Motivated Information Behavior

David Schwieder
Graduate School of Library and Information Science
501 E. Daniel, Champaign, IL 61820
schwied1@illinois.edu

ABSTRACT

While motivation is recognized as central to various aspects of information behavior, motives remain surprisingly underemphasized in information behavior research. Major theories focus almost exclusively on other psychological elements, primarily cognition, while studies of motivation have been limited or absent in a variety of important respects. In this paper, I suggest that a stronger emphasis on motives is warranted. Drawing on recent trends in social psychology research, I argue that a "motivated information behavior" approach can offer a variety of benefits: it can improve our explanations of information behavior, unify disparate research areas, and illuminate some of the mechanisms underlying important information behavior phenomena.

Keywords

motivation, information behavior, information needs, information seeking, information avoidance

INTRODUCTION

Motivation plays a central part in information behavior. Information needs are commonly assumed to rest on a motivational base, and many formulations of this needs concept invoke a motivational drive. These motives then spark information seeking; as Donald Case notes [1] "information seeking is a catchall phrase that encompasses a variety of behaviors seemingly motivated by the recognition of "missing" information." Similarly, much of the work on the related topic of information avoidance recognizes the important role that motives play in this process.

Despite this acknowledged importance, however, motivation remains underdeveloped in LIS information behavior research. Major theories pay little attention to motives, focusing instead on other psychological factors, primarily cognition. When motivation is examined, it is often vaguely conceptualized, or analyzed through scattered, ad hoc treatments which focus on specific motives relevant to particular areas. Unfortunately, these approaches have failed to identify more fundamental aspects of motivation or to capture its core importance in information behavior.

In this paper, I argue that existing information behavior work contains the seeds of a more productive approach. Drawing on recent social psychology studies, I suggest that a focus on "motivated information behavior" (MIB) can move LIS research in a more productive direction. While simple in itself, MIB offers a variety of important advances; better explanation, a framework for organizing disparate research areas, useful new predictions, and the illumination of some key mechanisms underlying important information behaviors.

The (Relative) Neglect of Motivation

Information Seeking

Motivation has never played a particularly prominent part in information seeking research. Along with other psychological factors, motives were largely ignored by the "system-centered" approaches that dominated early information retrieval study. These early approaches emphasized the rational, purposive dissemination of information"typically treating users as little more than passive receivers"and thus psychological factors were seen as largely irrelevant [2].

Nor did the "user-centered" turn in the 1970s and 1980s introduce an emphasis on motives. This is most apparent in the major theories that have gained prominence in the information behavior field. To one degree or another, most of these theories place a central emphasis on cognition. Nick Belkin's ASK formulation was explicitly cognitive, with other theories like Robert S. Taylor's model and Brenda Dervin's sense-making approach also centered primarily around cognitive concerns [3,4,5]; reviewed in [6,7]. Another approach, Carol Kuhlthau's Information Search Process model, (ISP), incorporates affect while retaining a strong focus on cognition [8].

The lack of theoretical focus on motivation is readily apparent in a recent overview of information behavior theory. Of the seventy-some theories outlined in Theories of Information Behavior, only one explicitly invokes "motivation" in the title. Moreover, while a handful of these

theories concern subjects with a clear connection to motivation, like monitoring and blunting, and library anxiety, the presentations of these theories make no explicit references to this term. Nor is motivation mentioned in any the thirteen "meta-theories" discussed in the opening chapter of the book [9].

Of course, motives have not been entirely absent from information behavior research. The most popular approach has been to identify specific motives thought relevant for particular informational contexts or tasks. Studies of Web-based activities, for example, have examined motives like entertainment and communication that are seen to drive Web use [10,11], while other studies have analyzed motives in educational settings [12,13]. The number of cited motives varies widely; some studies employ a general, unspecified information seeking drive, while others identify dozens of specific motives [14,15].[1] These studies have been useful, but they have neither yielded broader theory nor identified what one can call "basic motives more fundamental to the nature of human desire than particular motives that are the result of relatively specific conditions [16]."

Information Avoidance

If information seeking research has paid little explicit attention to motives, motivational considerations have been more prominent in studies of information avoidance. Situations where people desire to avoid threatening or ego-challenging information seem to prompt an intuitive recognition that motivation plays an important part, and a number of studies have analyzed the dynamics of this process [17]. Many of these studies have focused on the areas of medicine and health, where "bad news" can have dire consequences.

However this research has suffered from several problems in terms of motivation. Motives have rarely been well specified, and many studies simply posit a vague drive to avoid information. Little attention has been paid to theory. More fundamentally, information avoidance studies have been a minor sidelight to information seeking work; as Donald Case notes, information behavior research has generally rested on the assumption that information seeking represents the norm [18].

---

[1] If inclusion of motivation has been so sporadic, how do these various theories move from mental factors to action? Some approaches simply proceed as if behavior follows directly from mental activity, while others have suggested that emotions drive behavior. While these approaches are not unreasonable, especially the latter, by definition neither can capture the nature or importance of motivation.

Causes and Consequences

The previous sections document the limited and fragmented attention paid to motivation in the information behavior literature. From a psychological perspective, this is somewhat surprising. Psychology research has traditionally posited a "triumvirate" of three basic mental elements; cognition; affect and emotion; and a third area which includes the interrelated concepts of conation and motivation [19]; from this perspective, the absence of motivation is apparent. This raises an obvious question; why have motives not played a larger part in information behavior research?

The most obvious answer is that motives have been overshadowed by cognition. In part, this seems to be a legacy of the early systems-centered approach. As Savolainen notes, in that type of model "the system is the essential order, and the individual or user bends to it [20]" If the purpose of information systems is to provide a rational supply of information, then the role of the user is to rationally retrieve it; rational systems were seen to beget rational "task oriented" users. And rational users are cognitive users. Reflecting this, psychological approaches have tended to place a strong focus on cognition.[2]

More broadly, cognitive approaches have dominated related disciplines. In the1970s and 1980s, when the user-centered turn was developing in information behavior research, the social psychology subfield was in the midst of an intellectual cycle which strongly asserted the primacy of cognition [21]. This "cognitive imperialism" drew attention away from other factors like affect and motivation. In the case of motivation, the effect was particularly dramatic. A variety of psychological phenomena can be explained in either cognitive or motivational terms, and thus motivational approaches languished behind more favored cognitive rivals [22]. These trends affected a number of disciplines that "import" from social psychology, information behavior research among them.

This under-emphasis on motivation has had several unfortunate consequences. As indicated earlier, the theoretical underspecification of motives has been accompanied by empirical work which is fragmented across a variety of specific motives and particular areas of application. More importantly, these theoretical and empirical limitations have obscured more basic forms of motivation, and their importance in information behavior, as the next section will suggest.

---

[2] This cognitive focus may have been further advanced by this early work's focus on scientist and engineers, two disciplines which place a strong professional emphasis on rationality and objectivity.

Motivated Information Behavior

While information behavior studies have paid relatively little attention to more fundamental motivations, this does not mean that such motives have been entirely absent from this work; rather, most of these studies have implicitly assumed a basic model of motivation. This can be appreciated through the lens of recent social psychology work. Following several decades where motives were out of fashion, this field has returned to an earlier interest in motivation; as the most recent Handbook of Social Psychology has it, "motivation is back [23]."

The central thrust of this recent work has focused on the motivated construction of understanding. This approach posits two basic types of motives. The first emphasizes accuracy. In many cases, people wish to form accurate beliefs and impressions about the world; that is, to reach conclusions that are best supported by available evidence and information. Given the obvious importance of accuracy in many instances of "sense making," much of this recent psychology work has analyzed accuracy-seeking motives and how they shape people"s thinking and information use [24].

However accuracy is not the only possible goal, and at other times people seek to construct more comforting conceptions of reality [25]. Motives serving these kinds of goals are characterized as "directional," and they help people to arrive at conclusions which they wish to reach. These conclusions can be used to ward off threatening implications, or to defend basic values or existing points of view. Directional motives function primarily through biased strategies for selecting and evaluating beliefs and information; for example, by affecting which types of information are considered or how this information is used [26].

What does this tell us about information behavior? If information seeking and information avoidance are motive-driven, as Donald Case argues, and if these motives will be either accuracy-seeking or directional, as the social psychology research suggests, then many information behaviors will be driven, at a fundamental level, by one or the other of these basic motives.

While information behavior research has not explicitly recognized or labeled these directional or accuracy-seeking motives, in many cases this work has assumed their existence. This is most evident in the information avoidance literature. As indicated earlier, it seems intuitively apparent that a desire to avoid certain types of information is motivationally driven, and information avoidance research has regularly, if rather casually, treated motivation as important. Though the term "directional" is not used, the motives involved here-for example with serious medical conditions-obviously are in-

tended to help people attain or preserve a particular perspective or conclusion; i.e. one that is uninformed by troubling information.

On the other hand, assumptions about accuracy seeking motives have been less apparent. Accuracy motives are not explicitly invoked in the information behavior literature-indeed, seeking accuracy hardly seems like a motive at all-but most information seeking studies have implicitly assumed that people wish to reach accurate conclusions. This assumption comes easily; absent any reason to think otherwise, accuracy seeking constitutes a reasonable, almost automatic default. Moreover, along with being an often functional strategy, seeking accuracy also is a core value in the LIS professional culture; bibliographic systems, reference and instructional services are designed to emphasize accuracy. And if the system prizes accuracy, then, in an odd echo of the early information retrieval literature, it is rather easy to assume that users do too. Accordingly, the belief that people desire accuracy has served as an unrecognized assumption in most research on information seeking and use.[3]

Discussion

What does it buy us to recognize that information behavior is motivated in this basic sense? Most directly, positing "motivated information behavior" can improve theory and explanation. We can appreciate this by considering one of the leading information seeking theories, the ISP model. This model emphasizes "affective (feelings) [and] cognitive (thoughts)," and these two factors interact to shape information seeking behavior [28]. As noted, this approach differs from most theories by its inclusion of affect. But what does this add? If one can model information behavior in purely cognitive terms-as most theories do-what do we gain by adding emotion? The payoff, of course, is richer understanding and explanation. Kuhlthau's research subjects report that feelings are an important aspect of information seeking, and this points to useful insights; how anxiety can short-circuit information seeking, for example, or the discovery that uncertainty actually rises at certain points in the information seeking process rather than simply declining monotonically.

Similarly, then, considering motivation can also contribute additional insights. While information behaviors

---

[3]The point that unrecognized assumptions guide research is a generally acknowledged one, and accuracy-seeking is not the only implicit assumption in information behavior work. Commenting on the relative lack of attention to information avoidance, Donald Case notes the underlying assumption that people seek information; "As in Aristotle"s time, it is assumed that people want to know; looking for information is a natural aspect of being human" [27].

can be explained without it, motivation can add explanatory and theoretical insights that other psychological factors cannot, particularly when information behavior is viewed as an active process of construction.

Most broadly, motivated information behavior can provide a powerful organizing framework, one that helps to connect disparate literatures and findings. While information seeking and information avoidance have been treated as distinct phenomena, the MIB perspective views these two behaviors as different sides of the same motivational coin, with the choice between them driven by the particular goal that people happen to employ. When they wish to gain an accurate understanding of some unfamiliar area, people will typically tend to seek information; alternatively, they may avoid or reject information when their motives direct them toward reaching or preserving particular positions or states of mind.

The MIB framework can also organize more specific behaviors. While information avoidance has been the only form of "non-use" to receive much LIS attention, MIB suggests that avoidance is hardly unique; rather, it is simply one type of directionally motivated information behavior.[4] Another such behavior involves information rejection. Studies in a number of other fields have examined the use and evaluation of information, and they have consistently found that people show a strong bias toward accepting information consistent with their existing views while rejecting information which clashes with these views or undermines them [30,31,32,33]. Accordingly, a MIB approach can offer predictions about the existence and basic nature of directionally-driven information behaviors.

Following from this, the MIB approach can also help to identify specific mechanisms underlying particular information behaviors. For example, psychology studies suggest that a main mechanism underlying information rejection is "counterarguing," an active endeavor where unpalatable information is challenged or contested, then dismissed through the mobilization and use of reasons or arguments which undermine or dispute undesirable evidence. While people accept affirming information rather uncritically, discordant information is subjected to stringent evaluation [34]. Alternatively, people may simply pay more attention to confirming information than disconfirming information [35]. Along with information avoidance and rejection, MIB can also shed light on information seeking; studies show that people driven by accuracy motives seek information in a more balanced manner, and are resistant to cognitive biases that can undermine effective information seeking.[5]

Turning from theory to practice, does the MIB perspective help to inform practical library work? Yes, but not in the usual sense. While we typically expect research to guide practice, a MIB perspective probably raises more practical questions than it answers. This is due to the prevalence of directional motives. While LIS studies of information avoidance have focused heavily on health concerns, studies in social psychology and other disciplines predict that directional motives-and the behaviors they inspire-will be common, even the norm, in areas where people wish to preserve existing opinions, defend cherished interests or values, or to ward off perceived threats. Clearly, many types of information offered in the library-involving politics, for example, controversial issues and events, or any matters where people are invested in some settled view of the world-can involve the kinds of concerns that tend to prompt directional motivations. These points thus combine to suggest that library-related directional motives and behaviors will be far more common than the "accuracy-assuming" LIS literature has supposed.

This poses an obvious problem; when people reject or avoid information, information literacy will typically suffer. This problem is hardly a novel one, of course; information literacy routinely is compromised by a host of factors, including users' lack of effort, their cognitive biases or anxieties, or limitations in information systems [38, 39, 40, 41]. But motives are different. Whatever the unfortunate effects of these other factors, we can assume that users still have some basic desire to utilize the carefully assembled "public knowledge" that libraries exist to supply. With directional motives, however, we cannot.

The implications are important. While problems stemming from user biases or "least effort" can be addressed through traditional library approaches like instruction, reference services, and improvements that facilitate easier use of information systems, it is not clear how libraries can deal with the rejection or outright avoidance of information. Aside from the practical difficulty of providing services-many people who wish to avoid information will probably just avoid the library-there is a deeper problem as well. Helping anxious or casual users to find relevant information falls squarely within the traditional library paradigm, but serving people who have some basic wish to remain ignorant is another matter. Users who prefer "illusion," to use the social psychology term, would seem

---

[4]The term "non-use" is from Wilson [29].

[5]Finally, besides contributing to LIS study, applying motivated information behavior theory to this area could also help to extend

the theory itself. Given its reliance on experimental methods, social psychology research has tended to focus primarily on information evaluation; experiments present researcher-collected information to subjects, and then analyze its effects. However LIS research can direct attention to the prior information seeking stage, which has received little attention in psychology motivational research. Extending the theory in this manner would help to "export" LIS findings to other disciplines, a useful excercise which has tended to lag in the past [36,37].

to present a unique challenge.

Conclusion

Motivation occupies a paradoxical place in the information behavior literature. Recognized as central for information needs, motives have nonetheless played only a sporadic and fragmented role in research on information seeking and use: it is as if motives provide a powerful initial spur to the process, then virtually disappear. Clearly this is account is unconvincing, and we would expect motivation to influence subsequent stages in the information process.

As indicated, motives can make a significant contribution to the study of information behavior. While simple in itself, the notion of motivated information behavior offers several important benefits: improved explanation, frameworks to organize multiple research areas and findings, and the ability to offer new predictions and illuminate mechanisms of action. This array of benefits is broad, but probably not surprising. If such basic motivation is central, as the social psychology literatures suggest, and if it has remained underemphasized in information behavior work, then incorporating it would be expected to provide a variety of useful dividends.

Obviously this does not mean that motivated information behavior is the only way to conceptualize motives, or that motives must be incorporated into every theory or approach. However it does suggest that many information behavior literatures could profitably include these and other sophisticated treatments of basic motives and motivation.

REFERENCES

[1] D. O. Case. *Looking for information: A survey of research on information seeking, needs and behavior*. Academic Press, New York, 2002.

[2] B. Dervin and M. Nilan. Information needs and uses. In M. Williams (Ed.), *Annual Review of Information Science and Technology*, 21: 1-25, Knowledge Industry,White Plains, NY, 1986.

[3] N.J. Belkin, R.N. Oddy, and H.M. Brooks. ASK for information retrieval: Part I. Background and theory. *Journal of Documentation*, 38: 61-71, 1982.

[4] B. Dervin. *Sense-making methodology reader: Selected writings of Brenda Dervin*. Hampton Press, 2003.

[5] R.S.Taylor. Question-negotiation and information seeking in libraries. *College & Research Libraries*, 178-194, 1968.

[6] C.C. Kuhlthau. Inside the search process: Information seeking from the user"s perspective. *Journal of the American Society for Information Science*, 42, 361-371, 1991.

[7] R. Savolainen. The sense making theory: Reviewing the interests of a user-centered approach to information seeking and use. *Information Processing & Management*, 29, 13-28, 1993.

[8] Kuhlthau, *Inside*.

[9] K.E. Fisher, S. Erdelez, and L. McKechnie. *Theories of Information Behavior*. Information Today, 2005.

[10] S. Sun, A.M. Rubin, and P.M. Haridakis. The role of motivation and media involvement in explaining internet dependency. *Journal of Broadcasting & Electronic Media*, 2008.

[11] D. Yoon, F. Cropp, and G. Cameron. Building relationships with portal users: The interplay of motivation and relational factors. *Journal of Interactive Advertising*, 3, 2002.

[12] R.V. Small, N. Zakaria, and H. El-Figuigu. Motivational aspects of information literacy skills instruction in community college libraries. *College & Research Libraries*, 65, 96-121, 2004.

[13] J. Heinstrom. Fast surfing for availability or deep diving into quality: motivation and information seeking among middle and high school students. *Information Research*, 11, 2006.

[14] M.J. Dutta-Bergman. The impact of completeness and Web use motivation on the credibility of e-health information. *Journal of Communication*, 253-269, 2004.

[15] T.F. Stafford, M.R. Stafford, and L.L. Shkade. Determining uses and gratifications for the Internet. *Decision Sciences*, 35, 259-288, 2004.

[16] T.S. Pittman. Motivation. In D. Gilbert, S.T. Fiske, & G. Lindzey, (Eds.), *Handbook of social psychology* (4th ed., Vol. 1, 549-590). Oxford University Press, Inc, New York, 1998.

[17] D.O. Case, J.E. Andrews, J.D. Johnson, and S.L. Allard. Avoiding versus seeking: The relationship of information seeking to avoidance, blunting, coping, dissonance, and related concepts. *J Med Libr Assoc*, 93, 353-362, 2005.

[18] Case, *Avoiding*.

[19] B. Parkinson, and A. Colman. *Emotion and motivation*. Longman, Upper Saddle River, NJ, 1995.

[20] Savolainen, *Reviewing*.

[21] E.E. Jones. Major developments in five decades of social psychology. In D. Gilbert, S.T. Fiske, & G. Lindzey, (Eds.), *Handbook of social psychology* (4th ed., Vol. 1, 3-57). Oxford University Press, Inc, New York, 1998.

[22] Z. Kunda. The case for motivated reasoning. *Psychological Bulletin*, 108, 480-498, 1990.

[23] Pittman, *Motivation*.

[24] Pittman, *Motivation*.

[25] Pittman, *Motivation*.

[26] Kunda, *Case*.

[27] Case, *Avoiding*.

[28] Kuhlthau, *Inside*.

[29] P. Wilson, P. Unused relevant information in research and development. *Journal of the American Society for Information Science*, 46, 45-51, 1995.

[30] C.G. Lord, L.Ross, and M.R. Lepper. Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of Personality and Social Psychology*, 37, 2098-2109, 1979.

[31] C.S. Taber, and M. Lodge. Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science*, 50, 755-769, 2006.

[32] R.P. Vallone, L. Ross, and M.R. Lepper. The hostile media phenomenon: Biased perception and perceptions of media bias in coverage of the Beirut massacre. *Journal of Personality and Social Psychology*, 49, 577-585, 1985.

[33] J.R. Zaller. *The nature and origins of mass opinion*. Cambridge University Press, Cambridge, 1992.

[34] Zaller, *Nature*.

[35] C.S. Taber, M. Lodge, and J. Glather. The Motivated Construction of Political Judgments. In J. Kuklinski, (Ed.), *Citizens and Politics: Perspectives from Political Psychology*, 198-226. Cambridge University Press, Cambridge, 2001.

[36] B. Cronin and S. Pearson. The export of ideas from information science. *Journal of Information Science*, 16, 381-391, 1990.

[37] B. Cronin and L.I. Meho. The shifting balance of intellectual trade in information studies. *Journal of the American Society for Information Science and Technology*, 59, 551-564, 2008.

[38] A.Y.S. Lau and E.W. Coeira. Do people experience cognitive biases while searching for information? *Journal of the American Medical Informatics Association*, 14, 599-608, 2007.

[39] C.A. Mellon. Library anxiety: A grounded theory and its development. *College & Research Libraries*, 47, 160-165, 1986.

[40] H. Poole. *Theories of the Middle Range*. Ablex, Norwood, N.J., 1985.

[41] G. Zipf. *Human behavior and the principle of least effort: An introduction to human ecology*. Addison-Wesley, New York, 1949.