

Dervin, B. & Reinhard C. (in press). How emotional dimensions of situated information seeking relate to user evaluations of help from sources: An exemplar study informed by Sense-Making Methodology. In D. Nahl & D. Bilal (Eds.), *Emotional design: The emergent affective paradigm in information behavior research and theory*. Medford, N.J.: Information Today, Inc.

*Abstract and outline available at: http://imlsproject.comm.ohio-state.edu/imls_papers/osu_emotions.pdf

*A state-of-the-art-review of literature on the relationships between "emotions" and information seeking was embedded in this chapter as Figure 2 and Footnote 5. These are also reproduced at: http://imlsproject.comm.ohio-state.edu/imls_papers/osu_emotions.pdf with permission dated September 13, 2006, from the American Society for Information Science & Technology and from Information Today.

ABSTRACT:

In this chapter, Dervin and Reinhard pursued two major purposes. The first was to detail a highly abstract state-of-the-art literature review focusing on how emotion has been conceptualized in multiple ways in relationship to information behavior. Briefly stated, the review showed that emotions have been conceptualized as: being caused by or arising out of situations, tasks, or contexts or their sub-parts; being attributes of persons -- their personalities, demography, genetics, physiology, or past experiences; being causes of inhibiting or activating motivations; causing or leading to specific actor goals or activities; being encoding traces left in information, message, or text packages; and being states of being that themselves have informational value. The second purpose was to explicate how Dervin's Sense-Making Methodology conceptualizes the relationship and illustrate the approach with an exemplar study. The exemplar study examined how 409 informants-in-situations evaluated 2030 situations on a series of situational assessment scales that tapped "emotional" dimensions as found in the extant literatures on emotion. The authors then looked at how these situational assessments related to informant reports of how much and how sources helped them. The study was executed via deep qualitative interviewing that incorporated some quantitative aspects, followed by systematic quantitative content and statistical analyses. Results suggested that the various emotional dimensions often collapsed and confounded in prior work are not operating in unified ways and that situational conditions make a difference in terms of which dimensions are activated and how. While the extant literature often pits the cognitive against the emotional, this study pointed to more complex and complimentary possibilities.

OUTLINE OF CHAPTER:

Introduction

Entering the study of emotions through different doors

Research focus for an exemplar study

Method

 Sample

 Date collection

 Unit of analysis

 Measurement of situation assessment scales

 Measurement of how sources helped and how much

 Interview transcriptions and coding

 Statistical analyses

Results

 Average source helpfulness ratings

 Got pictures

Got or kept moving
 Got support
 Got control
 Got there

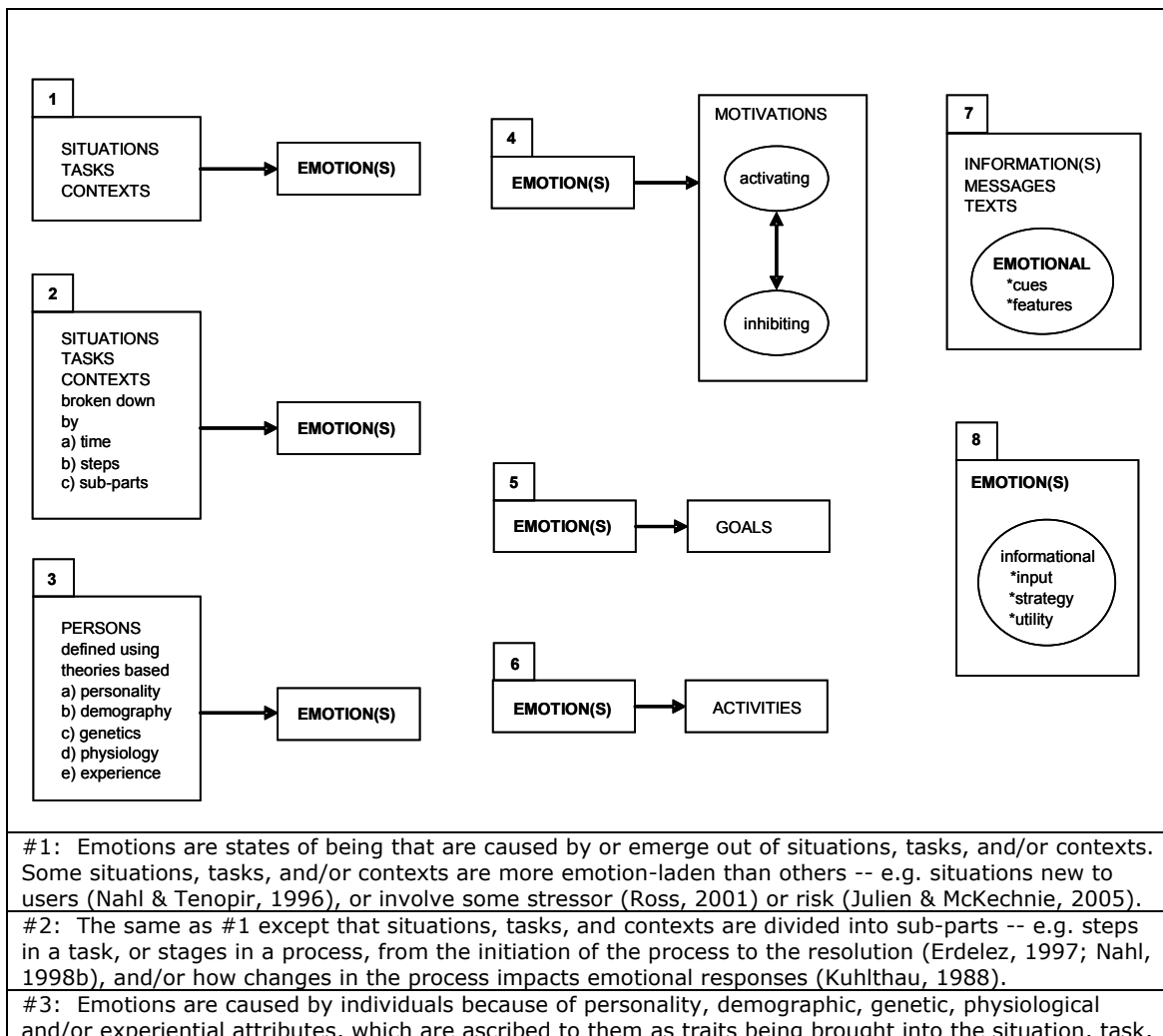
Conclusions
 Endnotes
 Reference list

A STATE-OF-THE-ART REVIEW ON EMOTIONS AND INFORMATION BEHAVIOR WAS ENCAPSULATED IN THE ABOVE CHAPTER IN FIGURE 2 AND FOOTNOTE 5. THESE ARE REPRODUCED HERE

with permission dated September 13, 2006, from the American Society for Information Science & Technology and from Information Today.

FIGURE 2 FROM CHAPTER:

Figure 2: Representations of the main thrusts in different conceptualizations of "emotion(s)" in the current library and information science, and communication literatures.¹



searching process, etc. -- e.g. lacking experience or familiarity (Nahl, 1998a), trait anxiety (Zorn, 1993) or neuroticism (Heinström, 2005), gender (Shamo, 2001), etc.
#4: Emotions are drive states that cause or lead to activating and/or inhibiting some activity, usually seen as in opposition (Nahl, 1998a; 2004; 2005b; Turner, Rimal, Morrison & Kim, 2006) or as a response to environmental stimuli (Gohm & Clore, 2002; Kalbach, 2006; Potter, 2004).
#5: Emotions are states of being that lead to or allow goals to emerge. This need or goal can be primarily unconscious (Taylor, 1968), a response to environmental stimuli (Wilson, 1981; Wilson, 1996), and/or of an indeterminate, uncertain nature (Kuhlthau, 1993)
#6: Emotions are states of being that lead to or allow specific activities to be undertaken-- e.g. aid or detract a search process (Nahl, 2005a; Kuhlthau, 1993), type of searching behavior (Heinström, 2005), or selection of inputs (Julien & Michels, 2000; Savolainen, 1995).
#7: Emotions are encoded into formalized information, message, or text "packages" and become defined as attributes of those packages with potential for impacts on users, such as framing how they will respond to the information (Nabi, 2003; Zillmann, 1988).
#8: Emotions are states of being that have informational value as inputs (informational content), strategies (define modes of information seeking and use), or utilities (the ways users evaluate things as helping and/or hindering) -- e.g. information about a situation (Schwarz, 1990), how to respond (Booth-Butterfield & Booth-Butterfield, 1990), and/or if it is useful to the individual (Weiss, 2000).

The pictures in the figure include directional arrows that imply one phenomenon is conceptualized as "leading to" or "emerging out of" another. The two directional arrow in picture 4 implies an oppositional or contradictory relationship.

FOOTNOTE 5 explaining FIGURE 2:

⁽⁵⁾ Our literature review focused most centrally on research in the field of library and information science, covering all the major journals and literature databases for the past five years. Additional forays were made into other fields' treatments of emotion(s) -- particularly the fields of communication and psychology -- if they received prominent attention in LIS. From this review, we extracted eight conceptualizations of emotions and their relationships to information seeking and use. These conceptualizations were sometimes used by researchers separately or in combinations. For purposes of this literature review, we discuss each conceptualization separately and cite example works which exemplify each thrust. The examples are presented as illustrations and not as a comprehensive list.

Of those conceptual thrusts focusing on what "causes" or "leads to" emotion(s), #1 focuses on the nature of the situation or task (the context) that may contain stimuli that would elicit emotional responses. Tasks may include using the internet or other technology for the first time (Dalyrumple & Zweizig, 1992; Nahl, 1998a) or searching for information to complete a project (Bilal, 2002; 2005). Situations may include health or other risk-related contexts (Julien & McKechnie, 2005), or coping with some stressor (Ross, 2001). Oftentimes the situation or task is conceptualized as eliciting a level of uncertainty and anxiety in the individual due to a gap in understanding, which initiates the searching behavior (Kuhlthau, 1993; Wang & Tenopir, 1998; Wilson et al, 2002); however, searching behavior may also be used to prolong positive emotions that are occurring (Zillmann, 1988).

#2 differs from #1 only in that the situation or task has been broken down into its component steps or stages, such as the steps undertaken during a searching process (Kuhlthau, 1988; 1991; 1993; Tenopir, 1994). Again, the steps are conceptualized as eliciting positive or negative emotions, which are in turn conceptualized as having subsequent impacts on the overall

searching process (Nahl, 1998b; 2005b). This may occur during any step of the process, from the initiation to the resolution of the task (Dalyrumple & Zweizig, 1992; Erdelez, 1997).

Whereas #1 and #2 describe characteristics of the situation the individual is facing that may differ across time and space, #3 conceptualizes the impetus of emotion(s) as derived from some internal trait of the individual that exists across situations. Traits have included: personality aspects, such as the general tendency to be "emotional" (Booth-Butterfield & Booth-Butterfield, 1990; Heinstrom, 2005; Savolainen, 1995; Zorn, 1993); demographic aspects, such as gender (Knobloch-Westerwick & Alter, 2006; Shamo, 2001); and, experience levels with any tool or step in the searching process (McCreadie, 1998; Nahl, 1998a; Wang & Tenopir, 1998; Wilson et al, 2002). An individual's general interests, lifestyles, and motivational states have also been ascribed as being cross-situational (Kracker & Wang, 2002; Nahl, 2005a; Nahl-Jakobovits & Jakobovits, 1985). While other fields (e.g. Condit, 2000; Damasio, 1999) have conceptualized physiological and genetic origins for emotion(s), no research in library and information sciences was found specifically focused here.

What has been found consistently, in combination with the three conceptualizations of causes, is emphasis on the central idea that emotion(s) impact information searching behavior. #4 conceptualizes emotion(s) as a drive state that leads to motivations that either activate or inhibit searching. In library and information science, research has largely seen negative emotion(s), such as anxiety, as the main activation to seek information (Kuhlthau, 1991; 1993; Nahl, 1998a; 2005a; Powell, 2004), whereas other fields have theorized the opposite -- that emotions lead individuals to avoid information (Turner et al, 2006; Zorn, 1993). Generally, the consensus is that emotions motivate internal and/or external behavior (Gohm & Clore, 2002; Potter, 2004; Schwarz, 1990).

In the same sense, motivations are conceptualized as arising from emotional needs the individual has, arising from contextual and/or personal requirements. #5 conceptualizes emotion(s) as informing the goal of the individual. An individual's emotional need, such as for support or pleasure, has also been conceptualized as an unconscious desire, triggered by environmental stimuli, to serve as the foundation and direction for information seeking behavior -- even if the nature of the need itself is vague and uncertain (Bilal, 2002; Kuhlthau, 1993; Nahl, 2005a; Roe, 1985; Taylor, 1968; Wilson, 1981; 1996; Zillmann, 1988). Thus, the goal elicited by an emotional need has been variously conceptualized as providing the motivation that impacts whether or not the search proceeds, as seen in #4, and/or dictating the methods undertaken to fulfill that need, as seen next in #6.

The conceptualization in #6 suggests that emotions may orient individuals toward specific activities or behaviors in order to accomplish their information

seeking and use (Heinstrom, 2005; Raghunathan & Corfman, 2004; Tenopir, 1994). Just as #2 theorizes how the process may impact emotion(s), #6 suggests that feedback from emotion(s) may impact subsequent steps during searching (Nahl, 2005a; 2005b). Emotion has also been conceptualized as impacting the selection of sources of input (Choo, Detlor & Turnbull, 2000; Julien & Michels, 2000; Kuhlthau, 1991; Potter, 2004; Savolainen, 1995; Wilson, 1981; Zillmann, 1988), which, in turn, has consequences on the end-result, or the sought-for goal. Emotion(s) have thus been conceptualized as an impetus to behavior, from vague need to impetus for each step of the process to fulfill that need.

The final two pictures show emotion(s) as being conceptually linked to information. #7 conceptualizes emotion(s) as being encoded into the nature of the information, message or text "package" that the individual is interpreting. These "emotional cues" may then impact how the information is perceived and thus used by the individual (Nabi, 2003; Potter, 2004). This conceptualization comes largely out of the communication field, from work done on information-processing of messages (Nabi, 2003), and from work focusing on the uses and gratifications audiences derive from media. The latter work has focused on the use of media content to manage mood states (Zillmann, 1988), where the features of particular media texts are conceptualized as interacting with the users' mood state in consistent and predictable ways to influence the mood state (Chang, 2006; Hansen, 2003; Knobloch-Westerwick & Alter, 2006; Roe, 1985).

In a related conceptualization, #8 shows how emotion(s) can be construed as another source of information for the individual to use, if judged applicable (Beer, Knight & D'Esposito, 2006; Schwarz, 1990). One variant suggests that emotion(s) are related neurologically to memory, telling the individual what to attend to, how to attend to it and what to remember for the future (Booth-Butterfield & Booth-Butterfield, 1990; Gohm & Clore, 2002; Schwarz, 1990; Weiss, 2000). Another variant (Dervin, 2003) proposes emotions or feelings as themselves information bearers in a confluence of sense-making elements a user brings to bear in satisficing an information need. While Dervin (2003) is the one example we found of a researcher focusing on information seeking and use who has explicitly positioned emotions as informational, across our entire review picture #8 -- referred to in the social psychology literature as affect-as-information -- has played an implied role in how researchers have theorized the nature of emotion(s) in the process of information seeking and use.

Updated November 23, 2006