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Weaving an affective framework for information behaviour research: a consideration of ‘trilogy of mind’ and ‘flow’

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Introduction. This paper contends that the notions of (1) trilogy of mind and (2) flow should be considered in weaving an affective framework for information behaviour research.

Method. This research proposal was informed by a review of the relevant research and introspection.

Analysis. The seminal research on trilogy of mind and flow is considered and the potential implications for an affective research framework are described.

Results. This paper shows that research on affect in the area of information research remains in its infancy and lacks quantum. A sufficiently broad research framework is needed to extend this subfield of research.

Conclusion. This paper proposes that two concepts (i.e., trilogy of mind and flow) be included in an affective research framework to expand information behaviour scholarship.

Introduction

Many scholars have proposed a research agenda for the field of information behaviour centred around *affect*. Notably, Nahl and Bilal (2007), Spink and Heinström (2011) and Fourie and Julien (2014) made convincing arguments about the importance of affect and emotion in information behaviour research. In addition to theoretical arguments, a number of practical arguments on the importance of affect and emotion in this field have been raised, including that the significant technological advances in information and communication technologies are making information behaviour more ubiquitous, complex and likely to evoke a wide array of affective responses. As Spink and Heinström (2011) observed, individuals can

attend to numerous intellectual, emotional and other needs simultaneously due to the convergence of media platforms and constant access (p. 292).

This paper extends the work of information science scholars, such as Nahl and Bilal (2007), Spink and Heinström (2011), Fourie and Julien (2014) and is underpinned by the work of psychology scholars, such as Russell (2003), Ortony, Clore and Foss (1987) and Csikszentmihalyi (2008) with the contention that research in information behaviour should consider the notions of *trilogy of mind* and *flow* in weaving an affective research framework.

Trilogy of mind

The first notion (i.e., trilogy of mind) represents three focal faculties: cognition, affection and conation. According to Hilgard (1980), the recognition of this threefold division of faculties of mind is a longstanding tradition that can be traced back to Germany in the period between Leibniz and Kant (i.e., 1646–1804). Different theoretical traditions lend support to this trilogy and empirical evidence suggests the presence of a tripartite model of attitude (Breckler, 1984). Cognition refers to aspects related to thinking and understanding, affection encapsulates feelings while conation denotes will or, as Ortony *et al.* (1987) referred to it, behaviour.

The mental capacities represented in the trilogy are important when considered individually, but even more so when considered collectively. As a collective, they provide insights into the intricate relationship between thoughts, feelings and actions. The trilogy of mind also implicitly points to the far-reaching effects of information in shaping conscious thoughts, evoking feelings and emotions and influencing behaviour. Traditionally, a strong emphasis has been placed on cognition in psychology and information science (see e.g., Hilgard, 1980; Belkin, 1990). Hilgard (1980) discussed this emphasis in the discipline of psychology. Conversely, in information science, many scholars (e.g., Ellis, 1992; Hjørland, 2000) have recognised the prevalence of a cognitive viewpoint and its potential use in mapping users' thinking and mental models to guide research on users' information needs, seeking and retrieval behaviours. However, in psychology a significant amount of attention has also been directed towards research on affect and conation.

In information science, research on affective aspects has remained in its infancy, despite early calls being made for research in this area. A basic review of research in this area reveals that very few researchers have taken-up these calls. Consequently, research on affect continues to be lacking. To date, research on affect and emotion has been largely confined to information searching and information retrieval. Indeed, other areas in information behaviour have been largely ignored. Additionally, no framework for guiding research efforts has been clearly articulated and thus no cumulative tradition created. As Fourie and Julien (2014) noted, many studies purporting to analyse affect and emotion have failed to define the relevant terms well, leading to muddled observations. Lopatovska and Arapakis (2011) reviewed studies in the domain of human-computer interactions and concluded that knowledge of the role of emotions in human-computer interactions is still in its infancy. They noted that a failure to define many variables, such as emotions, feelings, affect or mood, has led to an imprecise use of the terms and incomparable findings. They further observed that many researchers might not even be aware of relevant research on emotions in the cognate disciplines.

Russell's (2003) work is extremely helpful in clarifying the notion of affect and should be considered by information behaviour scholars. Russell's landmark study provided very clear conceptions of affect and emotion. According to Russell, affect denotes states that are free floating and which are experienced as simply feeling good or bad, energised or enervated. It should be noted that individuals do not know the reasons they experience such states. Conversely, emotions are states for which there is a '*cognitive content, or more technically ... an "intentional" object*' (p. 146). It should be noted that individuals know

the reason or object of an emotion. For example, the statement, ‘*Eddie was angry*’ (in which anger represents an emotion), shows knowledge of the object of Eddie’s anger. Conversely, the statement, ‘*Eddie is afraid of the eagle*’ (in which fear represents an emotion) shows knowledge of the object of Eddie’s fear. Russell further contended that both emotion and affect could be subsumed under a notion of *core affect*.

It is important to note that in addition to a lack of clear conceptualisations of core concepts, there is also a lingering danger that attention is only being directed towards affect and emotion. The absence of cognition, affection and conation (i.e., trilogy of mind) in information behaviour research has similarly received little attention. A few theoretical (e.g., [Bates, 2002](#)) and empirical (e.g., [Kuhlthau, 1991](#)) exceptions exist. However, a lack of research in this area has resulted in findings that while important are partial in nature, as they consider only one aspect or faculty of mind while ignoring the other two faculties. Thus, in addition to clear definitions of affect and emotion being needed, the aforementioned trilogy of mind also needs to be used to explore information behaviour within a broader research framework.

Flow

Research should also strive to go beyond examinations of affect and emotion to consider questions related to happiness and well-being. These two research areas are very important, as they are intricately linked to affect and emotion and the other two faculties of trilogy of mind (i.e., cognition and conation). Kari and Hartel ([2007](#)) eloquently argued that research in information science should seek to concern itself with more meaningful and profound experiences. They further contended that of these other experiences, *flow* should be considered in broader information science research. Particularising the relevance of flow to information behaviour has important implications; for example, it is arguable that research in this area could go beyond affect and emotion to also connect information behaviour to other highly significant research areas, including happiness and well-being.

Csikszentmihalyi’s ([1975](#), [1996](#), [2008](#)) research on flow has spanned over four decades and provides a sound theoretical foundation for the study of this concept in the context of information behaviour. Flow or ‘optimal experience’ is described as a state in which a person feels concentration and enjoyment ([Csikszentmihalyi, 2008](#)). According to Csikszentmihalyi, a state of optimal experience is reached when highly focused concentration leads to complete absorption in an activity. The state of flow has been attributed to a sense of deep enjoyment and happiness. Thus, the question arises: How can individuals reach a state of flow? Csikszentmihalyi’s research has shown that to experience flow, an activity should be easy to perform, have clear rules, provide feedback and make control possible.

An individual striving to achieve flow must channel his/her attention to ensure that the information in his/her consciousness is ‘*intentionally ordered*’. The order requires that thoughts follow each other. Thus, the information allowed to enter consciousness is extremely important ([Csikszentmihalyi, 2008](#)). Jackson and Marsh ([1996](#)) noted that a state of flow brings numerous positive experiences to an individual, including freedom from self-consciousness and a great enjoyment of the process. Feelings of control, effortless involvement and changes in sensing the duration of time are some of the experiences reported by individuals in a state of flow. The importance of flow has been recognised in various lines of enquiry, including studies on designing games (e.g., [Chen, 2007](#)), assessing student engagement (e.g., [Shernoff, Csikszentmihalyi, Schneider, and Shernoff, 2003](#)) and understanding athletes’ performance (e.g., [Kee and Wang, 2008](#)).

Information behaviour encompasses a broad range of information-related activities, including information seeking, searching, use, and sharing. It is unlikely that all these activities are equally conducive in creating a flow experience; however, the potential of these activities has yet to be explored. For example,

purposive information seeking has been shown to evoke affect and emotion (e.g., [Fulton, 2009](#); [Kuhlthau, 1991](#)); however, the following question arises: Can this kind of information seeking be experienced by users as a state of flow? Anecdotal evidence suggests that information seeking on social media websites and even non-purposive information seeking, such as browsing, can lead to alterations in an individual's sense of the duration of time—one of the characteristics of experiencing a state of flow. Similar plausible assertions can be made about other information-related activities, especially information use and information generation; however, empirical investigations need to be conducted to validate or refute these assertions. Thus, a set of questions arise in relation to: (1) the role of the intrinsic traits of types of media (e.g., social media) in providing opportunities for information seeking and flow; (2) the effects that different information needs have on the quality of flow during information seeking; (3) if and how the magnitude of flow varies during different information-related activities; and (4) the identification of addictive flow experiences.

The field of information behaviour has serious implications for the overall well-being of individuals. Traditionally, information science scholars have approached this research problem by studying the information needs of various user groups, including students, scientists and patients (e.g., [Bertulis and Cheeseborough, 2008](#)). Arguably, this stream of research has made an important, but perhaps indirect, contribution to research on the well-being of individuals. This is because *information* has been construed as a second-order effect or something that will be used for some other important need, which will then produce the first-order effect (i.e., the well-being of individuals). However, exploring the role of information behaviour in developing a state of flow could directly link happiness and well-being to information-related activities.

From a methodological standpoint, both qualitative and quantitative measures have been developed to study the state of flow, including semi-structured interviews ([Csikszentmihalyi, 1975](#)), in-depth qualitative investigations ([Jackson, 1992](#)) and quantitative approaches, such as the Experience Sampling Method ([Csikszentmihalyi and Larson, 1987](#)) and the Flow State Scale ([Jackson and Eklund, 2002](#)). These same measures could be adopted by information science researchers.

Conclusions

Broadly speaking, building on the suggestions of Nahl and Bilal ([2007](#)), Spink and Heinström ([2011](#)) and Fourie and Julien ([2014](#)), there is a need for information science researchers to study not only affect and emotion, but also trilogy of mind. The following questions are highly relevant to the affective research framework: (1) How does information behaviour affect the trilogy of mind; What circumstances restrict the effects of information behaviour to only one faculty of mind; and (3) How do information laden effects that travel from one faculty to another ultimately lead to behaviour?

To date, very few studies have examined individuals' optimal experience or flow as they engage in different information behaviours. Any research in this direction would be extremely helpful to the area of information behaviour research specifically and to the area of information science more generally. A research agenda that comprises trilogy of mind and flow will not only broaden the breadth of studies in information behaviour research, but will also connect this research to the more significant issues of happiness and well-being. Further, this framework will also help information scholars engage in multidisciplinary research with psychologists, medical practitioners, computer scientists and sociologists.

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