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An examination of Wilson's Concept of Information Need: implications

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Abstract

Introduction. This article is an examination of an important article in information science, as well as in my professional career, Wilson's (1981) 'On user studies and information needs'. In it, Wilson asked: is information need *qualitatively similar* to and as vitally important to humankind as the generally accepted basic human needs like our need for water and food? Or is information need merely a secondary need, one in the service of satisfying the primary human needs?

Method. To assess this question, this article starts with Maslow's (1943) classic *hierarchy of primary human needs*, which range from the most primary physiological needs (for air, water, food) to the least primary of human needs (for self-actualization). It then carefully analyses Wilson (1981) section by section.

Results. Part 1 of this article analyses Wilson's (1981) treatment of the primary versus secondary need question. Wilson clearly decides that he is on the secondary need side of the issue: i.e., that information need is not a primary need, but is a secondary need in support of the primary human needs. Part 2 of this article examines the implication, in three hypotheses, of information being considered a primary human need.

Conclusion. I argue that by Wilson posing the question, he elevated information science to one of the important research areas in social science. I concluded that information need is a primary need that makes us human.

Introduction

Recently, Cole and Wilson (2024) examined the concept of information need by opposing two different perspectives. Both asked the questions: What is information need exactly? Is it a basic or secondary human need? While Cole argued that it is a primary need like our need for water and food, Wilson maintained his position he articulated in his groundbreaking article forty-three years ago (Wilson (1981)), but that he had been wrestling with since 1971: that information need is not a basic need. Wilson (1981) is one of the fundamental articles in information science. I was introduced to its complexity in 1989 when Wilson taught a course at McGill University's School of Information Studies in Montreal. The course motivated me to follow Wilson back to the Information School at Sheffield University, England for my Ph.D., a decision I have never regretted.

Why is Wilson's discussion of information need so important, so fundamental to our field of information science? I'll start with Wilson's (1981) stated objective:

There is another confusion, possibly more basic, in the association of the two words "information" and "need." This association imbues the resulting concept with connotations of a basic "need" qualitatively similar to other basic "human needs". (Wilson, 1981, p. 7)

The aim of this paper is to attempt to reduce this confusion by devoting attention to the definition of some concepts and by proposing the basis for a theory of the motivations for information-seeking behaviour. (Wilson, 1981, p. 3)

In these objective statements, Wilson frames information need as a *motivating* need for human beings to seek information; but is the need for information a basic or primary need or is it a secondary need, in service of satisfying a primary or basic need? Examples of what are generally accepted as basic human needs are listed in Maslow's (1943, p. 385) hierarchy of primary human needs (listed from the most primary to least primary of his basic human needs):

- the physiological needs (e.g., the need for air to breath, for water and food, to reproduce)
- the need for safety and security
- the need for love and belonging
- the need for self-esteem
- the need for self-actualization.

Is the need for information equivalent to these primary human needs?

Wilson (1981), by merely asking the question, elevated the information need concept, making it important and vital to understanding the information behaviour of humans at work, at home, and in their everyday lives. In effect, he achieved this by considering the information need concept as potentially as important as any of the physical and social science concepts that constitute human knowledge. He postulated that information need is a *path* (the term Wilson uses) linking humans with the outside world, which Wilson terms the 'user's life world' (p. 6).

In Part 1, the article describes the structure of Wilson (1981) and his analysis of the primary versus secondary need question. In Part 2, the article extrapolates from Wilson's (1981) analysis (taking it a step further) by postulating three hypotheses which outline why information need should be considered a primary human need, as fundamental to humankind as our need for water and food.

Part 1: Wilson's (1981) "On user studies and information needs"

The article's objective is to arrive at a definition of key concepts for the purpose of proposing a theory of motivations for information seeking. The article is divided into five sections, an introduction, followed by Information, User studies, Information needs, and Consequences.

Information

The article starts with the 'troublesome' concept of information, citing two recent attempts at conceptualizing it by Belkin (1978) and Farradane (1979). A prominent structuring device for this conceptualization is to place information as a middle ground between data and knowledge, for example: data-information-knowledge. The three concepts being brought together infers that the concepts are different but that they speak to each other in a common or shared language; i.e., information is not data and it is not knowledge, but it is somehow related to these other two concepts. These two related concepts, therefore, speak to what information is definitionally.

Wilson gives three types of definitions of information from the research literature: information as a physical entity, as the channel through which a communication or message is transferred, or as factual data. Regarding factual data, Wilson states there is a further confusion about whether advice or opinion is also information, even if it is false. (I note that much of what we call *information* is in this false category; we may not discover it to be false until years later. Wrong information is still information if, not knowing it is wrong, we act on it, which says something about what the definition of information is.)

User Studies

The concept of information is subsumed under the larger term *user studies*. There are 'formal systems' for information flow, from user to system and then from the system back to user, and there are 'alternative' systems, e.g., from other people (such as subject experts) where 'information exchange' takes place. I have found it efficacious to label this latter, alternative origin of information flow using the dichotomous term 'informal' systems. Wilson notes that these alternative systems, in addition to being a source of information flow, perform ancillary information functions (e.g., emotional support) based on the fundamental human aspect of reciprocity. Wilson notes the link between information need, exchange and use to informational 'failure' at the end of this section.

Information Needs

Wilson states that progress in the 'theoretical understanding of the concept of "information need" has been slow' (Wilson, 1981, p. 5), partly due to not properly identifying the diverse contexts of information needs. Here, Wilson switches to the plural form of *need*. This is important because, as shown in Wilson's Figure 2 (p. 6), there is a diversity of users' life-worlds, a diversity of information systems that can be used, and a diversity in the embodiments of knowledge being sought and accessed by users. Wilson, however, comes back to information need in the singular (p. 7), where he defines information need as the *why* of the user deciding to seek information. Note that Wilson puts *why* in italics in the original paper, thus highlighting information need as a theoretical concept, which is not addressed in user studies.

Wilson gets to the heart of his topic on page 7, where he distinguishes between information need and the 'basic' human needs as determined by psychologists in the *Encyclopaedia of Psychology* (Eysenck, Arnold, & Meilie, 1972). Basic needs are divided into three types: physiological needs (e.g., for food and water), affective needs (e.g., for attainment, domination), and cognitive needs (e.g., to plan, to learn a skill). These basic needs, according to Wilson, determine the user's information needs, putting information need as secondary to the basic or fundamental human needs, i.e., the user engages in 'information seeking towards the satisfaction of [the basic or fundamental] needs'

(p. 8). Wilson reiterates that information need is not a fundamental human need but is rather a 'means towards the end of satisfying such fundamental needs' (p. 10).

Consequences

Consequently, from the above discussion, Wilson concludes that information need must be studied taking into account a 'holistic view of the information user. In such a wider view,' Wilson continues, 'the individual is perceived not merely as driven to seek information for cognitive ends but as living and working in social settings' (Wilson, 1981, p. 10). This requires a "consequent shift in the focus" of information science research to "an exploration of the role of information in the user's everyday life in his work organization or social setting" (p. 10)

For this shift in focus to take place, Wilson recommends, and here is a primary influence of Wilson on our field, that user information behaviour be studied, in the sense of an overarching framework, using a qualitative methodology, with an 'orientation towards the user in the true sense' (p. 12).

Part 2: My extrapolations from Wilson's (1981) Information need concept

The importance of Wilson (1981) is its examination of the concept of information need in a serious way, making this concept (and by extension the library and information science field) of first tier importance, on par with the concepts and issues in other social science and science fields. He did this by looking at information need from mainly a sociological perspective. But he also contemplated information need from the psychological perspective, for example by referring to Belkin's (1978) ASK concept. Both are of course viable perspectives. This is because humans are a species that is both psychologically complex, with a brain that *needs* to interact with the world, and socially complex, with a *need* to live, work, and play together. Both types of needs are, ultimately, for the purpose of ensuring the survival of the human species, and, at the level of the individual, for the purpose of ensuring the survival of the individual member in that species.

At least in theory, we humans do this psychological and social survival business extremely well. We interact with the world as individuals, writing beautiful poems and painting exquisite works of art about the world we live in and our relation to it; we also interact with our world in groups, working and communicating together to build both things and theories. And we do this to a far greater extent than any other species, to the point where we humans are not simply quantitatively but rather qualitatively different from all other species. This distinction between quantitative and qualitative difference is important. Humans don't simply do quantitatively *more* information seeking than other species; we do it at another level of complexity, so different qualitatively, than any other species. That is, our need for information and the use to which we put information is qualitatively different from other species which also need information and use information for survival.

As an example, humans write down the information we find, formulating it into hypotheses and ideas so that others can participate in our search for our understanding of the world. We have done this for 35,000 years, first by diagramming the hunt for animals on cave walls. The diagram said: *This is our experience of the hunt. We show it to you here. What do you think?* By inviting others to observe what we have found in the world, we invite others' input into the search for our understanding of the world. Writing down and drawing to share in this *seeking information to understand the world* is one of the fundamental deliverables of our existence as an exceptional species.

Eventually, we developed the scientific method and hypothesis-testing. The hypothesis concept underlying scientific enquiry specifies and narrows the information need tracks for the enquiry, thus directing (and limiting) information seeking for the scientist. By limiting the scientist's paths for effective enquiry (i.e., one that builds on human knowledge), we as a species build on what we

already know, turning random data in the outside world into needed information for the purpose of increasing human knowledge.

This is the framework for the data-information-knowledge relation set out at the beginning of Wilson's (1981) article. It suggests information and the need for information is a middle ground, turning data into human knowledge. But what could this middle ground be exactly? There is a processing look to it: is this processing of data into knowledge needed as part of our essential nature as human beings?

Three hypotheses for an information need concept as a primary human need

Let's push Wilson (1981) a little further in three hypotheses, the purpose of which is to envisage a definition of a concept of information need as a basic or primary human need, on the same level as our need for water and food. The three hypotheses build on each other.

Hypothesis 1: Information need is a fundamental and basic human need, like the need for water and food. You'll remember that Wilson explicitly stays away from this formulation. But here, I'll embrace it. First, information need is a basic human need because it is the essence of what makes us human, that distinguishes us from all other species. This exceptionality defines us as human. Let us define this exceptionality, i.e., what sets us apart from other species.

Hypothesis 2: How does information need work to make us an exceptional? First, we'll operationalize the user's information situation when seeking information. To formulate their question or query to an information system, the user starts from what they already know about the topic, their previous known knowledge. By definition they are seeking information in the outside world that is unknown to them. In this situation, the outside world for an unknown search object is unorganized data. When users find the information they need in this organized data, the data is received into their pre-existing knowledge on the topic. One definition of information, for example, is 'that which modifies the seeker's knowledge structure' (Brookes, 1980). But the 'that' is not a *thing* (i.e., a data element); it is a *process* (Buckland, 1991); the process whereby data from the outside world inserts itself in the user's previously existing knowledge on the topic, thus modifying this knowledge.

Hypothesis 3: Humans form an exceptional species because of information need. Our exceptionality is based on our being separate from the world, i.e., we stand apart from the world and examine it as a separate from ourselves. This separateness makes us unlike any other species. But this separateness creates alienation: we are alienated from the world. To abrogate this alienation, we look and study the world to understand it. And this understanding allows us to become part of the world again, i.e., understanding the world obviates or at least reduces our alienation. This propulsion to understand the world to reduce our alienation from it is the deeper role information need plays in the essence of being human, making it a fundamental basic (physiological) human need.

A final thought

This article grapples with the question raised by Wilson (1981) whether information need is one of the primary human needs (like our need for water and food) or a secondary need that effectuates or a mechanism for satisfying one of the primary needs (like the need for water and food). Or to put another way, is information need the motor making the nexus between humans and the outside world function? Or is information need brought into the nexus when we need something, to fuel the satisfaction of the more fundamental primary human needs like the need for water and food? Wilson convincingly presents the case for the latter interpretation of information need, that it is a secondary need brought in to satisfy a primary human need. It is much more logical, intuitively correct. Here, we have presented the contrary view, that information need is a primary need that makes us human, interpreting it as the propulsion to understand and become a part of the world,

once again, as we were before we became ‘cognitively modern’ humans (for this term, see Donald, 1991).

About the author

Charles Cole (Ph.D. (1994), Information Science, University of Sheffield) has been an information science researcher, writer and teacher for over 30 years. He was North American editor for the journal *Information Research* from 2011-2021. He has written two books: *Information Need: A Theory Connecting Information Search to Knowledge Formation* (2012), and *The Consciousness’ Drive: Information Need and the Search for Meaning* (2018); and edited two books (with Amanda Spink) *New Directions in Cognitive Information Retrieval* (2005) and *New Directions in Human Information Behavior* (2006).

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