, confidence, doubt, sadness, love, appreciativeness, calm, judgmental, trusting, offended, indifferent, or helplessness occurred were significantly less than the emotions discussed above.

### **5.3.3 Emotion and Information-seeking**

Based on data collected during interviews and observations, information-seeking (8.0%) represented the third most common information behavior associated with high stakes decision-making in the home buying domain, with the concomitant emotions of fear, anger, joy, confidence and trusting occurring most frequently (Table 9).

**Table 9 Co-occurring Emotion and Information-seeking**

Emotion	# Info Use	% Specific Emotion	% Total Emotion	Emotion	# Info Use	% Specific Emotion	% Total Emotion
<b>Strong Fear</b> -Fear, alarmed, panicky, frightened	2	10.0%	2.7%	<b>Strong Doubtful</b> -Doubtful	2	66.7%	2.7%
<b>Medium Fear</b> -Nervous, worried, anxious, distressed	13	65.0%	17.8%	<b>Medium Doubtful</b> -Uncertain	1	33.3%	1.4%
<b>Light Fear</b> - Uneasy, cautious, wary, concerned, resentful, defensive	5	25.0%	6.8%	<b>Light Doubtful</b> -Questioning	0	—	—
<b>Strong Anger</b> -Anger, outrage, furious	0	—	—	<b>Strong Caring</b> -Caring, compassionate	0	—	—
<b>Medium Anger</b> -Annoyed, irritated, exasperated, mean-spirited	5	41.7%	6.8%	<b>Medium Caring</b> -Sympathetic, kind-hearted	0	—	—
<b>Light Anger</b> -Frustrated, dismayed, resentful, impatient	7	58.3%	9.6%	<b>Light Caring</b> -Attentive, concerned, interested	2	100%	2.7%
<b>Strong Joyful</b> -Joyful, delighted, ecstatic, overjoyed, enthusiastic	2	25.0%	2.7%	<b>Strong Sad</b> -Sad, depressed, hopeless, despair	0	—	—
<b>Medium Joyful</b> -Happy, pleased, relieved	3	37.5%	4.1%	<b>Medium Sad</b> -Discouraged, dispirited, disheartened	2	100.0%	2.7%
<b>Light Joyful</b> -Gratifying, gratified	3	37.5%	4.1%	<b>Light Sad</b> -Disappointed, unhappy, let down	0	—	—
<b>Strong Confident</b> -Confident, positive, optimistic	1	14.3%	1.4%	<b>Strong Appreciative</b> -Appreciative	0	—	—
<b>Medium Confident</b> -Hopeful, encouraged	5	71.4%	6.8%	<b>Medium Appreciative</b> -Grateful	0	—	—
<b>Light Confident</b> -Reassured	1	14.3	1.4%	<b>Light Appreciative</b> -Thankful	1	100%	1.4%
<b>Strong Trusting</b> -Trusting	6	85.7%	8.2%	<b>Strong Hate</b> -Hate, abhor	0	—	—
<b>Medium Trusting</b> -Believing	1	14.3%	1.4%	<b>Medium Hate</b> -Dislike, distaste	0	—	—
<b>Light Trusting</b> -Unquestioning	0	—	—	<b>Light Hate</b> -Aversion	1	100%	1.4%
<b>Strong Love</b> -Love, desire	1	20.0%	1.4%	<b>Strong Indifferent</b> -Indifferent	0	—	—
<b>Medium Love</b> -Like	4	80.0%	5.5%	<b>Medium Indifferent</b> -Unconcerned	1	100%	1.4%
<b>Light Love</b> -Inclination for	0	—	—	<b>Light Indifferent</b> -Reserved	0	—	—
<b>Strong Calm</b> -Calm, assuring, peaceful	1	33.3%	1.4%	<b>Strong Surprised</b> -Surprised, shocked	0	—	—
<b>Medium Calm</b> -Comfortable, comforting	0	—	—	<b>Medium Surprised</b> -Amazed, astonished	1	100%	1.4%
<b>Light Calm</b> -Relaxed, at ease, patient	2	66.7%	2.7%	<b>Light Surprised</b> -Unexpected perplexed, marvel	0	—	—
				<b>Totals</b>	73		100%

Participants displayed fourteen discrete emotions in conjunction with information-seeking behavior. Of these, fear registered 27.3% of the time with medium fear or feelings of worry, nervousness, or anxiety arising most often (65.0%). Demonstrating medium fear was Angie, who worried that she would have only three days to move between the time her house closed and her lease expired. As a result, Angie emailed her landlord to see if the lease could be extended another month. In a like manner, Jo *didn't know if she would have a place to live in a month*, so when she took the rent check in, Jo asked if she could get an extension on her current lease. Genevieve, a single homebuyer, was worried that she would not be able to afford a house on her

own. Consequently, Genevieve *did a lot of looking into seeing if I'd actually be able to afford it on my own*. Genevieve learned that condominiums are *a lot cheaper*, and thus she decided to move forward with her home buying plans. Strong fear (10% of fear) and light fear (25.0% of fear), on the other hand, were less evident with homebuyers seeking information.

Anger (16.4%) followed fear as the next most common emotion associated with information-seeking, with light anger representing more than half (58.3%) of the anger category. Brad, a lender who experienced light anger or frustration regarding the federal guidelines or *roadblocks* in the industry today, expressed the following:

*All the guidelines that the feds and our wonderful elected officials have given them...When normal people look at a lot of that stuff, it's really evident to someone with the least bit of common sense that these things were written up by committee. Sometimes, it's a challenge, but relying on the folks in the office, relying on our underwriters...we can ask questions.*

Duke felt light anger or dismay with the lack of real estate inventory in the neighborhood in which he wished to buy a home, as *there's just not enough new stuff*, so each day he chose to search sites like Redfin for new properties coming onto the market. Roy was frustrated with his sluggish short sale as well as the recurring increases in his month-to-month rent, so he decided to ask if he could rent the vacant, short sale property while he waited for the transaction to close.

Participants also experienced medium anger or feelings of irritation or annoyance 41.7% of the time when seeking information. For Amy, an Israeli immigrant, annoyance was experienced when seeking information from her bank back home. *It was just annoying because of the time difference and the bank, when we called them, 'Hi, we're talking from Seattle.' 'What? I can't hear you. What?' and then she hangs up, and then you need to call again.* Whereas Jo felt

frustration with the real estate agent selling the house she had made an offer on. *He wouldn't give us information. We had to fight for every piece of information we got*, which prompted Jo's decision to engage the assistance of the problem agent's managing broker to obtain information. In contrast to light and medium anger, strong anger did not present for high stakes deciders seeking information.

The remaining feelings associated with information-seeking were less prevalent. Joyful followed anger with a 10.9% of emotional instances, while confidence and trusting were experienced equally (9.6%). Subsequent to these dually placed emotions are those of love (6.9%), calm (4.1%), doubtful (4.1%), caring (2.7%), sad (2.7%), appreciative (1.4%), hate (1.4%), indifference (1.4%) and surprise (1.4%).

### **5.3.5 Emotion and Information Need**

The next notable information behavior coupled with emotion was information need, which represents 5% of the instances encountered during participants' home buying experience (Table 6). Moreover, the feelings of fear and anger correspond to almost 70 percent of the emotion experienced in conjunction with the need for information (Table 10).

**Table 10 Co-occurring Emotion and Information Need**

Emotion	# Info Use	% Specific Emotion	% Total Emotion	Emotion	# Info Use	% Specific Emotion	% Total Emotion
<b>Strong Fear</b> -Fear, alarmed, panicky, frightened	4	18.2%	8.7%	<b>Strong Helpless</b> -Helpless, overwhelmed	2	100%	4.3%
<b>Medium Fear</b> -Nervous, worried, anxious, distressed	12	54.5%	26.1%	<b>Medium Helpless</b> -Inept, incompetent	0	—	—
<b>Light Fear</b> - Uneasy, cautious, wary, concerned, resentful, defensive	6	27.3%	13.0%	<b>Light Helpless</b> -Inadequate	0	—	—
<b>Strong Anger</b> -Anger, outrage, furious	0	—	—	<b>Strong Joyful</b> -Joyful, delighted, ecstatic, overjoyed, enthusiastic	0	—	—
<b>Medium Anger</b> -Annoyed, irritated, exasperated, mean-spirited	3	30.0%	6.5%	<b>Medium Joyful</b> -Happy, pleased, relieved	2	100%	4.3%
<b>Light Anger</b> -Frustrated, dismayed, resentful, impatient	7	70.0%	15.2%	<b>Light Joyful</b> -Gratifying, gratified	0	—	—
<b>Strong Confident</b> -Confident, positive, optimistic	2	66.7%	4.3%	<b>Strong Calm</b> -Calm, assuring, peaceful	0	—	—
<b>Medium Confident</b> -Hopeful, encouraged	1	33.3%	2.2%	<b>Medium Calm</b> -Comfortable, comforting	0	—	—
<b>Light Confident</b> -Reassured	0	—	—	<b>Light Calm</b> -Relaxed, at ease, patient	1	100%	2.2%
<b>Strong Caring</b> -Caring, compassionate	0	—	—	<b>Strong Judgmental</b> -Judgmental	0	—	—
<b>Medium Caring</b> -Sympathetic, kind-hearted	0	—	—	<b>Medium Judgmental</b> -Disapprove	1	100%	2.2%
<b>Light Caring</b> -Attentive, concerned, interested	2	100%	4.3%	<b>Light Judgmental</b> -Frown upon	0	—	—
<b>Strong Doubtful</b> -Doubtful	0	—	—	<b>Strong Trusting</b> -Trusting	1	100%	2.2%
<b>Medium Doubtful</b> -Uncertain	1	50.0%	2.2%	<b>Medium Trusting</b> -Believing	0	—	—
<b>Light Doubtful</b> -Questioning	1	50.0%	2.2%	<b>Light Trusting</b> -Unquestioning	0	—	—
				<b>Totals</b>	<b>46</b>		<b>100%</b>

The most frequent sentiment to appear alongside information needs was fear (47.8%), and within the fear group, medium fear (54.5%) was experienced more than strong (18.2%) and twice as often as light fear (27.3%). Illustrative of medium fear is Steven, who was excited about buying a specific house but felt medium fear with regard to its continued availability. Steven articulated his need for information along with the feelings surrounding that need. *Okay, what's wrong with this house? Is there a dead body buried in back here because when we found the house, it had been sitting on the market for a year... There's something going on if nobody is buying it.* Despite his worries pertaining to the house's length on the market, Steven chose to pursue the purchase of this home. For lender Brad, feelings of nervousness and worry create a need for information when waiting for the outcome of a home appraisal:

*That emotion of waiting for the appraisal to come in, to be on pins and needles. It ain't just the borrower, and it ain't just the agents or the seller, it's me as well. Because who gets blamed? Well, it's the bank and their dammed appraisal, and so there's a lot of vitriol when our appraisal comes in low.*

Light fear or emotions like unease or wariness were less of a factor for participants needing information. Megan's experience typifies the co-occurrence of light fear and the desire for information with regard to the foreclosed house they were about to buy.

*I don't want to live in a home that has a negative feel. So, when I walked into this home, the same thing goes through my mind. Why is this family moved out? There are little kid rooms. There are little switch plates. There's hand prints and things out in the shop for little kids... Why is this house vacant?*

Strong fear, however, registered at a marginal level for participants needing information while involved with their home buying experiences.

Anger represented slightly more than 20 percent of the emotion experienced concomitantly with information need. Within the anger group, light anger or frustration was felt 70% of the time, medium anger 30%, whereas no participants suffered strong anger while needing information.

Dillon's experience as a lender exemplifies the concurrence of light anger and information needs.

*The perception that mortgages are difficult to come by is, I believe, from the documentation. And the documentation did figure in on this, and so I have a buyer right now that is looking at closing next Monday, and they have attempted to send us a simple bank statement 3 or 4 times. Every format that they've sent it is unacceptable, and every format shares the exact same information. so, they had to...contact the credit union and have them mail out an updated statement to the borrowers and have it stamped so that they receive it by mail and then [the homebuyers] email it to us or fax it to us. And so that is a tremendous hassle. And a lot of buyers struggle and myself struggle with the need for that type of documentation, but that is where that reputation comes from.*

When compared to fear and anger, the eight additional emotions denote a marginal showing with less than 5 percent of instances associated with information needs.

### 5.3.5 Emotion and Information Avoidance

Information Science research indicates that people avoid information that would cause mental or emotional distress. With this in mind, this study examined the co-occurrence of emotion and information avoidance with regard to high stakes deciding. When juxtaposed to the above information behaviors, information avoidance represented just over one percent of linked instances (Table 6). Of the identified emotions, strong trust (36.4%) was most significant (Table 11).

**Table 11 Co-occurring Emotion and Information Avoidance**

Emotion	# Info Use	% Specific Emotion	% Total Emotion	Emotion	# Info Use	% Specific Emotion	% Total Emotion
<b>Strong Trusting</b> -Trusting	4	100%	36.4%	<b>Strong Fear</b> -Fear, alarmed, panicky, frightened	0	—	—
<b>Medium Trusting</b> -Believing	0	—	—	<b>Medium Fear</b> -Nervous, worried, anxious, distressed	0	—	—
<b>Light Trusting</b> -Unquestioning	0	—	—	<b>Light Fear</b> - Uneasy, cautious, wary, concerned, resentful, defensive	1	100%	9.1%
<b>Strong Anger</b> -Anger, outrage, furious	0	—	—	<b>Strong Hate</b> -Hate, abhor	0	—	—
<b>Medium Anger</b> -Annoyed, irritated, exasperated, mean-spirited	0	—	—	<b>Medium Hate</b> -Dislike, distaste	0	—	—
<b>Light Anger</b> -Frustrated, dismayed, resentful, impatient	2	100%	18.2%	<b>Light Hate</b> -Aversion	1	100%	9.1%
<b>Strong Calm</b> -Calm, assuring, peaceful	0	—	—	<b>Strong Sad</b> -Sad, depressed, hopeless, despair	0	—	—
<b>Medium Calm</b> -Comfortable, Comforting	0	—	—	<b>Medium Sad</b> -Discouraged, dispirited, disheartened	1	100%	9.1%
<b>Light Calm</b> -Relaxed, at ease, patient	1	100%	9.1%	<b>Light Sad</b> -Disappointed, unhappy, let down	0	—	—
<b>Strong Doubtful</b> -Doubtful	0	—	—				
<b>Medium Doubtful</b> -Uncertain	1	100%	9.1%	<b>Totals</b>	11		100%
<b>Light Doubtful</b> -Questioning	0	—	—				

Megan's story is instructive as regards the co-occurrence of strong trust and information avoidance. To begin, Megan's home buying experience involved offers on two houses. With the first house, Megan acted as the point of contact, responding to all manner of issues associated with the process. Megan fell in love with "the perfect house," and was confident that her offer for the property would be accepted. Upon learning that the offer was rejected, Megan grew despondent and subsequently ceased all home buying activities. The following year, Megan's home buying endeavors resumed, however, her role in the experience had changed. Megan

testified that *I let my husband do it all. I obviously was cc'd on emails, but I'd get an email and I'd vaguely read it and I'd push it aside because I knew that he was going to take care of it.*

Previous experience prompted Megan to avoid information associated with the second real estate transaction, yet she implicitly trusted her husband to manage matters concerning their side of the deal.

In addition to trust, six additional emotions were associated with information avoidance.

However, the low number of instances for these feelings suggests that they had negligible influence on the majority of participants' behavior.

### **5.3.6 Emotion and Information Security, Information Creation, Information Management and Information Monitoring**

During interviews, study participants indicated that information security, information creation, information management and information monitoring were part of their home buying experience.

However, data indicates that the behaviors occurring in tandem with emotion minimally influenced high stakes decisions as the percentages of co-occurrence ranged from 0.5 - 0.1 (Table 6).

### **5.4 Time Pressure and Information Behavior**

Like emotion, time pressure is a notable concept in the field of information behavior (Berryman, 2006; Savolainen, 2006; Wilson, 1997). As such, the study examined how time pressure affected the information behavior of high stakes deciders by asking participants to discuss decisions, indicate whether time was a factor and tell how time influenced their abilities to find what they needed. Interview and observational data revealed that homebuyers felt the greatest sense of time

pressure in conjunction with information use (51.9%) (Table 12). When asked about time pressure and subsequent decisions, Angie explained that knowing other people were interested in the same house as she prompted her decision to draw up an offer within three hours of viewing

**Table 12 Co-occurring Time pressure and Information behavior**

Information Behavior	# Time Pressure	% Time Pressure
Information Use	42	51.9%
Information Sharing	16	19.8%
Information-seeking	13	16.4%
Information Need	8	9.9%
Information Created	2	2.5%
<b>Total</b>	<b>81</b>	<b>100%</b>

the property. Previously, Angie allowed 3-4 days to pass before bidding on a home. In a like manner, David said that he *put in an offer the next day* after learning about a price drop on a desired house. David chose to make quick use of such information to prevent a competitive situation from developing which could engender losing the house. Lara, on the other hand, was informed that *there were two other offers [on a house] and that they [the sellers] were looking at them the next morning. So, we had to make a decision that evening.* Consequently, Lara used this information and subsequently had her agent submit a bid that night. Phil used information about lengthy short sales transactions to decide against pursuing them *because we had a definite time when we wanted to move, and short sales have...really indefinite closing times.* Time pressure and information use are an issue for stakeholders as well. For example, escrow agent Molly explained that

*If the document packet gets to us on Monday and the signing and closing is Tuesday, then we have to make sure that there's enough time to get them signed, get those documents copied and get half of them down to the title company for recording and the other half back to the lender.*

In lender Dillon's case, occasions arise in which homebuyers finds the perfect house at 3 o'clock Friday afternoon and, *with the market changing the way it is now, they really need to get that offer in on Saturday and then there is the transfer of pressure.* Therefore, Dillon experiences the pressure of time to generate the client's loan preapproval letter quickly.

Although much less common than with information use, participant's also experienced time pressure in tandem with information sharing (19.8%). In many instances, the sense of urgency to share information centered on financing. For example, Dillon spoke of a client who entered a competitive home buying situation when he placed a purchase offer Sunday afternoon. In addition, the client urgently needed an updated approval letter. Dillon explained that although he could not provide the necessary document that day, he could still share the requisite information: *I was available to contact the listing agent and introduce myself and let them know the strength of the [client's] file that day.* As a homebuyer, Jo also *scrambled* to assemble and share preapproval documentation with her lender so that financing information could be included with her competing offer. Conversely, real estate agent Lilly felt time pressure when sharing information as she worked to put a contract together for out of state clients.

*Time is of the essence and you just got to get it [the contract] in before somebody else. Get it to pending and so your time starts then, so just trying to get scanned stuff from Colorado over to my place before I can email to the listing agent, plus the managing broker's office, too. So you have to email it to 2 places or fax it. It's just, you want to get it done within the hour as much as possible.*

Time pressure, too, was felt with regard to information-seeking (16.4%). Like information sharing, financing prompted participants to move quickly when seeking needed information. Lois illustrated the phenomenon from a lender's perspective *because when they find their house and they're under contract and the clock ticks, then I've really got to have the stuff like yesterday,*

and the information Lois seeks comprises a long list of documents that verify income, demonstrate the viability of self-employed businesses, etc. Moreover, the sense of urgency can be amplified by other factors. For Amy, communication difficulties with her Israeli Bank complicated seeking account information for a preapproval letter, as did the need for an English translation of the obtained documents. Joe typifies self-imposed time pressure as he sought information the moment it was requested. Joe stated that

*Gathering all this information quickly was quite important...there wasn't any procrastination going on. If she [the lender] needed a certificate from the condo, I'd do it on the same day, usually right after I got off the phone. I need some condo insurance, go to Pempco right away. Give them a call and see how much it would be. Get it pulled. Just doing everything the same day they ask for it.*

Lara acknowledged that her decision to use the phone rather than in person interviews to seek information from potential lenders was driven by the issue of time, since she *really didn't have time to meet with them.*

Time pressure and information need was less of a factor for study participants (9.9%) when compared to the above information behaviors. Nevertheless, participants experienced time urgency as a self-imposed pressure and as a pressure imposed by external issues. For example, Genevieve conveyed that she did not feel rushed to submit her purchase offer, but once it was in she needed a prompt response regarding the offer's acceptance or rejection: *I was like the time was ticking and I just want to know right now.* Lara, on the other hand, needed information about available inspectors *because there is that whole time component and the house needed to be inspected within a week.* Time imposed by the home buying process factored into Lara's choice of inspectors.

Of the instances associated with time pressure and information behavior, information creation and time urgency were experienced just 2.5% of the time. Therefore, data suggests that the co-occurrence of time pressure and information creation were of negligible consequence to high stakes deciders.

### **5.5 The Interaction of Time Pressure and Emotion on Information Behavior**

Individually, emotion and time pressure do affect the information behavior of high stakes deciders. However, to learn how the interaction of time pressure and emotion shaped information behavior, participants were asked to discuss their home buying decisions and disclose how the combination of time urgency and their feelings influenced their ability to get what they needed. Participants revealed that the interaction of time pressure and emotion was a factor with regard to information behavior. Analysis of interview data distinguished five discrete information behaviors and fourteen emotions associated with high stakes decisions (Table 13). Of these, information use presented as the dominant behavior (63.3%) and fear (31.7%) showed as the prevailing emotion.

**Table 13 Interaction of Time Pressure and Emotion on Information Behavior**

Interaction of TP & Emotion	Info Use # (%)	Info Share # (%)	Info Need # (%)	Info Seek # (%)	Info Create # (%)	Total # (%)
TP & Fear	19 (31.7%)	3 (5.0%)	3 (5.0%)	4 (6.7%)	1 (1.7%)	<b>30 (50.0%)</b>
TP & Anger	5 (8.3%)	1 (1.7%)	1 (1.7%)	—	—	<b>7 (11.7%)</b>
TP & Love	5 (8.3%)	1 (1.7%)	—	—	—	<b>6 (10.0%)</b>
TP & Joyful	2 (3.3%)	—	—	1 (1.7%)	—	<b>3 (5.0%)</b>
TP & Calm	3 (5.0%)	—	—	—	—	<b>3 (5.0%)</b>
TP & Confident	1 (1.7%)	1 (1.7%)	—	—	—	<b>2 (3.3%)</b>
TP & Helpless	—	1 (1.7%)	1 (1.7%)	—	—	<b>2 (3.3%)</b>
TP & Doubtful	—	1 (1.7%)	—	—	—	<b>1 (1.7%)</b>
TP & Indifferent	1 (1.7%)	—	—	—	—	<b>1 (1.7%)</b>
TP & Judgmental	—	—	1 (1.7%)	—	—	<b>1 (1.7%)</b>
TP & Offended	—	1 (1.7%)	—	—	—	<b>1 (1.7%)</b>
TP & Sad	1 (1.7%)	—	—	—	—	<b>1 (1.7%)</b>
TP & Surprise	1 (1.7%)	—	—	—	—	<b>1 (1.7%)</b>
TP & Trusting	—	—	—	1 (1.7%)	—	<b>1 (1.7%)</b>
<b># (%) Total</b>	<b>38 (63.3 %)</b>	<b>9 (15.0%)</b>	<b>6 (10.0%)</b>	<b>6 (10.0%)</b>	<b>1 (1.7%)</b>	<b>60 (100%)</b>

Within the time pressure and fear category, medium fear was experienced more than half of the time (52.6%) (Table 14). Exemplifying the intermingling of time urgency and worry was lender Brad who was tasked with closing a loan transaction in less than the 30 days. Brad explained that

*What made it more difficult was that rather than wanting to close on the 29th, she desperately, hopelessly wanted to close on Friday the 24th so she could move in [to the new house] because her new tenants were taking occupancy[of the old house] on the 29th...and she needed to have everything out. She was concerned about coordinating it all on that Wednesday....I felt a great deal of pressure with trying to get it done in less than 30 days and actually 25 days, which was quick, certainly not undoable, but we have to have coordinated effort from my team along with the borrower and dealing with Dad was making me feel like I was really questioning if I would be able to perform for her.*

Despite experiencing both time pressure and a sense of worry regarding this specific loan package, Brad remained committed in his decision to help this client obtain financing. For homebuyer Starr, time pressure and worry combined to influence her information use. Like many homebuyers, Starr found a terrific house at a great price, however, the property had multiple

offers attached to it. After submitting an offer for \$2000 less than the listed price, her real estate agent came back to her that evening with news that *the selling agent said 'You need to make your final offer tonight.'* Feeling worried about losing the house, Starr realized *that it is now or never.* Using the selling agent's information, Starr chose to increase her offer that evening. In Angie's case, worry and a sense of time urgency along with the news of a pending open house prompted her decision to make an offer within two hours of viewing a property. Angie stated that

*We were worried that there would be [multiple offers] once they saw it at the open house because it was a nice house. So, we got our agent working on the offer. We went and drew up the paperwork within a few hours... We wanted to get there before anybody else.*

**Table 14 Interaction of Time Pressure and Emotion on Information Use**

Interaction of Time Pressure & Emotion	# Info Use	% Specific Emotion	% Total Emotion	Emotion	# Info Use	% Specific Emotion	% Total Emotion
<b>Strong Fear</b> -Fear, alarmed, panicky, frightened	5	26.3%	13.2%	<b>Strong Confident</b> -Confident, positive, optimistic	1	100%	2.6%
<b>Medium Fear</b> -Nervous, worried, anxious, distressed	10	52.6%	26.3%	<b>Medium Confident</b> -Hopeful, encouraged	0	—	—
<b>Light Fear</b> - Uneasy, cautious, wary, concerned, resentful, defensive	4	21.1%	10.5%	<b>Light Confident</b> -Reassured	0	—	—
<b>Strong Anger</b> -Anger, outrage, furious	1	20.0%	2.6%	<b>Strong Indifferent</b> -Indifferent	0	—	—
<b>Medium Anger</b> -Annoyed, irritated, exasperated, mean-spirited	1	20.0%	2.6%	<b>Medium Indifferent</b> -Unconcerned	1	100%	2.6%
<b>Light Anger</b> -Frustrated, dismayed, resentful, impatient	3	60.0%	7.9%	<b>Light Indifferent</b> -Reserved	0	—	—
<b>Strong Love</b> -Love, desire	4	80.0%	10.5%	<b>Strong Sad</b> -Sad, depressed, hopeless, despair	1	100%	2.6%
<b>Medium Love</b> -Like	1	20.0%	2.6%	<b>Medium Sad</b> -Discouraged, dispirited, disheartened	0	—	—
<b>Light Love</b> -Inclination for	0	—	—	<b>Light Sad</b> -Disappointed, unhappy, let down	0	—	—
<b>Strong Calm</b> -	0	—	—	<b>Strong Surprised</b> -Surprised, shocked	0	—	—
<b>Medium Calm</b> -Comfortable, Comforting	2	66.7%	5.3%	<b>Medium Surprised</b> -Amazed, astonished	0	—	—
<b>Light Calm</b> -Relaxed, at ease, patient	1	33.3%	2.6%	<b>Light Surprised</b> -Unexpected perplexed, marvel	1	100%	2.6%
<b>Strong Joyful</b> -Joyful, delighted, ecstatic, overjoyed, enthusiastic	0	—	—	<b>Totals</b>	<b>38</b>		<b>100%</b>
<b>Medium Joyful</b> -Happy, pleased, relieved	1	50.0%	2.6%				
<b>Light Joyful</b> -Gratifying, gratified	1	50.0%	2.6%				

Strong fear or feelings of alarm or panic represents just over one quarter (26.3%) of the instances in the fear category. Lara's story illustrates how strong fear and time pressure shaped her information behavior.

*We learned that someone had already made an offer, and that the seller would be looking at that offer in an hour. Yeah and that house had just gone on the market like I think that morning or something ridiculous like that. So, we had zero time and we spent a lot of time in the house, so we had zero time after leaving the house to make a decision. I mean we literally had to make a decision within 30 minutes. It was horrible because, also the kind of person I am, I am very methodical in my decision-making. Even just like planning trips, I research every angle. I look into everything and I need to have time to really look at everything. And so it felt just awful. And finally, I just had to go against my nature and just say, "let's just do this. I'm just going to throw caution to the wind. There's only one way we can do this, and I'm just going have faith that it will work out somehow." But yeah, it was totally against my nature to do something like that.*

Fear of losing an opportunity combined with severe time constraints compelled Lara to use limited information in her decision to submit an offer on this house.

Summing up the interaction of time pressure and light fear or feelings of concern (21.1%) is David, who felt light fear along with a sense of time urgency to complete a renovation plan for a sought after house as *the sellers were constantly threatening to back out and find someone else*. Despite the sellers' intimidation tactics, David decided to obtain two extensions so he could finish the renovation plan and purchase the property.

Anger and love were equivalent in the number of instances (13.5%) associated with time and information use. Within the anger group, light anger or frustration (60%) occurred most often. Scout, a real estate agent with seven years of experience, articulated the frustration and time pressure she felt in conjunction with a house requiring last minute a sewer line repair.

*The people that inspected found a problem, and then I had a sewer repair person come out who did the repair, and then they ended up tagging on extra cost [more than the estimate] ....It was super competitive to get into that house and I followed everything the way I should have. This was kind of close to the end. Sometimes the loan officer will require that repairs be done before we close and this was one of them. So, it's done [the repair] before we ever closed, and then the [sewer] bid doubled and that's a big deal. It*

*was very frustrating and I ended up having to put some money toward that...to make it right. We had kind of scrambled because of the quick timeline to get the inspections done and to figure things out and your contractors in...kind of three days to do all that.*

Feeling both a sense of time pressure and frustration, Scout used the information regarding the larger than anticipated sewer repair bill in her decision to help defray her client's repair costs.

Following light anger, the interaction of time pressure with strong and medium anger arose one fifth of the time (20%) for each emotion.

For the love category, the feelings of strong love or desire combined with time pressure were felt significantly more (80%) than medium love, whereas light love and time pressure did not emerge for any participant. Megan's experience is representative of the interaction of time pressure and desire:

*We knew when we both came and looked at the house on that Friday night, 'holy cow. This is actually everything we've looked for' and we didn't anticipate it being this good based on what we had read on the Internet. Immediate time pressure because, at least to me, I'm the kind of person that when I see it, I want it, I do it. No questions asked. I mean, you see in how quickly we got married. We made it work in 5 months, and I say I want to do it. I say I want to buy a car. I leave that day with a car. I don't think it's very smart, to be honest, but that's how my mind works. And so when we saw this house, I thought, 'I remembered multiple offers.' The only thing I'm thinking in my head is 'this house is good. There's got to be other offers on it.' And again, taking my prior knowledge from the year before, so I thought 'we need to look at it now. We need to contact them now and put in an offer'" before we had even thought about financing.*

In Megan's case, time pressure was self-imposed rather than compelled by external forces.

Nevertheless, the sense of time urgency interacting with the desire for the house induced Megan to use information regarding multiple offers and the condition of the property to contact her real estate agent about writing an offer.

Following love and anger is the interaction of time pressure and feelings of calm. Of the three instances of calm, participants experienced medium calm or being comfortable (66.6%) twice as often as light calm (33.3%). Mark epitomizes one's feeling of time pressure in conjunction with medium calm. He drew on previous experience for guidance when deciding to make an offer on a house. As such, Mark indicated that he felt a sense of time urgency *to get the offer in*. When asked how much time elapsed between his decision to make an offer and then submit the offer, Mark replied *half an hour to 45 minutes*. Despite feeling time pressure, Mark went on to explain how he felt regarding his decision. *I sat in my car and drove around the block and came back, and I said 'I feel comfortable giving you this offer.'*

Remaining instances telling of the interaction of time pressure and emotion are fewer in number but no less significant to the participants who experienced them. For example, Megan felt pressured by time to obtain a down payment while also feeling strong sadness (2.6%) when learning that funds she had counted on were no longer available to her.

*When I called my Grandfather...and said, 'here's our situation.' At that point, he'd already kind of heard that we were dabbling with the idea of moving out [of the condo she rented from Grandpa]. I said, "Grandpa, we want to move out. We want to get this home. If we can't, we're going to move in with Mom and Dad." And he said, 'Yes, I've been hearing that.' I said, 'So now here's my problem. I have 48 hours to come up with \$8000-9000. Are you still up for offering that money to us?' And he got very quiet, and I knew something was wrong. And after talking with me for a long time, he said 'I just don't know if I can do it right now.' And it wasn't that he didn't have the money because he did. It was that he now had this other pressure of this condo that he was really truly concerned about...And so, I just sat there on the phone and just cried to my grandfather.*

Steven faced the interaction of time pressure and feelings of strong confidence after learning that another family was interested in the house he wished to buy. Steven described the phenomena as follows: *The time urgency at that point was 'okay, now that we know these other people want it too, we have to make sure we get in there.'* When asked how he felt knowing about the other

family, Steven stated that *It made us more resolved to get that house... We got our competitive juices flowing and we're just like 'no way, we're not letting these people have this house. We saw it first!'* Steven used his collective feelings, sense of time pressure and the information concerning the other family to put together an offer that eventuated in the purchase of his new home.

Additional emotions linked to time pressure and information use were joyful, indifference, and surprise.

Next in frequency for the interaction of time pressure and emotion is information sharing (15.0%), with medium fear interacting with time pressure one third of the time (Table 15).

**Table 15 Interaction of Time Pressure and Emotion on Information Sharing**

Interaction of Time Pressure & Emotion	# Info Sharing	% Total Emotion
Medium Fear-Nervous, worried, anxious, distressed	3	33.3%
Medium Anger-Annoyed, irritated, exasperated, mean-spirited	1	11.1%
Medium Confident-Hopeful, encouraged	1	11.1%
Strong Doubtful-Doubtful	1	11.1%
Strong Helpless-Helpless, overwhelmed	1	11.1%
Strong Love-Love, desire	1	11.1%
Medium Offended-Hurt	1	11.1%
<b>Totals</b>	<b>9</b>	<b>100%</b>

On and Pon were looking to buy a condominium with two bedrooms and two bathrooms, but their searches found only one bedroom and one bath properties. Moreover, the couple failed in five previous attempts to buy a home. Given these conditions, On strove to find a larger place. On went on to explain that

*When this one went on the market, it was one day on the market..I saw pictures of it, and then I wanted to see it the next day...I was like 'I want to see this place!' and he [Pon] wasn't available, so it was just me going up to see this place. We went up to see the place and I said, 'We're putting a bid on this place right away. NOW!' So, what I did was with my phone, I videotaped and showed him [Pon] what I saw. I reassured him that this place...would be perfect...So that night, the same night, we put in papers right away and got the offer in....So that place was only on the market for two days.*

Both a sense of worry about losing another home and awareness that a larger condominium could generate a multiple offer situation contributed to On's decision to move quickly regarding the property and to share information about the condominium with her husband. This interaction combined with information sharing led to the successful purchase of On and Pon's new home.

Time pressure and strong feelings of doubt was a factor in 24-year-old Veronica's choice to share information regarding her home buying decision.

*I called my mom crying, 'I made the wrong decision. I was too quick' and by the time. Because I found my house and signed in 3 weeks' time. So I had no time to think about it, really. It just happened. So, I was upset. I made the wrong decision.*

Time pressure also interacted with the emotions of anger, confidence, helplessness, love, and feeling offended, which in turn influenced participants' information sharing.

Of the remaining information behaviors, information need and information-seeking were affected equally by the interaction of time pressure and emotion (10%) whereas, instances associated with information creation occurred 1.7% of the time. With regard to information need, medium fear was felt most frequently (33.3%) (Table 16).

**Table 16 Interaction of Time Pressure and Emotion on Information Need**

Interaction of Time Pressure & Emotion	# Info Need	% Total Emotion
<b>Medium Fear</b> -Nervous, worried, anxious, distressed	2	33.3%
<b>Light Fear</b> -Uneasy, cautious, wary, concerned, defensive	1	16.6%
<b>Medium Anger</b> -Annoyed, irritated, exasperated, mean-spirited	1	16.6%
<b>Strong Helpless</b> -Overwhelmed	1	16.6%
<b>Medium Judgmental</b> -Disapprove	1	16.6%
<b>Totals</b>	<b>6</b>	<b>100%</b>

Phil's situation embodied the interaction of time urgency and feelings of worry and nervousness as he needed information to document his job's new salary in order to qualify for a mortgage.

Phil explained:

*I did my defense for my PhD on May 31st. It was a Thursday, so I was kind of expecting to get all of my feedback on the written part of my dissertation on the same day. And then to make corrections so that, and then submit all of that to the grad school, essentially right around the same time. But one of the people from my reading committee didn't give me comments back until Sunday. He looked through all that and I think got back to me on Tuesday. And then I submitted my information to the grad school, and then I waited some time and never really heard anything back from them, and ended up talking to the grad advisor in my department and she called the grad school and got them to process my paperwork so I could get the documents back to my department so that I could transition to my new salary....The most stressful thing was just knowing that I needed to have a paystub showing my salary by the time we closed.*

Phil went on to explain how time pressure combined with a strong sense of helplessness overwhelmed him when asked if other emotions coincided with his need for information.

*I just, I didn't have any control of the situation so, there is nothing in. Like I couldn't think of any sort of way to get. I needed everything done by a certain amount of time, but I didn't see anything that I could do to speed up the process. So, I guess helpless.*

Interactions of time stress and the emotions of light fear, medium anger, strong helplessness and medium judgmental together with information need were experienced less frequently than associations with medium fear.

As with information need, the interaction of time and medium fear was associated most often with information-seeking (50%) (Table 17)

**Table 17 Interaction of Time Pressure and Emotion on Information-seeking**

Interaction of Time Pressure & Emotion	# Info Need	% Total Emotion
Medium Fear-Nervous, worried, anxious, distressed	3	50.0%
Light Fear-Uneasy, cautious, wary, concerned, defensive	1	16.6%
Medium Joyful-Happy, pleased, relieved	1	16.6%
Strong Trust-Trusting	1	16.6%
<b>Totals</b>	<b>6</b>	<b>100%</b>

Homebuyer Angie experienced the interaction of time pressure and nervousness with regard to her expiring lease, which triggered the decision to seek information. Angie recounted the incident:

*We were very worried about that because originally we thought we'd close by August 27th, and our lease is up the 31st of August. And knowing that the things don't always happen on time, I was just too worried about trying to get moved in a 3 day period, especially when I'm working again, too. So, we just, I emailed our landlord and she was very good about working with us to extend it another month.*

Jo, on the other hand, felt strong trust along with time pressure when seeking information about lenders from a friend who also happened to be her real estate agent. Jo provided the following account of the conversation: *She gave us a list. She said I worked with this person, but this is a good place. And because time was an issue we just said, 'Well, who do you work with that you trust a lot?' And so that's who we went with.*

For other participants, information-seeking episodes were shaped by the interaction of time pressure and feelings of light fear or medium joyfulness.

In the case of information creation, one instance of light fear or concern interacting with time stress was revealed. Molly, an escrow agent, expressed concern regarding document creation, as *they need to obviously be correct and to get them prepared as quickly as possible.*

## **5.6 Chapter Summary**

This chapter has provided an overview of study participants and study findings regarding emotion's influence on information behavior, time pressure's effect on information behavior and the interaction of emotion and time pressure on high stakes decision makers' information behavior. Analysis of the data revealed that information use prevailed as the most important information behavior employed by high stakes deciders, and that they experienced fear, joy and anger more frequently than other emotions associated with time pressure and information behavior. Next, I discuss findings associated with the theoretical frameworks guiding the study.

## **Chapter 6: Highlighting High Stakes Decision Maker's Information Behavior through Theory**

### **6.1 Introduction**

This chapter discusses findings regarding Chatman's Theory of Normative Behavior (TNB) and its effectiveness for explaining high stakes deciders' information behavior. Additionally, results detailing how Fisher's Information Grounds (IG) support high stakes decision makers' information behavior are presented.

### **6.2 Normative Behavior and Home buying**

The Theory of Normative Behavior provided a lens through which to examine participants' information behavior within the context of the home buying domain. Fundamental to Chatman's theory are the four concepts of social types, social norms, worldview and information behavior. Moreover, the notion of a small or social world is associated with TNB and is described as a civilization in which everyday activities occur with some level of certainty. The next section examines findings associated with the theory's key concepts.

#### **6.2.1 The Social Norms of High Stakes Deciders**

Social norms allow people to know what is considered normal and right within specific contexts by providing guidance for appropriate standards of conduct. Moreover, social norms outline boundaries of behavior that people are generally unwilling to cross. Adhering to home buying social norms was evident in this study as participants subscribed to the norms of their particular small worlds. The workplace comprised the small worlds of stakeholders, whereas homebuyers

lived in the small worlds of family units, circle of friends, local neighborhoods or their workplaces (Table 18).

**Table 18 Home buying Social Norms**

	<b>Workplace Social Norms % (#)</b>	<b>Family/Friends Social Norms % (#)</b>	<b>Neighborhood Social Norms % (#)</b>	<b>Total Social Norms % (#)</b>
<b>Stakeholders</b>	75.8% (47)	—	—	75.8% (47)
<b>Homebuyers</b>	4.8% (3)	16.1% (10)	3.2% (2)	24.2% (15)
<b>Total</b>	<b>80.6% (50)</b>	<b>16.1% (10)</b>	<b>3.2% (2)</b>	<b>100% (62)</b>

For stakeholders, laws, regulations and job-related guidelines dictated social norms. For example, escrow agents in Washington State are neutral representatives in real estate transactions. As such, escrow agents are prohibited from giving clients advice. Molly explained that *even lawyers who are operating as escrow companies still cannot give legal advice to the buyer*. New regulatory laws similarly forbid lenders from contacting appraisers. Lender Brad exclaimed that *I am subject to immediate termination if I contact an appraiser and ask for information*. Whereas income verification rules mandate that lenders take extra measures to verify one's income. Lender Lois recounted such a step: *So, if you give me your tax returns and they say you make \$50,000 a year, then I say 'Great, but will you sign this paper because I have to send this into the government now to get their copy of your tax returns to make sure you're showing me the correct ones.'*

Real estate agents subscribe to legal norms as well, for example, it is illegal to limit access to houses or certain neighborhoods based on the homebuyer's ethnicity. Ron, an experienced agent of 14 years, gave an account of a legal boundary he was unwilling to cross.

*I was referred to a client by one of my friends...She wanted to sell her house, so we were going to set up a meeting and at the very end of our conversation, she said that one thing she wanted to make sure was no black people went through her house. I go, 'Excuse me?'...I said that that is against the law. It's a federal offense if I keep them out because of their ethnicity. She goes, 'I don't care. I don't want black people in my house.' I said, 'Then I cannot represent you. Goodbye.'*

Liability concerns establish norms as well since they compel real estate agents to be present when inspectors or contractors enter a person's home. Agent Diane explained that it is part of the job but more so, *you don't want people wandering around in somebody's house that's for sale. I mean that's a liability first of all insurance-wise.*

Going beyond federal or state regulations, specific office policies create social norms for stakeholders, too. In the case of lender Lois, safeguarding client information is paramount for her mortgage bank. Electronic files are maintained on a secure server and all hard copy materials are shredded, *and everything is under lock and key during the process. So, even when I leave my office, everything is locked. There can't be social security numbers lying around.* For agent Diane's real estate office, *a licensed agent must be in the office when the office is open to answer questions for anybody who calls or walks into the office, who needs a real estate agent to help them.*

In a like manner, homebuyers conform to workplace norms as Scarlett's experience illustrates. Scarlett, a bank employee, explained that *being as I work in the mortgage industry, the company I work for, there are only a handful of loan officers that can actually do loans for other employees...they don't want everyone's personal information floating around however many offices.* Ann, on the other hand, revealed that she looked to live in a neighborhood that had *covenants and restrictions so that all houses look similar and the yards are nice.* The social

norms present in Giovanni's family stressed the importance of homeownership, as his parents gave *strong, strong encouragement. It took them six months to convince me to buy a home.*

Similarly, a cousin informed 63-year-old Mark that *you are not a child. You've got to do this yourself* when he depended too heavily on the cousin to make home buying decisions for him.

### 6.2.2 High Stakes Deciders' and their Worldviews

A worldview is an awareness of what is important or insignificant and is shared by members of a social world. People learn what they should know from the collective sense of members living in their social worlds. For decision makers in the home buying domain, worldviews presented for both stakeholders and homebuyers (Table 19). The predominant worldview emanated from

**Table 19 Home buying Worldviews**

<b>Worldview</b>	<b>Stakeholders % (#)</b>	<b>Homebuyers % (#)</b>	<b>Total % (#)</b>
Commitment to service	59.2% (61)	—	<b>59.2% (61)</b>
Homeownership desirable	—	10.7% (11)	<b>10.7% (11)</b>
Bad Reputation	4.9% (5)	2.9% (3)	<b>7.8% (8)</b>
Help	5.8% (6)	7.8% (8)	<b>16.5% (14)</b>
Community	—	2.9% (3)	<b>2.9% (3)</b>
Other	2.9% (3)	2.9% (3)	<b>5.8% (6)</b>
<b>Total</b>	<b>72.8% (75)</b>	<b>27.2% (28)</b>	<b>100% (103)</b>

stakeholders and this perspective spoke to their commitment to providing high quality services for their clients (59.2%). Lender Lois is representative of such commitment: *My number one concern is the client, so if I feel that the agent is not doing what is best for the client, I have to let the client know. I have to tell the client.* Real estate agent Anna demonstrates her commitment by taking more time to write a contract. Anna explained that *my writing an offer with my clients usually takes an hour and a half or two hours because I really want them to understand the*

*contract and understand their obligations*, whereas agent Patricia avoids dual agency or representing both a buyer and a seller for the same transaction. Patricia stated that

*I vowed from the minute I got my license that I would never do dual agency, which is totally legal...I believe that everyone needs to be totally represented in their best interest...I have never had that [dual agency] so there's never any gray area in the thoughts or anything for my clients because I represent only them and nobody else.*

Following the commitment to service worldview was that of "help" (16.5%). The help worldview was operationalized as helping oneself or accepting help from others. Lender Lois helps herself by confirming one's information: *I've learned that if I'm not sure about something and I ask someone else, I need to verify it, too...I'll try to check it out and make sure it's legit.*

Agent Lilly, on the other hand, acknowledges that she must rely on herself to generate business, *as we are all independent contractors here. I am not an employee of the office...and it's up to you to make your business.* Consequently, Lilly hosts 4-5 home buying classes per year to connect with potential homebuyers. For homebuyer Duke, self-help involved home buying research.

*I wanted to look at a lot of things just so you can sort of identify when a house is overpriced or underpriced...it's like you need to go through the experience enough times so when you are willing to put your pen to paper and sign that thing, you're fairly confident that you are doing the right thing.*

With regard to accepting help, Amy understood that her husband's employer offered help for employees who were relocating. As such, *Amy saw that this relocation process went really well and they were willing to help us with more stuff, so why not use it.*

The third most held worldview was the notion that homeownership was desirable (10.7%).

Giovanni found that *you're throwing money away in rent* view was sufficiently compelling to proceed with his home purchase, while 33 year old Genevieve was aware that she did not have to

be married to buy a house. Rather, Genevieve *just wanted to do it for me*. Amy, Joe and Pasteur embraced the viewpoint that owning a house made for a good investment, while Steven conceded that homeownership indicated that *you're going someplace now. You're changing it up, doing something different and I liked that*.

Participants also adopted the bad reputation worldview (7.8%) which they ascribe to banking institutions and their questionable lending practices during the past decade. Homebuyer Roy elected to finance his mortgage through a credit union rather than bank because *after this whole banking thing, I just really don't like what a lot of the banks did. I think they harmed the country and I feel strongly about not contributing to that*. Lender Brad acknowledged that banks are responsible for problems, yet faults others as well:

*Certainly the banks did the wrong things for the wrong reasons—greed, but the brokers did the wrong things for the wrong reasons—greed. But neither the banks or the brokers did anything that wasn't being sold to the government based on what the government criteria was, so to say that it's the banksters fault is very much simplifying a failing of our political system as well as our business.*

In a like manner, lender Lois believed *lending in general is difficult right now because there is a general feeling out there that lenders are bad...We are vilified...So it makes it hard when you're working with clients sometimes*.

Rounding out the participants' home buying worldviews were the importance of community (2.9%) and miscellaneous other viewpoints (5.8%), for example, homebuyer Megan held that *when it's [a house] foreclosed, people leave very angry...so they trash it*.

### 6.2.3 Home buying Social Types

Social types refer to the classification given to one or more individuals in a social world with specific social types adhering to social norms such as how they speak or how they interact with others. Further, social types can assist or hinder one's access to information. Data collected from participant interviews and observations identified twelve home buying social types (Table 20), moreover, one person could embody multiple social types. Homebuyers comprised the largest group (27.8%) followed by real estate agents (13.9%). Representing 12.7% of social types were educators, who use home buying classes, one on one meetings and house shopping tours to edify homebuyers about the home buying process, teach them how to determine a property's value or educate buyers to see the potential of a home rather than merely viewing its warts, for example, shag carpeting and dated bathroom fixtures. In addition, some educators take on the responsibility of training peers. Scout, a real estate agent of 7 years exemplifies the educator social type as she has taught home buying classes for the past 6 years and instructs homebuyers when showing homes. Scout explained,

*We start with about six houses for the first tour. They are going to spend a lot of time in those houses in the beginning, learning about the property, the condition. You're going to talk about the roof, the systems in the house, the basement and look for water intrusion, look around the neighborhood.*

**Table 20 Home Buying Social Types**

<b>Social type</b>	<b>%</b>	<b>#</b>
Homebuyer	27.8%	22
Real estate agent	13.9%	11
Educator	12.7%	10
Problem solver	12.7%	10
Supporter	10.1%	8
Relationship builder	6.3%	5
Lender	3.8%	3
Business owner	3.8%	3
Escrow agent	2.5%	2
Attorney	2.5%	2
Manager	2.5%	2
Other	1.2%	1
<b>Total</b>	<b>100.0%</b>	<b>79</b>

"Problem solvers" also embody 12.7% of home buying social types. Typically associated with stakeholders, problem solvers find ways to overcome difficulties encountered during the home buying process. For instance, lender Lois' problem solving involved helping a buyer establish the required *three trade lines* when his two active credit card accounts were deemed insufficient for mortgage qualification. To resolve this dilemma, Lois used a nontraditional credit line that established the homebuyer had a 12-month history of paying his cellular phone bill on time. Like problem solvers, the "supporter" (10.1%) social types are those who helped or assisted home buying participants. Both homebuyers Lara and Megan were supported when gifted with money from parents to help them buy homes, whereas Genevieve's parents supported her with information that helped Genevieve move forward in her decision to buy a home. In the case of real estate agent Diane, who experienced problems with a bank on a short sale, support came from the listing agent who *went on Twitter and complained about Bank of America and somebody called him within two hours from Bank of America and said 'What's the problem?'*

"Relationship builder" (6.3%) was the sixth most common home buying social type and is indicative of stakeholders who develop relationships with their clients, potential clients and other stakeholders. Real estate agent Anna explained the significance associated with this social type with regard to her clients.

*I think it's super important. We don't need to be best friends and hang out for drinks, but there's a high level of trust that has to be happening...I want them to trust me, definitely ask questions, challenge me, ask me why I think something. I want them to have a certain level of confidence that I know what I'm doing, that I'm going to find the answers when I don't know what I'm doing and that I'm keeping their best interest at heart at all times. If we don't have that, it does not make for a good relationship.*

Escrow agent Molly echoed the importance of as relationship building as it *key to not only the new clients, but also the existing relationships that I have.*

Less common social types were lender (3.8%), business owner (3.8%), escrow agent (2.5%), attorney (2.5%), manager (2.5%) and other (1.2%).

#### 6.2.4 High Stakes Decision makers and Information behavior

The fourth component of the Theory of Normative Behavior is information behavior. As discussed above, home buying participants demonstrated information behavior beyond Chatman's information use and information avoidance (Table 21).

**Table 21 Home Buying Information Behavior**

Information Behavior	Info										Total # (%)
	Info Use # (%)	use by Proxy # (%)	Info Share # (%)	Info Seek # (%)	Info Need # (%)	Info Avoid # (%)	Info Security # (%)	Info Create # (%)	Info Mgmt # (%)	Info Monitor # (%)	
	643 (70.7%)	10 (1.0%)	116 (12.7%)	73 (8.0%)	46 (5.0%)	11 (1.2%)	5 (0.5%)	4 (0.4%)	2 (0.2%)	1 (0.1%)	910 (100%)

Information use (70.7%) stood out as the most frequent behavior for home buying participants followed by information sharing (12.7%), information-seeking (8.0%) and information need (5.0%). Less common information behaviors were information avoidance (1.2%) and information use by proxy (1.0%). The remaining behaviors occurred less than 1% of the time and, as such, were a rare part of the home buying experience.

In addition to exhibiting multiple forms of information behavior, participants indicated that particular sources were employed when seeking material to meet their home buying information needs (Table 22). Of these sources, people were preferred more than half of the time. Illustrative of this inclination is lender Dillon who stated that if *I am uncertain about an income calculation or an interpretation of some guidelines for the programs, then I would involve an underwriter*. Escrow agent Rachel indicated that her business partner is the go to person when she needs escrow-related information, whereas real estate agent Patricia would turn to *other agents or my broker*. Homebuyers Steven, Tarrah, Phil and Pasteur sought home inspector recommendations from their real estate agents, while On and Pon found their real estate agent through a cousin's recommendation and Megan was put in touch with a lender based on her agent's referral. Giovanni relied on *people in my own socioeconomic group to obtain everything from what kind of agent, what areas to consider, the migraine of financing. I mean just a plethora of information*.

**Table 22 Home buying Sources of Information**

Source Used	#	%
People	97	51.3%
Real estate specific websites	29	15.3%
Internet in general	27	14.3%
Personal experience/education	25	13.2%
Professional materials	6	3.2%
Other	5	2.6%
<b>Total</b>	<b>189</b>	<b>100%</b>

Following people, real estate specific websites (15.3%), the Internet in general (14.3%) and personal experience (13.2%) were almost equal in importance to high stakes decision makers.

Numerous homebuyers, for example, Amy, Angie, and David, explored Redfin.com for housing information. Duke, on the other hand, liked reading the local blog, Seattle Bubble: *I was reading like a man possessed. I was consumed by it all and these charts.* Lara and Mark examined Zillow.com for information while Megan referred to such local real estate sites as John L. Scott and Windermere. With regard to the Internet in general, lender Brad *did some sleuthing on the Internet* to obtain *general terms* on a client's loan, and lender Dillon used the Internet to research employers or for *getting information about business licenses*. Lara relied on this source as part of *the initial research process...like understanding what the basic steps* of the home buying process were, whereas Roy *would search online and look at different advice about buying homes*.

Personal experience was also an important source of information for participants. Homebuyer Angie explained that her offer on a home was derived from her experience as a home seller: *we offered \$5000 less than what their list price was and asked for closing costs. We figured that was a pretty fair offer based on our home selling experience. We know that you price it a little higher than what you eventually want to sell it for.* Mark drew on the experience gained from making an offer on his first house when making another offer on a subsequent home. Moreover, escrow agent Rachel relied on her *law degree and just understanding what real property law is* to inform

a client about the legal consequences associated with backing out of both a home buying and a home selling contract. Lastly, participants employed professional materials and other sources least of all.

When discussing information sources, high stakes deciders revealed various reasons for using their chosen sources for information (Table 23). Of these, the ability to provide relevant or knowledgeable information (40.2%) registered most frequently. For example, homebuyer Phil used Redfin.com to find his lender. As Phil stated, *they list a bunch of lenders that they recommend and people that have used Redfin rate the lenders they've used, and the top rated person was from Sterling Bank, so I just sent him an email.* Tarrah, however, preferred Zillow.com for its worthwhile material: *I go to Zillow to see more photos. I noticed that Zillow posts more photos than Redfin, and then they have their estimated price so that it's kind of fun to see all those things.* For addressing difficult or problem situations, real estate agent Lillie seeks help from her managing brokers:

*Some stuff actually came up today, and we have managing brokers...and I've spoken with two of them this morning. I just pick up the phone and call them and say 'how do we do this? What's going on? What's the next issue and can you help with that? Can you fix it? What do we need to do?' So yeah...they're there for a reason. They have much more life experience than I do, and they've been doing it. One of our brokers said she's 42 years in the business.*

**Table 23 Reason for using Home buying Sources**

<b>Reason for Using</b>	<b>#</b>	<b>%</b>
Relevant/Knowledgeable information	49	40.2%
Recommended/Referral	40	32.8%
Trustworthy	9	7.4%
Attentive/Helpful	7	5.7%
Ease of use	6	4.9%
Convenient	5	4.1%
Other	3	2.5%
Fun to use	2	1.6%
Familiarity	1	0.8%
<b>Total</b>	<b>122</b>	<b>100%</b>

Following the relevant information category is that of the recommended or referral, wherein sources provided participants with recommendations or referrals. Homebuyer Ann relied on her real estate agent for a lender recommendation. As Ann articulated, *there's some Internet ones that won't close on time...so the ones that she's had good experience with, those are the ones that we decided to go with.* In a like manner, David engaged a sewer inspector based on recommendations: *it was mainly from a recommendation from Bryan [the agent]. Also, our friend who recommended him had that done based on Bryan's recommendation and saved himself \$10,000.* Joe's father and a managing real estate broker directed his son to *a smaller bank that goes through these different kind of loans than conventional ARM mortgages.* Presenting less often as reasons for using a source were trustworthy (7.4%), attentive/helpful (5.7%), ease of use (4.9%), convenient (4.1%), other (2.5%), fun to use (1.6%) and familiarity (0.8%).

### **6.3 Information Grounds and the Home buying Domain**

As noted above, an Information Ground can occur at any place and at any time. Information Grounds may be permanent or transient in nature. Moreover, people frequent an IG for a specific purpose (e.g. to pick up a book at the library) but end up sharing or receiving information with those present. For example, social interactions taking place at the library may occur with such social types as other library patrons and information flow can take myriad directions and forms. When asked about their Information Grounds, nearly all home buying participants indicated that they had multiple IGs (Table 24).

**Table 24 Home buying Information Grounds**

Type of Information Ground	#	%
Workplace	16	22.9%
Restaurant, coffee shop, bar	12	17.1%
Group social gatherings: e.g. parties, Seattle's girlfriend group events	11	15.7%
Store, shopping	7	10.0%
Workout places: e.g. gym, walking	7	10.0%
Children's activities: e.g. pool, scouts, soccer, play dates, etc.	6	8.6%
Other	5	7.1%
Educational activities: e.g. training, seminars, classes	4	5.7%
Transportation: e.g. plane, ferry	2	2.9%
<b>Total</b>	<b>70</b>	<b>100%</b>

The workplace (22.9%) presented as the most common Information Ground for participants.

Pasteur explained how his job functioned as a home buying Information Ground: *I was looking for houses online and then my colleague approached me on a different matter...and he just saw my screen, that I was looking for houses, and he just referred me [to a real estate agent].*

Subsequent to workplace IGs are restaurants, coffee shops and bars (17.1%) followed closely by group social gatherings (15.7%) such as parties or an event hosted by Seattle's girlfriend group. Stores or shopping (10%) ranked equally with workout places (10%), for example, the gym or walking around Green Lake. Children's activities like swimming at the pool or play dates comprised 8.6% of participants' Information Grounds, whereas other (7.1%), educational activities (5.7%) and transportation (2.9%) completed the list.

### **6.3.1 Support from Home buying Information Grounds**

Since participants reported visiting their Information Grounds, it was worthwhile to learn how information obtained at an IG supported high stakes decision-making. When participants were asked how IG information helped with their home buying experiences, four themes emerged

(Table 25). Almost 63% of responses indicated that Information Grounds provided useful information or advice. Homebuyer Lara reported that *they gave me tips on what to look for in a home. They advised me to focus on the location. I got advice not to select too much of a fixer upper based on a colleague's experience struggling with a fixer upper.* Steven, on the other hand, learned from a Mom at his daughter's preschool that having a mother-in-law unit to rent was a *cool* option and factored into his home buying decision. Angie acquired worthwhile information regarding a roofing contractor *from a gal at work*, whereas lender Lois picked up valuable tidbits from a dinner with Seattle Seahawks coach, Pete Carroll. Lois explained that

*Pete is such an amazing person and coach. He was giving specifics about what he learned about coaching and human behavior and what motivates. And I was sitting there the whole time listening to him and thinking, 'Wow, you could really apply this to anything in your life.' So, I thought it could help me in my business... What we do is really hard... You have to work really, really hard and even when you work really hard, you don't always get a payoff. So, you're always looking for a way to motivate yourself or to do something smarter, get business in a different way, and you're always looking for the mental edge, which in his case, it was a lot of discipline, mental discipline.*

**Table 25 Home buying Information Grounds Support**

Information Grounds Support	#	%
Provides useful information/advice	27	62.8%
Information helps to foster relationships	8	18.6%
Information provides perspective	4	9.3%
Information offers reassurance	4	9.3%
<b>Total</b>	<b>43</b>	<b>100%</b>

A distant second to useful information is the awareness that IG's help to foster relationships (18.6 %), which also speaks to the "relationship builder" social type. Typically, information used to foster relationships is social in nature and associated with small talk or casual conversation. Real estate agent Anna articulated her thoughts regarding social information: *I think it's information that connects all of us outside of what we do professionally. I think it is really*

*helpful. It is helpful in establishing relationships, kind of finding out what makes people excited, and kind of establishing a personal connection as well as a professional one.* Anna connects with clients by establishing common interests through information obtained at her IGs. Lender Brad, too, strives to connect with people: *I try to, probably more than I should for my own personal health and wellbeing, try to talk socially to people to try to break the ice. I find that if I've broken the ice with people that I can help them better if I really understand where they're coming from and what their goals are.* For Brad, social information can stem from such activities as Boy Scout meetings or skiing events. In a like manner, escrow agent Rachel is open to receiving a variety of information, which she uses on the job. For example, Rachel overheard

*a joke the other day while sitting at the pool. I couldn't stop laughing to myself. It wasn't being told to me, but I thought of it and shared it here at the signing table. The agent and the people were sharing jokes and they asked if I knew one, and I said 'yes, I just heard one at the pool.' And so I was able to share the joke...so not necessarily real estate-related, but certainly conversational-related, which I think is almost more important.*

The themes indicating that information provides perspective (9.3%) or offers reassurance (9.3%) surfaced less frequently than the previous two, yet remained significant to participants. As a lender, Dillon does not participate in the home shopping process; therefore, his home buying classes allow him to *pick up on people's perceptions. What is their view of the market? What are they actually finding as they are looking for homes...or where their stress points are in this.* Armed with such information, Dillon revamped how he worked with clients and reset their expectations beginning with the loan approval procedures. Real estate agent Anna, however, found that

*Hearing people talking to their girlfriends over coffee about what they are looking for, what they're frustrated by, what they can't find is awesome. It kind of gives you the unfiltered reminder of what it was like to be in their situation, or what my clients are going through on a regular basis. It reminds me of how they are really human beings that*

*are affected by this because I think, as agents, we can get really busy and caught up in all the paperwork and the this and the that, and we can forget that on the other side of a contract is a human who is worried, frustrated, excited, thrilled, devastated. So, it's a good reminder.*

With regard to the reassurance theme, colleagues' experiences comforted homebuyer David: *it was reassuring to know that other people had been through this and survived.* Whereas Scarlett felt *very fortunate in that I have a lot of people who are, they want to help me, to make sure that I get the loan that's best for us...because, while I work in the mortgage industry, I have only been in the mortgage industry six months.*

### **6.3.2 Unhelpful Aspects of Home buying Information Grounds**

Data suggested that Information Grounds supported participants in their home buying experiences. However, counter examples to such findings also emerged (Table 26). Of these, the concept that information obtained at IGs was untrustworthy (36.8%) predominated. For homebuyer Mark, trust was an issue. Mark explained that *I asked people that I knew I could trust. I didn't want to ask just any Tom, Dick or Harry at Starbucks, 'Oh, give me a name' because they're going to give me a name of someone they're comfortable with.* As such, Mark stressed that he only trusted information given to him by his cousin, lawyer, realtor, a friend from church and his home inspector.

**Table 26 Home buying Information Grounds Unhelpful**

<b>How Information Grounds Unhelpful</b>	<b>#</b>	<b>%</b>
Information is untrustworthy	7	36.8%
Seeking/Sharing information at IG is not in one's nature	5	26.3%
Information is not appropriate	4	21.1%
Information is not useful	3	15.8%
<b>Total</b>	<b>19</b>	<b>100%</b>

Lender Brad mistrusted information from people in his continuing education class because

*The talk after is less than helpful for some of these because the talk during the breaks, you have people literally chasing you down trying to get you to buy the product. You'll get people who are plants in the class...who are quote unquote taking the class and asking the right questions, who are actually people trying to sell this Affinity Sales marketing campaign...trying to get people excited to go buy the product, so you can waste a day on some of them.*

For some participants, seeking or sharing information at IGs was not in their natures (26.3%). On and Pon, who moved to Seattle from New Jersey, stated that *we don't typically start up conversations with strangers because that's kind of like where we're from, like that's not something we really do*. Homebuyer Roy echoed this sentiment: *I don't usually just talk to strangers too much. It's one of those holdovers from a little kid*. In the case of Veronica, she tries *not to talk to people during breaks at work. Some of the people know that when I'm there in the mornings...they know not to talk to me*.

In other instances, the nature of the information obtained at an Information Grounds was neither appropriate (21.1%) nor useful (15.8%). For real estate agent Ron, seeking or sharing business [home buying] information at his Rotary Club can result in a *hefty* fine. Conversely, homebuyer Tarrah does not *want to arouse weird feelings between friends* during social gatherings, as some are not in a financial position to buy a home. With reference to unhelpful information, homebuyer Genevieve, who lives in Seattle, summed up this notion: *I work in Lynnwood and I don't live there. People had local things to offer*.

## **6.4 Chapter Summary**

This chapter discussed findings regarding Chatman's Theory of Normative Behavior and its effectiveness at explaining high stakes deciders' information behavior. More specifically,

Chatman's concepts of social types, social norms, worldview and information behavior were examined. Additionally, results detailing how Fisher's Information Grounds supported high stakes decision makers' information behavior as well as counter examples to this notion were presented.

Although Chatman's TNB and Fisher's Information Grounds theory were examined separately, it should be noted that each framework enhance the other. Both concepts are dependent on the co-presence of people and the context surrounding information behavior in everyday life. However, what distinguishes one concept from the other is that people inhabit their social worlds, whereas they visit their Information Grounds.

Next, I discuss the major findings of this study.

## **Chapter 7: Discussion and Summary**

### **7.1 Experiencing Information**

This study explored how high stakes decision makers experienced information when emotion, time pressure or the interaction of both occurred during their home buying experiences.

Furthermore, the dissertation's guiding theories were examined for their ability to explain and support participants' information behavior when making high stakes decisions. The study's major findings are summarized below and discussed in-depth in this chapter.

- Information use generates emotion, creates time pressure, triggers the interaction of time pressure and emotion
- Emotion, time pressure along with the interaction of time pressure and emotion propel non-use information behavior (e.g. seeking, sharing, needing, etc.)
- Emotion prompts "information use by proxy"
- Emotion and time pressure can alter one's information behavior
- The Theory of Normative Behavior supports information behavior but also demonstrates limitations with regard to high stakes deciders' IB
- The theory of Information Grounds does not support all high stakes decision makers' information behavior

#### **7.1.1 How Information Use affects High Stakes Decision Makers**

As discussed above, information behavior encompasses many facets such as information needs, seeking, sharing, etc.; moreover, associations can be drawn between the various forms of IB and emotion or time pressure (Case, et al., 2005; Julien & Michels, 2004; Nahl, 2004; Nahl & Bilal,

2007). Given these connections, it is notable then that the relationship between information use, emotion, time pressure as well as the interaction of both characteristics varies from other information behaviors. When asked about their home buying experiences, high stakes deciders revealed that information use stimulated emotion, created time pressure and brought about the interaction of time pressure and emotion.

With regard to emotion and information use, for example, homebuyer Angie felt strong joy and enthusiasm about a house after viewing the property. Angie explained that

*when you walked in the top-level, there was this big wrap around deck and kind of a peekaboo view of the sound, which was really awesome. And then it has this funky 70s hanging fireplace in the living room which, it was just pretty cool...the view was great. There is a big deck out there...the kitchen was pretty outdated...if we redid the kitchen and knocked down the wall between the kitchen and the living room, you could see all the way out to the sound. And we just had this vision of having this cool open living room and this cool kitchen where you could see the water.*

David, however, felt disappointed after learning that he had not qualified for a 203 K renovation loan, as is *meant that we're going to have to pay steeper mortgage insurance, which meant another couple hundred bucks a month for a longer period of time.* Jo, too, suffered disappointment after hearing that her offer on a house was rejected because *now we're not going to be able to afford anything in this neighborhood if we couldn't buy that one.* Genevieve, however, experienced dislike for a condominium after encountering a smell *like somebody cooked...I didn't like that.*

Like homebuyers, information use generated emotion for stakeholders, as was the case when a homebuyer contacted real estate agent Anna. The homebuyer informed Anna that *I'm really serious about buying. I remember meeting you at this home in Ballard so long ago...I had a*

*great experience meeting you, and I would like to work with you.* When asked how she felt about receiving such news, Anna replied, *It's the best call of your week. It really is, not just for the financial part, but it is really nice when someone remembers you from six months or a year ago and feels like they had a good experience...It's really nice.* Strong surprise was the reaction agent Patricia experienced after hearing that a home's appraisal came in \$15,000 less than the accepted offer. Patricia stated that *that was a shocker to my buyers, to me, to the listing agent...I didn't expect that. There's no way!* Escrow agent Rachel, on the other hand, experienced anger after hearing a client disclose that he did not want to sell his current home and buy another. As Rachel said, *I felt like he may have been forced into a decision. I feel the agent probably pushed him a little too hard, a little too fast...I got the sense that no one was listening to him.*

In a manner similar to emotion, information use created a sense of time urgency for high stakes deciders. For instance, homebuyer Lara felt pressured to submit an offer on a house after learning that *there were two other offers and they [the sellers] were looking at them the next morning. So, we had to make a decision that evening.* In the case of Joe, who was looking to invest in property, self-imposed time pressure was experienced after viewing a condominium that he determined was a *good deal.* Joe *decided there and then, to go back home, draft it up,* and make the offer the very same day. Angie used information obtained from viewing a home along with news of a pending open house to prompt her submission of an offer *within the next few hours.* Awareness of an upcoming deadline demonstrated how escrow agent Molly experienced externally imposed time pressure. As Molly explained, when the document package arrived on Monday, *and the signing and the closing is on Tuesday, then we have to make sure that there's enough time to get them signed, get those documents copied and get half of them down to the title company for recording and the other half back to the lender.* A sense of external time pressure

can similarly present for real estate agents needing to accommodate clients' requirements. Agent Patricia described such a situation with homebuyers who were *both professional people, so they don't have a lot of time*. As a result, Patricia felt a sense of time urgency with this couple when it came to showing homes. The clients specified that *'I want to see it tonight at 6:00 pm, period.'* *And I'm like, well... 'No, we want to see it now,' so they were a little bit demanding.*

Although less common than the stimulation of emotion or the creation of time pressure, the interaction of these two elements was correspondingly significant to high stakes decision makers. Moreover, the emotion felt during the interaction can land anywhere within the strong, medium or light range. Real estate agent Anna expressed medium anger or exasperation while simultaneously experiencing a time pressure situation. While using the information that her clients found a house that *had actually just come on the market* and there was *at least one other offer*, Anna was compelled to write their *offer pretty quickly*. At the same time, Anna acknowledged that *it can be really stressful for me. Real estate doesn't care about things like putting your son to bed or showing up at your mother's birthday party or whether or not you've already put in a 14 hour day and you haven't seen your husband for 3 days.*

Whereas lender Brad felt medium doubt or uncertainty while working under a client's deadline. Brad learned that his client needed to close early so that she could vacate her old home before tenants took occupancy of the property.

*She really wanted to have the house, to be able to get in and have the weekend to start the move process. And so on this particular one, I felt a great deal of pressure with trying to get it done in less than 30 days and actually 25 days, which was quick, certainly not undoable but we have to have coordinated effort from my team along with the borrower and dealing with dad was making me feel like I was really questioning if I would be able*

*to perform for her or not because I was losing a day here and a day there due to dad dragging his feet.*

Escrow agent Rachel, however, conveyed light anger or frustration when other stakeholders create time pressure issues through their mistakes or unpreparedness, thus forcing closing dates to be changed. Lenders were cited as the most frequent offenders.

*Either they can't generate their documents in time to be signed, in time to get the documents back to review, to close. Or the appraisal isn't done, or it needs to be redone, or the file is stuck in underwriting, but it's almost always because of a lender problem. Very frustrating because then, no matter how organized we are, no matter how prepared we are, at the end of the day there is this made crunch, time wise, and it reflects poorly on us...All that the buyer knows is 'Darn it. Rachel called me at 4:00 for a signing appointment and I have to leave work. Why couldn't she have called me yesterday?' When in reality, I couldn't have because I didn't have any loan documents.*

After viewing a foreclosed home, Megan exclaimed *Holy cow! This is actually everything we've looked for, and we didn't anticipate it being this good based on what we had read on the Internet.* Information about the property triggered Megan's strong love or desire for the house as well as generating *immediate time pressure*, since she thought *there's got to be other offers on it...we need to contact them now and put in an offer*, which was done before any consideration was given to financing the home. The interaction of time pressure and emotion presented for On and Pon following their fourth attempt to buy a condominium. Accompanying the time urgency was the strong fear that they might lose yet another bid. On explained that *after we got rejected, we really wanted #5 because we knew we lost one chance and we didn't want to lose #5 especially...We had to rush everything, since our realtor was part-time. He could only do things at night, so we're really making sure all the papers are signed and he's gotten it.* For a number of homebuyers, however, the housing market shifted during their home buying experience. Illustrative of this phenomenon was Starr, who embraced a "leisurely" two-week timeframe

before deciding to place an offer on the first house she wished to buy. Conversely, Starr took one day to submit an offer on a second house. Starr was excited about this property as she *didn't realize that there was going to be something of this quality at that price...When I first saw the house, I was like 'we have to make an offer right now.'* Information regarding the quality and price of the house combined with multiple offer reports engendered feelings of strong joy and enthusiasm along with time pressure to get an offer in. Like Starr, Mark made offers on numerous houses. When asked about his decision regarding the third house, Mark confessed to *learning from my mistakes...and so I knew exactly what I wanted...I decided I can handle this and I won't be overwhelmed. I am self-confident, smart enough now, I can handle this.* Consequently, Mark's previous home buying experience left him feeling calm making an offer on a third home. Moreover, Mark faced time pressure of his own making by deciding to submit an offer within 45 minutes of viewing the house.

### **7.1.2 Compelling Influence behind non-Use Information Behavior**

Unlike information use, which can generate emotion, introduce a sense of time pressure or stimulate the interaction of these two elements, a substantially different effect presented when non-information use behaviors were involved during high stakes decision-making. In such instances, emotion and time pressure propelled and shaped one's information behavior.

Illustrative of this phenomenon is homebuyer Angie, whose aversion to rehabilitating a foreclosed house influenced her avoidance of information associated with such properties. In a like manner, Duke's frustration with features in his current home empowered him to create *a top ten list of things that we wanted, what we were really looking for in a house.* Lender Dillon, however, felt nervous regarding his need for information from underwriters because *a lot of the*

*time, once you get to final underwriting there are additional conditions needed, so we may need another pay stub or explanation, what if there is something I missed in my write-up.* Homebuyer David's panic, on the other hand, shaped his information management. David explained that *for many estimates, contracts, permits, etc., we ended up piling them on any number of flat surfaces in our houses. Every couple of weeks or more, I would freak out that I didn't know where everything was, then go through the piles and try to group things together by type.* For Angie, her fondness of Redfin contributed to her information monitoring. As Angie noted, *I'm kind of addicted to Redfin.com...they're awesome...I have the App on my iPad and on my phone...Once you picked out the neighborhoods that we thought were going to work for us, just do searches in those areas.* Phil indicated his light love for his lender's secure servers and their information security benefits *because I don't really like normal mail...I don't use my email to send my social security number or things like that. I really liked that.* With regard to information sharing, escrow agent Rachel exhibited judgmental feelings when telling both buying and selling agents that their client was experiencing seller's remorse. Rachel stated that *the agents went ballistic, absolutely ballistic. The listing agent said 'oh, now is not the time,' and I kept thinking 'it's all about the money. You don't want to lose your commission. It's all about the money.'* For Roy, whose resentment over an ever-increasing month-to-month rent burden, prompted him to ask if he could move into a desired short sale house while his real estate transaction ground through the system.

Time pressure, like emotion, similarly compelled high stakes deciders' information behavior. For instance, escrow agent Molly explained how time pressure prompted her creation of a quitclaim deed for a client traveling outside the country:

*Preparing a quitclaim deed for people that are standing by waiting for legal documents out of the country, that creates time pressure [because] you have somebody standing by a computer waiting for the document to be prepared...it is a matter of being in this chair at that computer at that moment to get that created for them.*

Time pressure, too, provoked an urgent need of information as lenders Lois and Dillon can attest. For example, Lois needed a client's documentation *by tomorrow in order to get you through your contract*. In the same way, an immediate need for documentation presented for Dillon whose client required an instantaneous preapproval letter. Dillon noted that *I need your application right now and I need you to be gathering all of this documentation in the next hour or two*. Genevieve, conversely, induced her own form of time pressure with the need to learn the outcome of a submitted offer. As Genevieve said, *the time was just ticking and I just want to know, right now!*

Like information needs, participants' information-seeking was driven by time pressure as evident with homebuyer Joe who described his seeking as *pretty much crunch time*. Moreover, Joe's time pressure was self-imposed, since

*there wasn't any procrastination going on. If she needed a certificate from the condo, I'd do it on the same day, usually right after I got off the phone. I need some condo insurance, go to Pempco right away. Give them a call and see how much it would be. Get it pulled. Just doing everything the same day they asked for it.*

Alternatively, external time pressure motivated David to scramble in his efforts *to contact contractors and get estimates and do some design for the kitchen layout* after his offer was accepted, since a renovation plan contingency was constrained by the lender's deadline.

Real estate agent Lilly's experience exemplifies time pressure's influence on information sharing, as *time is of the essence*. Lilly reported that it is crucial to get her client's contract to pending, therefore, important documents must be sent to the listing agent and Lilly's managing broker: *you have to email or fax it to two places. You just want to get it done within the hour as much as possible*. Time stress and information sharing came into play for homebuyers as well. For Ann, the desire to include a preapproval letter with a purchase offer encouraged Ann to quickly share financial documents with her lender. Jo and Phil echoed this sentiment as they, too, rushed to provide lenders with relevant financial information.

A less common but equally significant factor guiding participants' information behavior was the interaction of time pressure and emotion. Similar to the stand-alone attributes of emotion and time pressure, the interaction of both factors motivated high stakes deciders' need for information as well as how they sought, shared and created information during their home buying experiences. Evidence of such impact came from homebuyer Phil, who experienced both anxiety and a strong sense of helplessness in his urgent need for information combined with the pressing requirement to share information. Phil explained that his situation revolved around such life events as defending his dissertation, attaining a PhD and transitioning to a higher pay scale while simultaneously buying a home. More specifically, Phil had to share information showing that he earned doctorate level income rather than the pay of a graduate student. Because of this requirement, a cascade of time sensitive behaviors was set in motion, beginning with the need for feedback on his dissertation:

*I was kind of expecting to get all of my feedback on the written part of my dissertation on the same day[Friday], and then to make corrections and then submit all of that to the grad school...but one of the people from my reading committee didn't give me comments*

*until Sunday. He looked through all that [corrections] and I think got back to me on Tuesday.*

In this instance, Phil's need for information along with the obligation to share information engendered feelings of anxiety as one behavior was dependent on the other. Consequently, when Phil received his final feedback, he submitted the dissertation to the university graduate school, which prompted additional time pressure episodes of information need and sharing. Phil stated,

*I submitted my information to the grad school, and then I waited some time and never really heard anything back from them, and ended up talking to the grad advisor in my department. She called the grad school and got them to process my paperwork so I could get the documents back to my department so that I could transition to my new salary.*

Phil then discussed the emotions he experienced during this time sensitive process; *I just didn't have any control of the situation, so there is nothing in, I couldn't think of any sort of way to get. I needed everything done by a certain amount of time, but I didn't see anything that I could do to speed up the process. So, I felt helpless...anxious.*

With reference to information-seeking behavior, homebuyer Angie suffered the interaction of time pressure and worry as her apartment lease was soon to expire. Consequently, Angie was motivated to ask her landlord about extending her current lease: *I was just too worried about trying to get moved in a three day period...so I emailed our landlord.* In Jo's case, because *time was an issue* and she believed her real estate agent trustworthy, Jo was encouraged to solicit a recommendation from her agent for a suitable mortgage lender. Molly, however, felt both time pressure and concern as she endeavored to create accurate escrow documents *as quickly as possible* for her clients.

### 7.1.3 The role of Information Use by Proxy

High stakes decision makers have demonstrated their inclination to engage in various forms of information behavior during their home buying experiences. A few participants, however, revealed an additional behavior in which they elected to forgo their information responsibilities and enlist trusted surrogates to use information to make decisions on their behalf or "information use by proxy." Moreover, emotion played a key role in homebuyers deferring their information use to others. Twenty-four year old Veronica exemplifies the phenomenon of information use by proxy as she permitted home buying stakeholders to make decisions for her. For example, trust factored into obtaining a mortgage. As Veronica explained, *half of what the mortgage lender, I didn't understand half of what she was telling me. I just went along with it. So, it probably isn't the smartest idea, but I felt that's what she did for a living, so I would trust her.* In a similar manner, Veronica trusted her real estate agent's use of information to determine the amount to offer on a desired condominium: *I was comfortable with her and I trusted her because I had never done that before. She knew exactly how much money I had... When she told me that we could offer \$85,000, I thought, 'okay, I'll do that.'* Genevieve, too, trusted her agent to determine the proper amount to offer *because I didn't have too much say in it, I guess. I just trusted her.* As a first time homebuyer, Mark experienced multiple emotions during his home buying experience, which precipitated his information use by proxy. Once Mark made the decision to buy a house, he worried that *I'm going to find some slick realtor who is going to talk me into something I don't want and can't afford.* Furthermore, Mark feared that people would take advantage of him given his home buying naiveté, *like when somebody is foundering in the ocean, the sharks start circling.* Consequently, Mark turned to a trusted cousin. After describing the house to her, Mark implored his cousin to *tell me the offer...tell me exactly what to say, and I said exactly what she*

*told me to say*. As indicated by these examples, information use by proxy represented an important information behavior for some high stakes deciders.

Proxy studies are not new to information science as previous inquiries have examined the notion of lay information mediaries or seeking information for the benefit of others (Abrahamson & Fisher, 2007; Abrahamson, et al., 2008). Typically, these lay information mediaries seek information with or without being asked and tend to do so for people they care about. A representative scenario of such behavior would be finding diabetes information for a parent. Research has also found that proxies seek information on behalf of strangers, for example, helping a fellow library patron find a flight to his or her desired destination (Becker et al., 2010) Information use by proxy, however, is an emergent and novel concept within information science.

Although findings tie information use by proxy to emotion, it is worth noting that the behavior may similarly present when experiencing time pressure, information use by proxy may be viewed as a time saving strategy. In such an instance, the stakeholder surfaces as an important surrogate during the home buying experience.

#### **7.1.4 Altering Information Behavior**

Study findings suggest that emotion, time pressure and the interaction of the two elements had the ability to influence the information behavior of high stakes decision makers. Moreover, findings intimate that such factors have the capacity to “alter” participants' information behavior.

Emotion presented as the most common factor capable of modifying one's information behavior. Illustrating this phenomenon was Megan, who took responsibility for information seeking and sharing during her initial home buying experience, which ended unfavorable. For Megan, this negative outcome was demoralizing, and thus prompted a change to her home buying-related information behavior. With the next home buying attempt, Megan elected to avoid information by shifting all information-seeking, sharing and managing responsibilities to her husband. Megan stated that *Yes, I let my husband do it all. I obviously was ccd on emails, but I'd get an email and I'd vaguely read it and I'd push it aside because I knew that he was going to take care of it.*

On and Pon experienced a similar shift in information behavior after the offer on a fifth home was rejected. On explained that she *was devastated. I was like, 'Oh, my gosh. Not another one!' ... We lost the bid only because they were able to put down over \$120,000 down payment...I'm like, 'Oh my gosh, it's hopeless.'* Given such feelings of despair and hopelessness, On temporarily avoided further home buying information: *I refused to look at the time. I refused to look and then I think it was about three weeks or so afterwards that I started picking back up.*

Conversely, homebuyer Mark progressed from employing information use by proxy to using information by and for himself. Mark ascribed this change in behavior to having gained experience and developing feelings of confidence from his initial home buying attempt. Consequently, when a later home buying opportunity arose, Mark used what he had learned from house number one, asserting that *I felt good because I wasn't just grabbing a number. I had something to rely on, past experience. And I was getting more self-confident...I was getting smarter.*

Time pressure similarly altered information behavior, as time did not always permit participants to act in an expected manner. For example, homebuyer Angie needed information regarding the condition of a house, and her predictable IB was to seek such information by way of a home inspection. However, Angie altered this behavior as a two-day deadline to accept the seller's offer precluded sufficient time for the inspection to occur. Real estate agent Franklin substantiated that time urgency prevents information-seeking, as *sellers are setting review dates, which creates excitement and it discourages contingencies based on inspections. So, you can do a pre-inspection but often there isn't time to get one done before the review deadline.* Hence, homebuyers are opting out of the procedure. For Phil, price was an important home buying consideration. Consequently, Phil looked for homes that fell within his price parameters, which included move in ready, short sales and foreclosed properties. Despite such a concern, Phil changed his information-seeking behavior when faced with an expiring apartment lease: *we avoided short sales because we had a definite time when we wanted to move, and short sales have...really indefinite closing times.* Real estate agent Anna changed her method of information sharing because of time pressure. Anna explained that

*We wrote the contract differently these other times. Previously we had actually met face to face to get paperwork done, but in this case we would have done everything by fax and email because there wasn't that opportunity. We're in such a tight deadline that we had to get things done quickly. There wasn't time to meet.*

In a like manner, Lara altered her manner of information-seeking when interviewing prospective lenders. Unlike her face-to-face approach to interviewing real estate agents, Lara interviewed lenders by phone, as *we didn't have time to really meet with them in person.*

As with the stand-alone elements of emotion and time pressure, the interaction of these two factors also had the ability to alter participants' information behavior. In the case of homebuyer David, time pressure and emotion collided regarding his need to understand closing documents, and he expressed disapproval over the rapid approach to signing important such documents.

*I would have liked to at least understand what type of document I was signing, at each step along the way, if not read the fine print. But I didn't even have time for that. And I think it's a failed, terrible process of the real estate system today, that that's what you have to do. You have to just blindly sign whatever they put in front of you or the deal doesn't go through. And so, I would have liked to have a week with that packet before we had to go to signing.*

Given the nature of the speedy signing appointment, David yielded to the interaction of time pressure and emotion by abandoning his need for information.

During her home buying experience, Lara described the interaction of time pressure and emotion as *horrible*, as she was forced to relinquish systematic control of her information behavior. In this instance, Lara had 30 minutes to decide whether to make an offer on a home as well as determining the amount to offer, which prohibited careful information-seeking and information use. Lara described her situation:

*I am very methodical with my decision-making...I research every angle. I look into everything and I need to have time to really look at everything. And so it felt just awful. Finally, I just had to go against my nature and say, 'Let's just do this. I'm going to throw Thecaution to the wind. There's only one way we can do this, and I'm going to have faith that it will work out somehow.' But yeah, it was totally against my nature to do something like that.*

It is worth noting that the alteration of one's information behavior is reflective Papadopoulou, Lee and Fisher's (2013) notion of a couple's shared information behavior. The six concepts of

context, seeking, storing, managing, sharing and barriers presented in the authors' Model of Dyadic Information Behavior apply to some homebuyers, for example, Megan who shifted home buying information responsibility to her husband after receiving the devastating news that a highly sought after home was lost to them. This backdrop constitutes the context delineated in the model. Seeking, storing, managing, and sharing behaviors were assumed by the husband, while negative emotion comprises the barrier experienced by Megan. Further, this shared dyadic information behavior has implications that extend beyond couples in intimate relationships to those relationships found in the business world, academia, artistic endeavors or other dyadic collaborations.

#### **7.1.5 High Stakes Decision Makers' Normative Behavior**

The Theory of Normative Behavior guided this research study. Moreover, the theory helped to make sense of high stakes deciders' social worlds and information behavior as well as highlighting the limitations of TNB as participants exhibited Chatman's principles of social norms, worldview, social types and information behavior.

##### **7.1.5.1 Influential Social Norms**

Within the context of the home buying experience, social norms informed participants of appropriate standards of conduct while concomitantly influencing information behavior. Among participants, social norms were most prevalent with stakeholders as laws and regulations stipulated proper behavior in the small or social worlds of their workplaces. For example, limited practice officers or attorneys are the only stakeholders permitted to prepare legal documents known as limited practice board forms (LPB). Stakeholder Molly is an escrow agent as well as a

legal practice officer and, as such, the preparation of LPB documents illustrates the information creation aspect of her information behavior. Real estate agent Ron echoed the norm while engaging in his own document creation: *What we do is write up the offer. All we do is fill in the blanks. We can't be attorneys, so our job is to fill in the blanks of the forms that are provided by the Northwest Multiple Listing service.* In a like manner, social norms prohibited information sharing. Real estate agent Diane explained that managing brokers instruct agents not to attend client's closing appointments *because they say you're not an attorney and you shouldn't be giving legal advice to your clients.* Lender Brad revealed how social norms instituted by the Dodd-Frank Wall Street Reform and Consumer Protection Act affected his information-seeking: *I am subject to immediate termination if I contact an appraiser and ask for information.* Whereas office policy informs lender Lois' information behavior regarding information security in that all hard copy material is shredded and that *everything is under lock and key...So, even when I leave my office to come in here, everything has to be locked. There can't be social security numbers lying around or people's bank accounts and stuff on fax machines.* Home appraisals are an integral part of the home buying process, and therefore represent a social norm as well as an information need. For lender Lois, an appraisal is ordered to protect the lender and ensure that *that specific property...is indeed worth what they [the client] made the offer on and we're willing to lend on it.*

Social norms presented less frequently for homebuyers but influenced information behavior in a manner similar to stakeholders. For instance, the social norm pertaining to regulated neighborhoods with *covenants and restrictions so that all the houses and yards look nice* appealed to Ann. As a result, Ann sought real estate information indicating that *the houses were similar.* Amy, on the other hand, depended on Microsoft's norm of helping immigrant employees

to buy homes. Amy stated that *when you relocate and you owned a house in your origin country, they give you a benefit if you want to buy another house*; consequently, Amy employed this fact when asking the company to pay for her home inspection *and other stuff*. For Giovanni, *who grew up with real estate agents my whole life, on my dad's side of the family*, the family social norm to own a home was firmly placed. In the case of Veronica, who is a single, 24 year old female, a chauvinistic type of norm discouraged homeownership. Veronica's father exemplified this norm when he *told me that no man would want to marry a woman who bought a house on her own*.

#### **7.1.5.2 The Significance of Worldviews**

Like social norms, participants' worldviews were a factor in their information behavior. Worldviews represent an awareness of what is important to members of a social world, and within the social worlds of high stakes deciders' six worldviews emerged. Of these worldviews, the "commitment to serve" predominated. Real estate agent Anna embodies this perspective when she shares information like *really wanting to direct people away from banks and credit unions because they're just not set up to do business at the same pace the rest of us have to move in the current market*. Similarly, agent Lilly *will write up an offer if they really want to, but I am going to tell you every reason why you shouldn't even though it is a sale for me. It's not worth if for my clients to be unhappy getting a property*. When asked about underwritings need for additional client documentation, Lender Lois stated that *I just go the route with being honest. I just say [to the client], 'you know what, this is ridiculous and I know you're not going to like this. It is going to be a little painful, but I'll help you in any way I can. Here's what they're asking. Here's what I think we should do*. Whereas, agent Scout demonstrates both information use as

well as seeking when providing services to a client: *As an agent, you have to understand what they want their payment to be and we'll be searching in that range.*

With regard to the "help" worldview, whether helping oneself or relying on help from another, high stakes deciders demonstrated various information behaviors. Real estate agent Ron acknowledged both seeking and sharing information when *there's so many questions that I need to talk to somebody, I have a good long list of fellow realtors who are my advisors. Once in a while, I advise them.* In a like manner, agent Lilly will talk to her managing brokers *if it's a major catastrophe.* Homebuyer Amy looked to buy a condominium because *I don't want to take care of the maintenance of the house. I feel we don't know enough...the HOA, you know that there is someone you can always ask. Like, 'Hi, I have this problem. What to do. Can you help us?'* Lender Lois, however, helps herself by managing information: *I have to keep it really organized [email]. I make a file for every client. I've got folders for everything. There's lots of subfolders* as well. Homebuyer Duke engaged in information-seeking as well as information use while house shopping. Specifically, Duke *wanted to look at a lot of things just so you can sort of identify when a house is overpriced or underpriced.*

Somewhat less common than the help worldview was the notion that "homeownership was desirable." As with the previous perspectives, information behavior was evident among high stakes deciders. Homebuyer Amy used the information gained from previous homeownership in her decision to buy another home: *I think because we owned an apartment in Israel and we found it a great investment...so, we thought we're going to live here. It's going to be a good investment. It's a great area. People will always want to live in this neighborhood, so why not buy.* Angie, too, used information regarding personal finances as well as market conditions in her

decision to buy a home. Angie stated, *We thought that now the prices were low enough, and we'd saved up enough money...just kind of penciling the numbers, it looked like owning a home in the price range that we were looking at would be about the same if not less than we were paying in rent.*

Of all the worldviews, the "bad reputation," "community" and other worldviews presented least of all. Representative of the "bad reputation" perspective is Roy, who used information regarding the recent banking crisis in his decision to finance a loan through a credit union. Roy stated that *after this whole banking thing, I just really don't like what a lot of the banks did. I think they harmed the country and I feel strongly about not being a part of that.* Speaking to the "community" worldview was Jo, who used previous experience to inform her decision to buy a house in Seattle: *We lived here before and we really liked it. We really liked Seattle, and I think because our time in North Carolina was so transitory, we just really felt like we're ready to put some roots down here;* whereas real estate agent Ron's worldview falls into the "other" category. When discussing the issue of ethnicity, Ron indicated that *when I see you, I don't see what color you are...I just don't see that.* Consequently, Ron chooses to avoid ethnic information, which he deems irrelevant to a real estate transaction.

### **7.1.5.3 The Role of Social Types**

High stakes deciders have demonstrated that the TNB elements of social norms and worldview are relevant to their information behavior. In a like manner, social types who inhabited a participant's social world affected the decision maker's information behavior by assisting or hindering access to information. Subsequent to homebuyers, real estate agents were the most

common social types in the home buying experience, and providing access to information came in many forms, for example, sending clients listings of available homes, directing them to potential lenders or home inspectors, showing homes or advising homebuyers on the nature of foreclosures and short sales. For homebuyer Steven, a forwarded email from his real estate agent influenced his home buying offer, since that email included an attached message from the selling agent that stated *'well, if it doesn't work out [with Steven], there's another family'* interested in the house. Jo devoted one year to the purchase of a home that went through the stages of a bankruptcy short sale, a foreclosure and finally an auction. Being unfamiliar with auctions, Jo's agent *found a company that will help you...and they have the cash that they lend you*, as auctions are strictly cash sales. Lenders, too, provided access to information pertaining to loan rates, mortgage packages and qualifying loan amounts. Moreover, lenders informed clients on their loan approval progress, as was the case with Brad who told a homebuyer that her mortgage application had stalled because her father failed to provide sufficient income documentation. Dad was a co-signer on her loan.

The "educator" social type was significant for the part he or she played in giving homebuyers access to information. For example, real estate agent and attorney Franklin offered home buying class attendees handouts with links to King County websites regarding county records, parcels, septic systems and building permits along with an article addressing residential heating oil tanks. Similarly, agent Elizabeth offered her home buying students information addressing credit history, repairing bad credit, along with Washington State material concerning insurance and credit. Elizabeth also featured a lender as guest speaker who, in turn, provided access to information on affordable financing options and *A Consumer's Guide to Mortgage Settlement Costs*. Scout, on the other hand, demonstrated her educator role by teaching clients how to access

information on potential homes. As Scout said, *they are going to spend a lot of time in those houses...learning about the property, the condition. You're going to talk about the roof, the systems in the house, the basement and look for water intrusion.* The importance of the educator social type was articulated by agent Anna, who stated that *I feel that's my biggest responsibility and role...I really feel like my job is to educate them. Give them facts and let them decide for themselves.*

Like the educator, the "problem solver" social type assists homebuyers when giving them access to information. Illustrative of a problem solver is real estate agent Lillie who expanded clients' investment possibilities by providing information on duplex properties. The clients had wanted to buy a triplex or fourplex that offered an adequate capitalization rate (CAP), or how much money one earns on an investment. Low inventory, however, frustrated the investors' plans. By giving access to information on duplexes, Lillie helped her clients achieve their CAP goal despite the number units in the property. Providing access to information on reliable contractors represented another means of problem solving. Real estate agent Patricia fulfills the role when sharing information with clients whether for a plumber, roofer or professional who can address standing water in a crawlspace.

As Chatman suggested, home buying social types assisted study participants by giving access them access to information. At the same time, social types hindered access to information. Real estate agent Nan explained one such situation, in which she withheld information from a selling agent. An inspection of the home Nan's clients wished to buy revealed that *the slab of the house had settled.* To repair such a defect required jacking up the house and leveling the slab, but after spending many hours examining the house, Nan *pointed out that the windows were level, the*

*doors were level, the floors were level. To jack the house and repair the slab would result in damage to the entire house.* The inspector agreed with Nan's assessment and the buyers assumed the house *as is*. Because Nan held back this information, the clients were able to buy the house for a lesser amount. Additionally, Nan explained that the negotiation stage of a transaction could be very stressful as she wished to do the best for her buyers, but *not reveal all the drama behind the negotiating. Listing agents and sellers may have considerable baggage that they bring into the negotiating process and it's not necessarily helpful to have the buyers hear about it.* Agent Diane echoed a similar view regarding difficult issues arising between the buying and selling agents: *I try not to go overboard with that kind of information...I feel that all the drama can be between the two agents, and with their clients, they [the agents] can tell them what's going on but not make a nightmare of it.* Agent Ron experienced a rare situation in which a seller refused to sell to buyers despite having signed a legal, binding contract. Although Ron admittedly lacked evidence, he suspected the seller's refusal was attributable to the buyers' ethnicity. Given the situation, Ron shared information with his clients but also acknowledged that *I kept a little bit back from them.*

#### **7.1.5.4 Beyond TNB's Information Behavior**

The Theory of Normative Behavior has been an effective framework for explaining participants' information behavior thus far; however, the theory falls short with respect to the "information behavior" aspect. Chatman indicated that one's information behavior denotes choosing whether to act on information; moreover, information may be rejected despite its usefulness (Burnett, et al., 2001; Chatman, 2000). Findings imply that high stakes decision makers engaged in IB that went beyond the notion of using or avoiding information, and included information sharing,

seeking, needing, security, creation, management and monitoring. Furthermore, participants employed multiple sources when seeking information, such as people, real estate specific websites or the Internet in general, and they applied selection criteria like relevancy, trustworthiness, and recommendations. Chatman's Theory of Normative Behavior is useful for exploring information behavior, but researchers should also note the theory's limitations as the information behavior piece of the framework pertains to just a small portion of information behavior as a whole.

Chatman's characterization of information behavior evolved out of her studies of marginalized populations, wherein people did not seek information beyond their social settings (Chatman, 1991, 1992, 1999). When sought, people turned to trusted and accessible sources for practical information that helped with immediate, everyday problems. The presumed risk of seeking information, too, was a factor. For example, specific health information would be avoided if it suggested that a retiree had become incapable of maintaining her independence (Chatman, 1992), or when concerns of privacy prevented one from seeking information for such deeply personal issues as depression (Hayter, 2007). For female inmates held in a maximum security prison, the small worldness of the institution shaped normative behavior, as inmates serving long term or life sentences elected to avoid information of the outside world and focus on information pertaining to the everyday reality of prison life. Outside information had scant relevance to one's life in an institutionalized world (Chatman, 1999). Wilson (2000, p. 49) proposed a broader definition of information behavior which encompasses "the totality of human behavior in relation to sources and channels of information, including both active and passive information-seeking, and information use." Wilson's definition is an improvement over Chatman's but lacks inclusion of such behaviors as information creation or information security. To be fully useful today,

Chatman's theory needs a more modern definition of information behavior. To strengthen the Theory of Normative Behavior, I submit a more holistic and comprehensive definition for the information behavior tenet as *the totality of human behavior associated with information, wherein information is defined as that which is experienced through all human senses and sensations*. For instance, homebuyers demonstrated the use of information derived from the senses such as the visual impact of dead bugs covering the floor of one house, the sound of children laughing during recess at a nearby school or detecting the lingering odor of cooked food in a prospective home. These sensory examples provided informational cues that homebuyers used in conjunction with information viewed online, heard from stakeholders or experienced in various other means to make high stakes decisions. This new definition not only embraces all current areas of IB study but also those yet to be uncovered.

#### **7.1.6 Using Home buying Information Grounds**

The theory of Information Grounds submits that the exchange of information is a social activity tied to the trichotomy of people, place and information. Given that people turn to others for information and that they seek information that is easily accessible (Harris & Dewdney, 1994), it was conceivable that Information Grounds played an important role in supporting homebuyers and associated stakeholders' high stakes decision-making.

Participants demonstrated information behavior throughout their home buying experience, and part of the experience involved Information Grounds. Most participants indicated that they had multiple Information Grounds, and that IGs generally supported their high stakes decision-making. When asked how they helped, participants revealed that Information Grounds benefited

them in four areas. Providing "useful information" emerged as the dominant theme as it facilitated deciding, for example, information from Steven's IG prompted his decision to buy a home with a mother-in-law unit. Megan, on the other hand, employed IG advice with her decision to get *the septic tank pumped without owning the home, which was a huge risk...that was emotionally exhausting*; whereas Scarlett overheard the mortgage brokers talking in the office kitchen and learned that she could save *\$149 per month on payments* by having *the seller pay \$3000 at closing*.

Subsequent to providing useful information was the notion that IGs helped to "foster relationships" through social information. Such information is representative of small talk or light conversation. Typically associated with home buying stakeholders, participants valued social information for its ability to make or maintain connections with clients and other stakeholders since *prospecting for clients is the hardest part of this business* (real estate agent Scout). Consequently, stakeholders rely on word of mouth referrals or repeat business and fostering relationships helps with this aspect of the job. Exemplifying this point of view, escrow agent Molly stated that to *solidify our relationship a little bit more*, she would *bring up* an IG topic such as salsa dancing with both new as well as familiar real estate agents who sent escrow work her way. Establishing a connection is equally important to real estate agent Patricia as *the more you know or learn or can have some kind of an interest with a client*, the better able to help them. Similarly, real estate agent Lilly found that *it's all about having that connection first*, and thus Lilly, a member of a cribbage club, shared information about the game to develop a relationship with a new client and cribbage fan.

The two remaining themes demonstrating how Information Grounds supported high stakes deciders were less prevalent yet nevertheless important. For both homebuyers and stakeholders, IG information that gave "perspective" was helpful. For example, homebuyer Megan, who struggled with the decision to pump the septic tank on property she did not own, information gleaned from her Information Grounds provided a general sense of what other people would do. Megan explained that *you'd tell 10 different people that we've got to get the septic pumped and you'd hear 50/50. Half would say 'I'd never do it,' and the other half would say, 'Do it. Go for it. Take the chance.'* In the case of lender Dillon, *picking up on people's perceptions* aided his decision to change how he worked with clients, whereas real estate agent Anna found that perspective helped her to both remember and understand that homebuyers *are really human beings* and not simply contracts with deadlines. As with the concept of perspective, the theme of "reassurance" was also less frequent, yet participants were comforted to learn that others shared similar experiences. While attending her husband's theatrical play rehearsal, Jo was relieved to learn from his colleague that she *went through a long [home buying] process also. So, we weren't the only people. A year wasn't too long.* Similarly, workmates left David feeling reassured with the knowledge *that other people had been through this and survived.*

#### ***7.1.6.1 Dependable Places and Lasting Relationships***

The above findings suggest that Information Grounds supported participants' home buying experiences. However, it is worth noting that, although information was derived from myriad IG's, permanent Information Grounds and longstanding relationships stood out as providing the most instances of helpful information over that of transient Information Grounds or fleeting liaisons. The chief example of this phenomenon was the workplace, as routine visits to such a

place were part of people's everyday lives. Joe, a budding real estate developer and residential real estate investor pinpointed such an occurrence while working at his parent's restaurant: *There have been customers who are in the real estate business. They're actual developers themselves. They've built from the ground up. They build neighborhoods and...just talking to them in a general, more of a friend basis, and then I kind of extract information from them.* Joe found this IG information helpful for making home buying decisions as well as those associated with furthering his career path. Alternatively, Phil was reassured when his colleague and fellow graduate student informed him about the quality of the elementary school near the home he wanted to buy, whereas co-workers advised Megan that home buying is stressful and that she should be patient with the process. Amy relied on the virtual Facebook group "Israelis in Seattle" for home buying information. Specifically, Amy used the group's recommendation to find her real estate agent. With regard to this digital IG, Amy stated, *I don't have to participate in the discussion, but I can still see what is being shared.* Information Grounds associated with children's activities were similarly stable as parents regularly accompanied their children to such events. For example, Starr learned about sump pumps and basements from a member at her child's play date, while Steven ascertained information pertaining to mother-in-law units from a woman at his daughter's preschool.

Like stable places, longstanding relationships engendered helpful IG information. Such was the case for 24-year-old Veronica, who obtained reassurance while socializing with friends at a local bar.

*I basically told everybody, 'oh, I'm going to look for houses tomorrow.' So everybody kind of had their input and actually, that's what made me feel more at ease about going because they're going, 'that's awesome. You're so young and you're single and we are all jealous that you can do that....so that was good.*

Real estate Anna appreciated the perspective she gained regarding the home buying experience while talking with girlfriends over coffee. Similarly, while *hanging out with friends*, homebuyer David was reassured to learn that *other people had been through this and survived*.

While durable places and resilient liaisons are not required aspects of home buying Information Grounds, they nevertheless emerged as relevant characteristics for high stakes decision makers in the home buying domain.

#### ***7.1.6.2 Not Finding Support***

In general, participants acknowledged that Information Grounds provided helpful information for high stakes decision-making. Despite this recognized benefit, however, data suggested that Information Grounds did not support all those populating the home buying domain. For some, the issue of trust, whether the person or the information, presented as an information roadblock. Homebuyer Giovanni shared his perspective on the topic:

*I think home buying is such a personal experience that it is difficult to broach it very casually with someone you don't know well, because it comes down to very sensitive things like money, neighborhood, whether you can afford to buy a home and things that most people, I would think you only feel comfortable talking to someone they trust.*

In a like manner, homebuyer Mark expressed concern that *people were circling me, trying to take advantage of me*. As a result, Mark chose to use information obtained only from five trusted individuals rather than *just ask any Tom Dick or Harry at a Starbucks*. Tarrah learned that *sometimes people give you wrong information like a townhouse has homeowner dues. It's not true. I've seen some townhouses that don't have homeowner dues, so you just take it with a grain*

*of salt. In the case of lender Brad, who judged that information offered at a continuing education seminar was deceptive, since there were people who are plants in the class...who are actually trying to sell...a marketing campaign...Trying to get people excited to buy the product.*

For other participants, seeking information from strangers went against their natures. Once again, homebuyer Mark, a regular churchgoer, shared his perspective:

*It bothers me when people go there [church] for all other reasons. I go there...every Sunday. I go there. I try to sit alone. Take communion, say 'Lord, I'm really sorry for all the stupid things I've done...' and I leave...I'm a church organist, and I hear all the gossip. I hear the talking. That's not why I'm there. Church is the one place I don't do that.*

In the case of homebuyer Roy, childhood training inculcated an aversion to talking with strangers, whereas real estate agent Patricia does not socialize at potential IGs. Patricia remarked that *I'm pretty much business and that's it, and I don't sit around chit chatting a whole bunch because I don't have a lot of time.* Homebuyer Duke echoed a similar sentiment: *I work from home and just don't have time to hangout anywhere.*

Information Grounds were also found to be unhelpful when home buying information was deemed inappropriate or not useful. With regard to inappropriateness, real estate agent Ron imparted that at his place of worship, *I don't talk about business at all. People know what I do. I do not talk to them about it. It's the wrong venue, I think, so we just don't talk about it.*

Additionally, Ron indicated that talking business at his Rotary Club could result in a *hefty fine* and therefore avoided. Finally, a few participants noted that IG information was not useful.

Illustrating this point was Genevieve who worked in one city but lived in another: *people had local things to share such as don't use these people or use these people.* Because this information

was not useful, Genevieve chose to *kind of tune it out*. For On, a colleague specifically told her not to buy a home in Belltown *because there were druggies and stuff like that*, but rather On should look for a place in either the Ballard or Queen Anne neighborhoods. This information was not useful to On since *we would have to drive to work. I don't want to commute. She's like, 'it's not a bad commute.'*

These findings suggest that, although the theory of Information Grounds is generally supported by study's results, the theory has limitations and does not hold up for all high stakes decision makers. However, given such results, the question of how to tweak IG characteristics to aid information flow arises. Participants indicated that the notion of trust and information relevancy were significant concerns during their home buying experiences and, as such, should be considered when contemplating approaches to facilitating information flow, for example, providing a common place where socialization may occur like an employee break room or a gym's juice bar. Such places may be key to developing trusted and long lasting liaisons, an important aspect of deciders' information-seeking and sharing. Offering worthwhile information at digital Information Grounds may also help deciders who are reluctant to interact with others by affording "lurking" opportunities that are similar to overhearing conversations at an IG. Still, given the high monetary and/or emotional costs associated with high stakes deciding, additional study into high stakes deciders understanding of information is needed with regard to Information Grounds.

## **7.2 Contributions**

This investigation contributes to the field of information science methodologically, empirically and theoretically.

### **7.2.1 Qualitative Approach for Studying the Information Behavior of High Stakes Decision Makers**

Due to the exploratory nature of this research and the newness of the phenomenon under investigation, the study design encompassed qualitative methods. Moreover, the inquiry took a broad, holistic approach to understanding the information behavior of high stakes decision makers by investigating the many stakeholders and homebuyers involved in the home buying experience rather than focusing on a specific group. By adopting this tactic, I could draw a more complete picture of high stakes deciders' information behavior. Additionally, the study implemented a deep reflective strategy by employing an ersatz home buying experience, which facilitated my understanding of home buying challenges and concerns, highlighted likely perspectives and educated me on the language of the experience. Thus, this deep reflective exercise demonstrated its functionality as an effective qualitative tool by equipping me with the knowledge, language and receptiveness to engage participants in the field. Once in the field, data were collected using semi-structured interviews. Key to collecting rich data was the use of individual timelines that, in turn, enabled participants to provide worthwhile and reliable material. Because interviews rely on autobiographical memory or self-report and are prone to error (Belli, 1998), the timeline established its effectiveness by resurrecting home buying memories along with their attendant emotions and feelings of time pressure. Homebuyer Tarrah acknowledge the value of the method when asserting that *the timeline is brilliant because people forget that 'Oh, I did this after that one.'*

### **7.2.2 The Dynamics of High Stakes Deciders Information Behavior**

The focus of this study was on the information behavior of high stakes decision makers in the home buying domain, with an overriding attentiveness devoted to such factors as time pressure and emotion. From this, a general picture of high stakes deciders' information behavior materialized wherein "information use" presented as the primary behavior associated with decision-making. Moreover, findings show that deciders' use of information precipitated emotion at varying levels of intensity, for example, strong anger/outrage, medium anger/irritation or light anger/frustration. Along with triggering emotions, information use was capable of producing a sense of time urgency as well as generating an interaction between the two factors. Despite its predominance, however, information use was not an exclusive behavior. Participants also revealed myriad "non-use" IBs (e.g. information-seeking, sharing, needing, etc.), but unlike information use, emotion and time pressure functioned as motivators by propelling behaviors like information avoidance, seeking or sharing. As such, a notable divergence emerged between high stakes deciders' information use and non-use information behaviors.

In addition to traditional forms of information behavior, the study identified the emergent theme "information use by proxy" strategy with regard to high stakes decision-making. That is, homebuyers relinquished their information responsibilities and engaged others to use information for making decisions on their behalf. Here, too, one finds evidence of emotion's influence as such feelings as fear, uncertainty or trust prompted participants to rely on supportive family members or principled professionals to make home buying decisions. This suggests then that emotion is a leading factor in one's employment of information use by proxy. Given this dependence, it is worth noting that surrogate deciders do not always embrace their imposed role and subsequently return information use and decision-making responsibilities to the homebuyer.

An unanticipated finding was emotion and time pressure's ability to alter high stakes deciders' information behavior. Participants revealed that the presence of emotion, time pressure or the interaction of the two caused them to modify or abandon typical information behaviors. In some instances, such alterations were positive in nature, for example, changing from an information use by proxy strategy to using information by and for oneself. Less constructively, however, time urgency compelled participants to forgo systematic information-seeking and use in favor of a more impulsive or arbitrary approach, whereas emotion derived, for example, from depressing news shifted active information use to that of blunting or information avoidance. Participants indicated that emotion and time pressure induced modifications were generally unwelcomed and suggested that such alterations went against their very natures. Participants wanted control over their information behavior.

In sum, this dissertation contributes empirically to the knowledge base of information behavior by extending the field's understanding of how emotion, time pressure or the interaction of the two can shape the information behavior of high stakes decision makers. In addition, the study identified the phenomenon of "information use by proxy" and noted how emotion and time pressure can change established patterns of information behavior. Finally, empirical findings allow for transferability to other contexts, both high and low.

### **7.2.3 Theoretical Frameworks Revisited**

To guide this study and to help make sense of high stakes decision makers' information behavior, this dissertation employed two theoretical constructs. The first was Chatman's (2000) Theory of

Normative Behavior, which had yet to be used as a conceptual framework in a wide-ranging information behavior inquiry. Given this historical backdrop, the study examined the theory to determine how effectively TNB explained people's information behavior. Chatman argued that four principles are central to the theory: social norms, social types, worldviews and information behavior. Study findings suggest that social norms, social types and worldviews were indeed integral to participants' IB while the information behavior portion of the theory revealed limitations. Chatman's information behavior principle simply encompasses information use and avoidance behaviors, whereas high stakes deciders exhibited additional forms of IB, for example, information-seeking, sharing, managing or needing information. As such, the additional behaviors augment Chatman's IB premise rather than replace them. Because of the theory's limitation, I propose a more holistic and comprehensive definition of Chatman's information behavior principle. Building on Wilson's (2000, p. 49) notion that information behavior encompasses "the totality of human behavior in relation to sources and channels of information," I submit the following definition: *the totality of human behavior associated with information, wherein information is defined as that which is experienced through all human senses and sensations*. The new definition embraces all current areas of IB study as well as those yet to be uncovered. Wilson's definition falls short in that it excludes, for example, information creation and information security.

The second theoretical framework used to inform the investigation of high stakes deciders' information behavior was Fisher's Information Grounds (Fisher, Durrance, et al., 2004). Study findings revealed that IGs supported participants' IB. Notably, most instances of helpful information came from permanent Information Grounds or longstanding relationships rather than transient places or fleeting liaisons. Despite the supportive nature of Information Grounds, not all

deciders deemed them useful. For some, lack of trust with the information provider or the information itself obviated the use of IG material, whereas an aversion to chatting with strangers presented another barrier for others. Finally, IG matter considered inappropriate or useless also precluded its utilization. In addition to supporting high stakes decision makers, Information Grounds benefited home buying stakeholders by contributing social information used for small talk or light conversation. Such information was significant as it helped to cultivate relationships by developing or maintaining connections with clients, prospective clients and other stakeholders. Stakeholders indicated that relationship building was an important aspect of the job.

Theoretical contributions originating from this study include the testing of Chatman's TNB, noting that it supports high stakes deciders IB but with limitations associated with Chatman's concept of information behavior. Because of this, a new information behavior definition is presented to strengthen the theoretical framework. With regard to Information Grounds theory, findings revealed that IG's generally provided helpful information for deciders'; however, because people lacked trust in IG information, talking to strangers went against one's nature, insufficient time precluded socializing, or the irrelevance of information prevented some people from obtaining support. Further, social information gained at an IG presented as significant as it helped to build and maintain work-related associations, which is considered vital to a successful business in the competitive field of residential real estate.

Although Chatman's TNB and Fisher's Information Grounds theory were examined separately, each framework complimented the other as participants lived in their social worlds but visited their Information Grounds.

### **7.3 Limitations**

It is important to analyze this study for limitations while concomitantly taking into account its contributions. Four limitations were identified and need to be addressed. The first concerns the semi-structured interview and the nature of self-report. Because autobiographical memory is likely to include errors (Belli, 1998), a timeline strategy was built-in to the methodology to ameliorate the difficulty by using its ability to stimulate participant recall, thus engendering the collection of high quality data (Belli, 1998). Secondly, all participants originated from Seattle, Washington and the surrounding metropolitan areas. Large urban areas like Seattle may present opportunities for information acquisition that are not available to residents of small or remote communities. Regional differences, too, may influence information behavior as social norms can enhance or hinder opportunities for information. Thirdly, study findings apply to this specific area. As naturalistic inquiries focus on people's understanding of their realities in a particular social context, generalizing across context-specific situations is not possible (Erlandson, et al., 1993). Findings, nevertheless, can inform or encourage a working hypothesis for new inquiries and areas of study. Finally, the researcher did not obtain the specific times that transpired between each participant's home buying stages. However, since different people experience time pressure differently, participants were asked to talk about the time stress associated with the various stages of their experiences. For example, three days to decide on making an offer represented time pressure for one participant while 30 minutes to make a similar decision characterized time pressure for another.

## 7.4 Implications

The home buying experience represents a high stakes decision-making situation that engenders myriad emotional responses. Time pressure, too, enters the home buying equation. As such, the interaction of time constraints and emotion can significantly affect a person's information behavior. By understanding how people think and feel when experiencing stress, research can help them to make decisions, to make decisions less stressfully, and to work more easily with other decision stakeholders. Moreover, study results offer transferability to other high stakes contexts such as deciding to buying an airplane, planning an extensive vacation, or making important medical decisions. Transferability also applies to low stakes decisions. For example, information offered in such low stakes contexts as daily deal websites like GROUPON.com and LivingSocial.com can be considered when deciding to buy deeply discounted deals within a short period of time. A representative scenario would be choosing whether to spend \$99 for \$350 worth of housecleaning services and doing so within a five-hour window of time. Emotion can attach to such a low stakes decision as well, since one may feel excitement at finding a bargain, suffer doubt about the deal's true value or experience concern over increasing one's credit card debt.

In addition to offering transferability, findings will inform system design. Given that emotions are likely to influence the information behavior associated with high stakes decision-making, system designers must attend to such variables. Julien, McKechnie and Hart (2005) noted that little thought has been devoted to this aspect of design. Time pressure, too, must be a consideration in system design, as high stakes decision-making may precipitate the use of new and unfamiliar technology when engaging in information behavior. Designers should embrace a user-centered attitude and create systems that do not require a large learning curve, as decision makers may not have the luxury of time or the emotional resilience to learn how to operate them.

Moreover, a principle of information behavior is that "people tend to first seek help or information from interpersonal sources, especially from people like themselves" (Harris & Dewdney, 1994, p. 24). Knowing this, social networking sites could facilitate the information behavior associated with rapid decision-making as well as providing emotional support by establishing connections to appropriate support networks. Home buying groups could fulfill this need, for example, on Twitter wherein people with similar interest share links to articles, blogs, websites or other relevant forms of information. In a like manner, social networks could provide a platform for sharing applications developed for high stakes decision scenarios. For instance, a role-playing App created to simulate outcomes for various decision alternatives. By employing such an App, a decider may be better equipped to engage helpful information behavior associated with high stakes decision-making.

## **7.5 Future Research**

The exploratory nature of this study provided a number of potential issues for future investigations. For example, further testing of this study's findings in other high stakes situations would be a valuable next step toward extending our understanding of how emotion and time pressure's shape people's information behavior. Health-related decisions are illustrative of such circumstances, in which the factors of time pressure and emotion are likely to present, and thus affect deciders' information behavior. Similarly, emergency and disaster management disciplines present worthwhile areas for future study. Future research can also explore the information behavior associated with low stakes decisions and the role emotion and time stress play in such decisions. Such a scenario may unfold with a decision regarding dinner. Does one stop for takeout or contend with the hassle of cooking at home?

Moreover, the information use by proxy behavior provides an avenue for added research, for example, comparing the IB of deciders who employ such behavior against confident, self-assured decision makers. Similarly, the notion that time pressure can alter one's information behavior is befitting extra attention as time pressure has the potential to present in work-related issues like project deadlines or in our everyday lives such as finding an appropriate birthday gift after leaving work but before arriving home.

Further study of Chatman's (2000) theory presents another opportunity for research. As this dissertation represents the first testing of the Theory of Normative Behavior, additional investigations into study findings can result in theory building and, thereby, help researchers to make sense of people's information behavior. Future studies can also explore the failure of Information Grounds to support information behavior and identify best practices to help those making decisions.

## **7.6 Summary**

As an exploratory study, this dissertation aimed to increase understanding of time pressure and emotion's influence on the information behavior of high stakes decision makers. After analysis of the data, the study identified two specific information behaviors among findings: information use by proxy and altering one's typical IB. Moreover, findings highlight the effectiveness of Chatman's Theory of Normative Behavior for explaining people's information behavior when engaged in high stakes decision-making while pinpointing the limitations of Chatman's information behavior definition. The study also underscored the supportive nature of deciders' Information Grounds as well as instances in which information behavior went unsupported. The

insights and recommendations arising from this study are potential benefits to the field, as systems can be developed to assist people's information behavior when decisions are emotionally charged or when deciders are compelled to make choices under severe time stress.

## Appendix 1: Homebuyer Interview Guide

### University of Washington Information School

#### The Impacts of Time Pressure and Emotion on the Information Behavior of High Stakes Decision Makers: The Home Buying Experience

##### Homebuyer's Interview Guide

Hello! My name is [name]. I am conducting this study as part of my dissertation research at the University of Washington. I am interested in finding out how time and emotion affect how you seek, share, use and manage the information that you used when making decisions associated with buying a house. Your responses will help me to understand how people make such important decisions. Information about you is confidential. The interview will take approximately 60-90 minutes.

User Aliases:

Place of Interview:

Date:

Time:

Day:

Length of Interview:

Notes:

##### **Timeline overview home buying experience:**

I would like you to think about your home buying experience. Using this timeline (provide blank diagram), I would like you to walk through the process and recreate the experience. Start by telling me about your decision to buy a house. For example, what prompted the decision? Then we will continue by walking through each major step along the way such as getting financing, finding a real estate agent, house shopping, making an offer and closing. [If still in the process, describe to the point that you are at right now]. I'd like you to tell me about the successes and problems that you encountered and how those were handled (e.g. seller accepted a lower offer; financing fell through). What else was going on at this time? (e.g. a birth, illness in the family, child in trouble at school)

##### **Timeline probing questions**

1. Who are/were the major people considered in this decision?
2. What helped you make your decision? (people, Internet, Facebook, Twitter, blogs, etc)
3. How was this help obtained?
4. How did you feel while making your decision?

5. Was time a factor?
6. How did time influence your ability to find what was needed?
7. How did your feelings affect your ability to find what was needed?
8. Did you get any faulty information? (misinformation, disinformation) If yes, how was it faulty?
9. Aside from places that we talked about, are there other places that you go and meet people? (e.g. coffee shop, place of worship, gym, work)
10. How did information from this place help you with home buying?
11. How did you handle or manage your home buying information? (paper/electronic)
12. Are there things that made it difficult to go through this?
13. How did that make you feel?
14. Are there things that made it easier for you?
15. How did this make you feel?
16. Were there other things that would have helped you?
17. What was the most stressful for you?
18. What advice would you give to others who are about to buy a home?

Is there anything you'd like to add to what you have told me about your home buying experience?

To finish, I have a few quick questions.

19. What is your age?
20. What is your ethnicity?
21. Gender?
22. May I contact you again should I need to clarify what you have told me today?

Thank you for taking the time to answer my questions.

## Appendix II: Stakeholder Interview Guide

### University of Washington Information School

#### The Impacts of Time Pressure and Emotion on the Information Behavior of High Stakes Decision Makers: The Home Buying Experience

##### Interview Guide for Real Estate Agents, Mortgage Brokers, Attorneys, Inspectors

Hello! My name is [name]. I am conducting this study as part of my dissertation research at the University of Washington. I am interested in finding out how time and emotion affect how you seek, share, use and manage the information that you use when making decisions associated with the home buying process. Your responses will help me to understand how people make important decisions. Information about you is confidential. The interview will take approximately 60-90 minutes.

User Aliases:

Place of Interview:

Date:

Time:

Day:

Length of Interview:

Notes:

1. How long have you been with your agency/law firm/company?
2. What are your roles/responsibilities?

##### **Timeline overview of home buying process:**

I would like you to think about a recent experience when you were helping someone to buy a house. Using this timeline (provide blank diagram), I would like you to walk through the process and recreate the experience. Begin by telling me about the time you were approached by a prospective homebuyer. Then continue with the major stages until you close the deal (e.g. recommending mortgage broker, contacting seller's agent, negotiate agreement). I would like you to tell me the successes and problems that you encountered and how these were handled (e.g. seller accepted offer, buyer withdrew offer). What else was going on at this time?

##### **Timeline probing questions**

3. How does time influence your decision-making during home buying procedures?
4. How does time pressure make you feel?
5. What do you use to make decisions? (people, Internet, professional publications, personal experience, etc)

6. How does time influence your ability to find what you need?
7. Do feelings affect who or where you turn to for what you need? How?

Now, I would like you think of another recent home buying experience that was slightly different from the one we just talked about, and describe the process from first contact with a prospective buyer until closing. Again, use the timeline to walk through the experience (provide new diagram).

8. Are these incidents typical of how things go? If no, what is typical?
9. Aside from the places that we talked about, are there other places that you go and meet people? (e.g. coffee shop, places of worship, gym)
10. How does information from this place help you with the home buying process?
11. How do you handle or manage information used for home buying?
12. Are there things that make it more difficult to go through the home buying process?
13. How does this make you feel?
14. Are there things that would make it easier for you?
15. How does this make you feel?
16. Were there other things that would have helped you?
17. How is the real estate industry changing?
18. Is there anything you'd like to add to what you have told me about the home buying process?
19. May I contact you again should I need to clarify what you have told me today?

**Demographics:**

Professional training:

Years in Profession:

Gender:

Special Awards/Recognition:

Positions (e.g. state/national committees, column editor, blogger):

## Appendix III: Observation Checklist

**University of Washington Information School**  
**The Impacts of Time Pressure and Emotion on the Information Behavior of High Stakes**  
**Decision Makers: The Home Buying Experience**

### Home Buying Observation Checklist

Date:

Day of the Week:

Time of Day:

Type of Setting Code:

Place of Setting: Office

Length of Observation:

# Participants:

**Description of setting:** What is the physical environment like? What is the context (e.g. open house, long weekend, seminar, office)?

**Description of Participants:** Who is present and what are their roles. What brings these people together (open house, word of mouth, advertisement, website)? How are they dressed?

**Activities and interactions:** What is going on? Is there a definable sequence of activities? How do the people interact with the activity and with one another? How are people and activities connected or interrelated? How frequent are activities or interactions? What is the duration of the activities or interactions?

Description of information sharing activities, for each activity record:

- who was involved
- who said what
- who initiated the exchange
- how did people react to the exchange
- did another information sharing occur as a result
- what types of emotions were attached to the exchange

## Appendix IV: Recruitment Flyer

# University of Washington

Have you bought a house recently?  
Have you helped someone buy a house?



Did you make decisions during the process?  
How did you feel when making decisions?  
How did time affect you?

**These are Issues I want to hear about!**

I am conducting 60-90 minute interviews for my PhD Dissertation

If you are age 18 or older and would like to share your home  
buying experience

Please contact me

You will receive \$40 compensation for completing the interview

Carol F. Landry, PhD Candidate  
University of Washington Information School  
[cflandry@uw.edu](mailto:cflandry@uw.edu)

(We cannot guarantee the confidentiality of email)

## Appendix V: Home Buying Codebook

# Home Buying Codebook

### Decision to buy a house

DCPMT	What prompted decision to buy house	e.g. Interest rate, growing family, tired of renting, etc
DCCON	Who you had to consider when buying	e.g. Family, pets
DCGOO	What else is going on at the time of buying	e.g. Selling another house, completing a dissertation, etc.

### Home Buying Criteria

HOMCCT	Cost/price of home	Home price must be within homebuyer's price range
HOMCHT	House type	Specific house type preferred (e.g. House, condo, townhouse, new construction, Craftsman)
HOMCIV	INVESTMENT— Sellable/rentable	Home has to be rentable; Will the home be easy to sell later on
HOMCLO	Location	Desirable location
HOMCMV	Condition of home	Move in ready/Fixer
HOMCOT	Other home buying criteria	Other criteria homebuyer indicates as important to him or her
HOMCPT	Accommodate pets	Home had to accommodate needs of pet(s)
HOMCST	Sale type	Traditional sale/Short sale/Foreclosure
HOMCSZ	Home Size	Home Size including Bedrooms/Baths/Garage/sq. ft.
HOMCTR	Transportation	Access to Public transportation, to highways/streets, other types of transportation
HOMCWK	Walkability	Is the neighborhood safe to walk in? Can homebuyer walk to coffee shops, restaurants or grocery stores?
HOMSC	Schools	Quality schools in area
HOMCH	Accommodate children	Room for children or a growing family

### Demographics

DEMAG	Age	Age of homebuyer
DEMET	Ethnicity	White, Asian, African American, Latino
DEMGN	Gender	Male, female, other

### Profession

PROFY	Number of years in profession	How many years person has been in his or her profession
PROFO	Number of years at office	How many years person has been at his or her office
PROFR	Roles and responsibilities in office	The roles (e.g. realtor, lender, advocate, counselor) and responsibilities (e.g. to get best deal for homebuyer, to provide the best lending package for homebuyer) at work
PROFB	Professional background	College degrees, training specific to profession (e.g. real estate training, escrow training)

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### The Experience

<b>EXXDF</b>	<b>Made it difficult to go through the home buying Experience</b>	<b>Difficulty could encompass such issues as unsupportive family, waiting for information, lack of time, clients who take excessive action such as treating a walkthrough of a property like an official inspection.</b>
<b>EXXES</b>	<b>What made/make it easier to go through home buying Experience</b>	<b>An experience was made easier by understanding and supportive family, highly skilled and competent real estate agents or attentive lenders/bankers.</b>
<b>EXXST</b>	<b>Most stressful part of home buying experience for you</b>	<b>Most stressful may include such issues would be time pressure to complete tasks or make decisions, waiting for information, going through the lending process.</b>
<b>EXXAD</b>	<b>Advice for other homebuyers</b>	<b>Information that homebuyers feel that other homebuyers should be made aware of.</b>

### Information Behavior (IB) Exhibited

<b>IBIN</b>	<b>IB-information need</b>	<b>A person exhibits a need for information to resolve a problem, to answer a question, to satisfy a curiosity such as needing to find an inspector</b>
<b>IBSK</b>	<b>IB-information-seeking</b>	<b>A person seeks information to meet or resolve an information need, for example, asking real estate agent to provide name of inspector</b>
<b>IBSH</b>	<b>IB-information sharing</b>	<b>A person shares information with another (solicited or unsolicited), such as colleague recommending a specific neighborhood to house shop</b>
<b>IBSH-C</b>	<b>IB-information sharing— COUNTER</b>	<b>A person refuses to share information with another person such as a homebuyer not telling people that he is looking to buy a house</b>
<b>IBEN</b>	<b>IB-information encountered</b>	<b>A person encounters information unexpectedly or "bumps" into information. This information can come from anywhere such as a stranger, a website, newspaper or by overhearing conversation, for example, seeing an ad on Facebook regarding a specific lender</b>
<b>IBUS</b>	<b>IB-information used</b>	<b>A person uses obtained information (sought, shared, encountered) for CURRENT need (e.g. finding a lender, inspector, how much to offer on a house) or for FUTURE need (ensuring that credit is good, oil tanks are decommissioned, septic systems are in good condition)</b>
<b>IBUS_P</b>	<b>IB-Proxy--Information use by Proxy</b>	<b>Someone USES information to MAKE a DECISION for another person (e.g. real estate agent decides this is the house homebuyer should buy or a family member says, based on homebuyer's finances, this is how much to offer on a home.)</b>
<b>IBCR</b>	<b>IB-information created</b>	<b>A person creates information for use now or in the future (e.g. spread sheet for all homes visited, journal/diary of thoughts pertaining to homes visited)</b>

<b>IBMG</b>	<b>IB-manage information</b>	<b>A person manages information associated with home buying (e.g. file, pile, folders, subfolders, storing in boxes)</b>
<b>IBDE</b>	<b>IB-information destruction</b>	<b>Information associated with home buying is destroyed (e.g. shredding, deleting)</b>
<b>IBSY</b>	<b>IB-information security</b>	<b>Steps are taken to protect sensitive information from others (e.g. shredding, encrypting, secure server, locking up)</b>
<b>IBSY-C</b>	<b>IB-information security-- COUNTER</b>	<b>No steps are taken to protect sensitive information (e.g. emailing sensitive information)</b>
<b>IBAV</b>	<b>IB-information avoidance</b>	<b>A person avoids information to as a coping mechanism for news that may be perceived as unpleasant, frightening, unwanted, for example, not accepting phone calls from a specific person</b>
<b>IBMN</b>	<b>IB-information monitoring</b>	<b>A person monitors information for new material to stay current, to find wanted things, or to cope with a situation such as monitoring real estate websites for new homes that come on the market</b>

#### Information Source used

<b>ISUEX</b>	<b>Experience/education</b>	<b>Person experience or education is used to provide information (e.g. experience with a specific lender prompts real estate agent to recommend this lender to a homebuyer)</b>
<b>ISUPL</b>	<b>People</b>	<b>Family members, friends, colleagues, acquaintances who provide information to a homebuyer</b>
<b>ISUIN</b>	<b>Internet in general</b>	<b>Internet in general is used to provide information (e.g. search engines like Google, Bing, etc.)</b>
<b>ISUWB</b>	<b>Real Estate specific website</b>	<b>Websites associated with real estate used to provide information (e.g. Redfin, Windermere, Zillow.com, MLS listing, etc.)</b>
<b>ISUPM</b>	<b>Professional materials</b>	<b>Materials associated with a profession used to provide information (legal documents, federal guidelines, etc.)</b>
<b>ISUOT</b>	<b>Other</b>	<b>Other sources used to provide information</b>
<b>IFLTY</b>	<b>Faulty information received</b>	<b>Misinformation or disinformation such as a website state that a house has a refrigerator but it does not</b>

#### Information Source—Reason for using

<b>ISRTR</b>	<b>Trustworthy</b>	<b>Source is trustworthy as in a homebuyer has confidence in a source and believes that it/him/her provides good information</b>
<b>ISRFN</b>	<b>Fun</b>	<b>Source is fun to use.</b>
<b>ISRIF</b>	<b>Interface usability/ease of use</b>	<b>Prefers the usability of website interface, for example, interface loads pages faster</b>
<b>ISRAT</b>	<b>Attentive/Helpful</b>	<b>Source listens to homebuyer's questions, hopes, desires, concerns</b>
<b>ISRRC</b>	<b>Recommended</b>	<b>Source recommended/referral, for example, a colleague recommends a particular real estate agent</b>
<b>ISRCV</b>	<b>Convenient</b>	<b>Source conveniently available such as the Internet is</b>

		<b>on mobile devices</b>
<b>ISRRV</b>	<b>Relevant/knowledgeable information</b>	<b>Source provided relevant/knowledgeable information, for example, a real estate agent inform homebuyer about the value of a property</b>
<b>ISRFM</b>	<b>Familiarity</b>	<b>Familiar with source as when a website like Redfin is used so often, homebuyer becomes very familiar with it and its capabilities</b>
<b>ISROT</b>	<b>Other</b>	<b>Other reasons for using source</b>

### Emotion's influence on IB

<b>EMMIN</b>	<b>Emotion and information need</b>	<b>Emotion creates an information need to resolve a problem, answer a question, to satisfy a curiosity (e.g. a homebuyer is angry at low credit score and needs to learn why it is low)</b>
<b>EMMSK</b>	<b>Emotion and information-seeking</b>	<b>Emotion drives information-seeking to meet/resolve an information need (e.g. a homebuyer is worried about the slope a house sits on and seeks information regarding its stability during heavy rains)</b>
<b>EMMSH</b>	<b>Emotion and information sharing</b>	<b>Emotion drives information sharing (e.g. a homebuyer is happy that he or she made an offer on a house and shares this information with co-workers)</b>
<b>EMMUS</b>	<b>Emotion and information use</b>	<b>Emotion influences information use (e.g. homebuyers are afraid they will lose a foreclosed house because it needs to be winterized before their bank approves their loan, so they decide to spend their own money to winterize a house that does not belong to them)</b>
<b>EMMCR</b>	<b>Emotion and information creation</b>	<b>Emotion influences the creation of information (e.g. a homebuyer is worried that he will forget important details so he starts a journal to keep track of even the most trivial information associated with his home buying experience)</b>
<b>EMMMG</b>	<b>Emotion and information management</b>	<b>Emotion influence how information is managed as when a homebuyer is indifferent to all the information associated with the home buying experience and puts information into a file folder but does not look at again)</b>
<b>EMMDE</b>	<b>Emotion and information destruction</b>	<b>Emotion influences information destruction (e.g. a homebuyer is so disappointed at losing the perfect home that all information associated with the process is shredded)</b>
<b>EMMPR</b>	<b>Emotion and information security</b>	<b>Emotion influences how information is protected (e.g. a homebuyer is worried that others may see information associated with home buying that he keeps it locked in a file cabinet)</b>
<b>EMMAV</b>	<b>Emotion and information avoidance</b>	<b>Emotion triggers avoiding information to cope with a situation (e.g. a homebuyer's first attempt to buy a home was so disappointing that he or she refuses to look at any other homes that are for sale)</b>
<b>EMMMN</b>	<b>Emotion and information monitoring</b>	<b>Emotion triggers monitoring information for new material, to stay current, to cope with a situation (e.g. a homebuyer is hopeful to find a house that he or she monitors real estate websites for houses that are</b>

		newly on the market)

### Emotions experienced

EMEAB-1	Strong Ambivalent	AMBIVALENT	Clashing viewpoints such as Wanting to invest in a home since it is a good time to buy, but also not wanting to commit to that investment
EMEAB-2	Medium Ambivalent	Conflicted	To be at odds, for example, the location is great but the house is a little small for the family. Which is more important, location or size of house?
EMEAB-3	Light Ambivalent	Wavering	Waffling or Vacillating between choices such as using a bank or credit union
EMEAN-1	Strong Anger	ANGER, outraged, furious,	State of being enraged or mad such as feeling outraged when a bank requests information that is perceived as none of the bank's business like one's college transcripts
EMEAN-2	Medium Anger	Annoyed, irritated, exasperated, mean-spirited	Being bothered or irked such as feeling irritated that the bank will not let the homebuyer use cash money offered by the seller to repair house, but rather the bank insists that the money is applied to the down payment
EMEAN-3	Light Anger	Frustrated, dismayed, resentful, impatient,	Feeling embittered such as being resentful because a seller chose a married couple to buy his home rather than homebuyer and her fiancé
EMEAP-1	Strong Appreciative	APPRECIATIVE	Feeling beholden or indebted to other stakeholders (e.g. lenders, real estate agents, escrow agents) when they refer clients because they believe strongly in this person's knowledge and abilities to help clients
EMEAP-2	Medium Appreciative	Grateful	Feeling pleased, for example, when an inspector shares information about a condo building that homebuyers would not have considered on their own (e.g. roof, heating, cooling, siding)
EMEAP-3	Light Appreciative	Thankful	Feeling much obliged or thankful when a prospective agent really listen to what a homebuyer had to say rather trying to hard sell on agent's alleged abilities
EMECF-1	Strong Confident	CONFIDENT, positive, optimistic	Being convinced or presumptive, for example, feeling positive that the offer on a house will be accepted (already decorating home in one's mind)
EMECF-2	Medium Confident	Hopeful, encouraged	Feeling expectant such as being encouraged that the process for a buying a specific home is not going to fall through
EMECF-3	Light Confident	Reassured	Feeling secure or certain such as believing that the information regarding prospective contractors is good information
EMECO-1	Strong Calm	CALM, assuring,	Feeling dispassion such as experiencing

		peaceful	calmness because there is no sense of urgency to put an offer on a house before someone else has a chance to, since all offers will be reviewed at the same time
EMECO-2	Medium Calm	Comfortable, comforting	Feeling okay or agreeable to, for example, accepting that an agent sharing information about a lender was a normal thing to do
EMECO-3	Light Calm	Relaxed, at ease, patient	Being unexcited or laid-back such as feeling relaxed about obtaining financing documentation because the homebuyer was unfamiliar new banking requirements
EMECR-1	Strong Caring	CARING, Compassionate,	Being understanding or warmhearted, for example, showing compassion for homebuyers who finally commits to buying a specific house and then having their offer rejected
EMECR-2	Medium Caring	Sympathetic, kind-hearted	Being considerate or supportive such as wanting to help a friend by hiring him as a real estate agent
EMECR-3	Light Caring	Attentive, Concerned, Interested	Being involved or mindful such as being concerned that homebuyers understand the offer that they are putting together for a house
EMEDB-1	Strong Doubtful	DOUBTFUL	Feeling that something is unconfirmed or without substantiation such as doubting that Dad will retire and live in the house that homebuyer is wanting to buy as "Dad will never retire"
EMEDB-2	Medium Doubtful	Uncertain	Felling unsure such as being uncertain that homebuyers could find a house before their apartment lease expired
EMEDB-3	Hesitant Doubtful	Questioning	Casting doubt upon or disbelieving that a new real estate agent has sufficient skills to help homebuyer buy a house
EMEDL-1	Strong Hate	HATE, abhor	Felling extreme animosity, rancor or loathing such as experiencing revulsion to the dead bugs, leaks, writing on the walls and other disgusting things that can be found in foreclosed homes
EMEDL-2	Medium Hate	Dislike, Distaste,	Feeling displeasure or disinclination, for example, being reluctant to enter house that is still occupied, as it leaves the homebuyer feeling like an intruder
EMEDL-3	Light Hate	Aversion	Feeling an unwillingness or lack of enthusiasm such as experiencing an aversion to assembling financial documents because it is not a fun thing to do
EMEDP-1	Strong Sad	SAD, Depressed, Hopeless, Despair	Being despondent or disconsolate like experiencing deep despair when believing that one is never going to find the right house because of low inventory, strong competition and the fact that other homebuyers can make all cash offers

EMEDP-2	Medium Sad	Discouraged, Dispirited, Disheartened	Feeling woebegone or gloomy when, for example, learning that, despite offering their absolute maximum amount of money, someone with an all cash offer can come along and could outbid them
EMEDP-3	Light Sad	Disappointed, Unhappy, Let down	Feeling low or upset such as being disappointed that homebuyer missed out on the experience of signing escrow documents at an escrow office because she was out of town, and therefore had to sign them on her own in a hotel room
EMEDR-1	Strong Love	LOVE, Desire	To adore or experience strong liking such as being love with the dream house that happens to have everything that the homebuyers had ever wanted
EMEDR-2	Medium Love	Like	To fancy or favor such as liking that a house was in a quiet neighborhood and also had parking
EMEDR-3	Light Love	Inclination for	Experiencing a fondness or partiality toward something like sending financial documents by way of a secure email server rather than using regular mail
EMEFF-1	Strong Fear	FEAR, alarmed, panicky, frightened	Feeling terrified or very scared as when a person fears that a wanted house is going to be snapped up by another buyer and homebuyer does not want him or her to get it
EMEFF-2	Medium Fear	Nervous, worried, anxious, distressed	Feeling on edge, tense or frightened as when a homebuyer worries that an underwater seller cannot afford to repair the sewer line and will just walk away from homebuyer's offer
EMEFF-3	Light Fear	Uneasy, cautious, wary, concerned, defensive	Feeling apprehensive or troubled, for example, experiencing concern as to how a homebuyer will get to work from a new house, since she doesn't have a car and the bus routes are inconvenient
EMEHL-1	Strong Helpless	HELPLESS, overwhelmed	Feeling incapable handling certain issues, for example, a homebuyer feeling overwhelmed and vulnerable because he had never bought a house before, did not understand the process and had no family to advise him
EMEHL-2	Medium Helpless	Inept, Incompetent	To experience the feeling of bungling or being unequipped such as homebuyer not comprehending what her real estate agent was telling her with regard to the different type of loans that were available to her
EMEHL-3	Light Helpless	Inadequate	To feel insufficient or incapable like the homebuyers felt inadequate because they were not able to put together a sufficient down payment without gift money from a parent
EMEHP-1	Strong Joyful	JOYFUL, delighted, ecstatic, overjoyed, enthusiastic	Feeling high or doing handsprings as when a homebuyer learns that his offer on the perfect house was accepted

EMEHP-2	Medium Joyful	Happy, Pleased, Relieved	Feeling content, blessed or cheerful like the homebuyer who experiences relief when the appraiser determines that the house has greater value than its asking price
EMEHP-3	Light Joyful	Gratifying, gratified	Feeling satisfied such as learning that the sellers opted to do repairs on the house rather than giving homebuyers money so that they could do it themselves
EMEHT-1	Strong Offended	OFFENDED, Insulted	Feeling affronted or insulted, for example, when homebuyers' accountant said they should ask lender how she is paid given that it was irrelevant to providing the homebuyers the best loan for them
EMEHT-2	Medium Offended	Hurt	Feeling injured or upset as when homebuyer's friends did not support her decision to buy a home
EMEHT-3	Light Offended	Wronged	Feeling taken advantage or misrepresented as when a homebuyer's friend provided wrong information about a particular neighborhood that homebuyer was interested in
EMEIN-1	Strong Indifferent	INDIFFERENT	Feeling apathetic or dispassionate like the homebuyer who felt indifferent with regard to the importance of his preapproval letter since he believed that anyone could have gotten it
EMEIN-2	Medium Indifferent	Unconcerned	Feeling neutral or detached from an issue as the homebuyer who was unconcerned about problems in a house just as long as those problems would be fixed before she bought it
EMEIN-3	Light Indifferent	Reserved	Being undemonstrative or aloof, for example, feeling reserved when walking into a property because homebuyer had no expectations
EMEJD-1	Strong Judgmental	JUDGMENTAL	Denoting a personal attitude about other people's conduct, for example determining that an inspector was really bad
EMEJD-2	Medium Judgmental	Disapprove	To think something is wrong or to withhold approval as in disapproving of new real estate companies that have inexperienced agents who do not know what they are doing
EMEJD-3	Light Judgmental	Frown upon	To disfavor, for example, a lender frowning upon a client who was not forthcoming with all relevant information need to obtain a loan
EMERM-1	Strong Shame	SHAME	The feeling that arising from the belief someone has done something dishonorable or improper, for example, overstating the income one has for buying a house
EMERM-2	Medium Shame	Regretful, Remorseful	Experiencing self-reproach, such as feeling remorseful for asking a real estate agent to take homebuyer to a particular house when she really was not interested in the property

EMERM-3	Light Shame	Embarrassed, Guilt	To feel self-conscious or blameworthy as with the homebuyer who was embarrassed to accept a gift of money in order to buy a house
EMESP-1	Strong Surprised	SURPRISED, shocked	Taken by surprise or taken aback such as being told that a homebuyer was approved for a \$600,000 loan when he only needed \$200,00
EMESP-2	Medium Surprised	Amazed, Astonished	Dumbfounded or flabbergasted such as an agent doing a double take or experiencing amazement that a newly listed house was extremely underpriced
EMESP-3	Light Surprised	Unexpected, perplexed, marvel	To feel stumped or puzzled as was the case with a homebuyer who was perplexed to find that no other people were interested in the home that she wanted to buy
EMETR-1	Strong Trusting	TRUSTING	Reliance on the integrity of another, for example, feeling strong trust in one's real estate agent to use homebuyer's financial information to make decision on how much to offer for a house
EMETR-2	Medium Trusting	Believing	To have confidence in the reliability of something or to feel accepting such as the homebuyer believing that the lender who help with the mortgage on his first house will be just as helpful getting a mortgage for his second house
EMETR-3	Light Trusting	Unquestioning	To take for granted or to feel unhesitating, for example, a homebuyer providing whatever financial documentation a lender asked for without hesitation or concern

#### Time Pressure's influence on IB

TPRIB	Time pressure and IB	Time pressure affects a homebuyer's information behavior, for example, he or she may rely solely on personal experience to make a home buying decision since there is insufficient time to research an issue in greater depth
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#### Interaction of Time Pressure and Emotion on IB

INTPE	Interaction of time pressure and emotion	Homebuyer experiences emotion when decisions must be made under time pressure, for example, fearing that he or she is making the wrong decision about putting an offer on a house because there is insufficient time to consider myriad questions about the property
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#### Information Grounds Emerge and Support IB

IGGTP	Type of Information Grounds	A place that people go for one purpose but end up sharing information with others who are present, such as going to a coffee shop to buy coffee but end up talking to others in line. Other examples maybe work, a home buying class, the gym, a place of worship or a playground.
IGGHP	How Information Grounds HELP	Information obtained at an Information Ground helps, for example, providing information about type about a specific type of mortgage, desirable neighborhoods or who a homebuyer should use as his or her real estate agent.
IGGHP_C	Counter--how Information Grounds DOES NOT HELP	Counter example of IG supporting Information behavior, for example, a homebuyer will not share information with strangers about something as important as homebuyer, or he or she will not trust information from anyone that is not closely associated with homebuyer like a family member or an attorney

### Normative Behavior

NRBSN	Social Norms	<u>Social norms</u> allow people to know what is considered normal and right within specific contexts by providing guidance to appropriate standards of conduct. Social norms delineate boundaries that people are typically unwilling to cross. For example, being a neutral third party in a real estate transaction, not offering homebuyers legal advice, or not contacting appraisers.
NRBST	Social Type	<u>Social types</u> refer to the classification given to one or more individuals in a social world. Specific social types adhere to social norms, for example, how they speak dress or interact with others. Moreover, they can assist or hinder one's access to information. For example, advocates, facilitators, discouragers, encouragers
NRBWV	Worldview	<u>Worldview</u> is an awareness of what is important or insignificant that is shared by members of a social world. People learn what they should know from the collective sense of members in their social world. For example, developing a relationship with a client, wanting to live in a place where all the houses are similar, believing that renting is throwing money away, believing that representing both the buyer and the seller in a real estate transaction does a disservice to both clients, or thinking that banks are holding back inventory of homes for sale so they can increase the increase the asking price of them in the future

<b>Observer Effect</b>		
<b>Type of Effect</b>		
<b>OEE</b>	<b>Equipment</b>	<b>Participant very interested in recording equipment</b>
<b>OER</b>	<b>Researcher</b>	<b>Participant very interested in researcher</b>
<b>OES</b>	<b>Study</b>	<b>Participant very interested in study</b>
<b>Duration</b>		
<b>OEP</b>	<b>Persistent</b>	<b>Interest persists for long period</b>
<b>OEN</b>	<b>Non-persistent</b>	<b>Interest dissipates quickly</b>

## Appendix VI: Intercoder Instructions

### Home Buying Study Coding Instructions

1. Familiarize yourself with the home buying codes. The coding scheme details users actions, emotions and feelings of time pressure. Each code has a definition and examples based on its definitions. Use these as guidelines for coding.
2. Select the designated transcripts (from the primary documents) and read them carefully. Look for instances that reflect codes from the codebook. In Atlas.ti, **highlight** the instance and then drag the appropriate code to that instance.
  - a) **Do not** code the timeline portion of the transcript as it was used as a method to establish topics discussed in depth later in the interview.
  - b) Code only for the person interviewed. Do not code for comments attributed to the homebuyer's wife, children, friends, etc. unless the homebuyer is responding to the information received from this person.
  - c) Remember that one instance may have multiple codes applied to it.
  - d) Certain codes **must be paired** with other codes. For example, when applying a code for Emotion & Information-seeking—an emotion code must be paired with the emotion & information-seeking code. When using the interaction of time pressure and emotion code—an emotion code must be paired with this code. Same with time pressure and information behavior—the type of information behavior exhibited must be paired with the time pressure and info behavior code.
  - e) Remember that coding for one instance may also involve some overlapping of another instance.
  - f) Only apply a code once to a particular instance. For example, if a homebuyer states that he is worried about a steep slope on property that he would like to buy, thus prompting his need to find information regarding the slope's stability, code this as an instance of emotion and information behavior. If he refers again to this same problem later in the interview, do not code the instance a second time. This will eliminate counting one instance multiple times.
  - g) Use the coding worksheet to indicate the strength of the code's appropriateness.
3. With regard to using Atlas.ti, if you make a mistake and want to change or remove a code
  - a) First **Right click** and then **Unlink** the specific code.
  - b) Next **Delete** the vertical line that is associated with its particular instance.
4. Always **Log Out** of Atlas.ti when you are finished working with it. If you do not, other coders cannot gain access to their hermeneutic units.

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