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A Sign on a Tree: A Case for “Public Knowledge”

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ABSTRACT

Can information be objective and/or subjective? Based on Patrick Wilson’s notion of *public knowledge* and a story of a sign on a tree, this paper argues that *private information* is not the same as *subjective information*, and that the very communicative process of making information makes information objective. It also argues that the objective sense of information—public knowledge—has been and will be most relevant to information science, hence questions concerning collective responsibility in collecting, preserving, and organizing information shall be considered.

INTRODUCTION

“Is information objective or subjective/situational?” Hjørland (2007) asks in a paper in response to Bates’s (2005, 2006) two papers on the concept of information. Hjørland maintains that *informativeness* is an essential quality of the concept of information: “*To consider something information is thus always to consider it as informative in relation to some possible questions*” (p. 1451; emphasis in original). Indeed, the situational view of information has been explained and explored from various perspectives for many decades (see, for example, Blair, 2006; Buckland, 1991; Ma, 2012a; Machlup, 1983; Mai, 2013; Swanson, 1986; Wilson, 1973) and is important for both research and practical work in information science because it considers the cultural and social nature of information. Nevertheless, although I do not totally agree with the concepts of information that Bates (2005, 2006) proposed, I am intrigued by her quest to find “a way to think about information that effectively allows for both subjective and objective perspectives” (2005). Can information be subjective and/or objective?

The suggestion of objective information would probably elicit some negative reactions immediately. For decades, there has been a constant struggle for humanists in information science (IS) to be heard and recognized (see, most recently, Feinberg, Furner, Mai, & Tennis, 2012). For humanists and qualitative social scientists, *objective* seems to be a bad word in and of itself. But this is not and should not be the case. As I have argued previously (Ma, 2012b), “Information is not objective, subjective, or normative ‘in itself’ because the term plays different roles in relation to different ontological referents and so has different types of validity claims that are appropriate for different types of research” (p. 1865). We can identify instances of information being an objective entity, as well as the subjective and normative affordances that shape and make possible it being considered as information. In fact, the notion of *information-as-thing* suggests the situational understanding of information as an objective entity in information systems (Buckland, 1991; see also, Ma, 2010). Hence, the formal ontological categories suggested are well-suited for analyzing *instances* of information—for example, a book, an ephemera collection, or a database. However, this paper is less concerned with instances of information or information as an objective entity; rather, the question is, how does information become objective through communicative action? In this paper, *information* is understood as Wilson’s (1977) notion of *public knowledge*, and I will use the two terms interchangeably.

Before we move on to the discussion of public knowledge, it is important to make clear that the concept of public knowledge is not to be confused with knowledge, however. In Wilson’s words,

According to the standard analysis, knowledge is at the very least true belief; knowledge implies truth, and where there is no belief, there is no knowledge. But we are allowing things to be part of *public knowledge* that are unknown to, and hence not believed by, anyone. And what is unmistakably part of public knowledge at a given time not only may turn out not to be true, but may even be strongly suspected at the time not to be true. . . . Public knowledge does not imply truth and, therefore, is not knowledge. (p. 6; emphasis added)

Further to Wilson’s definition, I argue that public knowledge can be tangible or intangible and so is not necessarily in documentary forms and can be a practice—for example, intangible cultural heritage as defined by UNESCO.

Tangible or intangible, public knowledge is produced through communicative action and has to be constructed. In this paper, I argue that the very communicative process of making information is what makes information *objective*, and that this sense of information (public knowledge) has been and will be most relevant to IS. We will explore the objective sense of information by looking at a sign on a tree—in particular, how the sign transforms from private information to public knowledge through

communicative action, while also explaining the distinction between private and subjective information.

Let us begin with a story about a sign on a tree.

A SIGN ON A TREE

There is a sign on a tree. The sign is left by a friend of mine. The sign is information to me, and, supposedly, only my friend and I know the meaning of it. There is no need for me to communicate this information to others, and this information is only shared with me. The sign signifies edible tree leaves and is going to help me survive in the next few days of outdoor adventure in the woods. Others would not understand what this sign means; in fact, they may not even notice at all that there is a sign. The information is *private*.

The sign on a tree is information because of its potential to inform me. It is information also because it is used for facilitating the exchange of meaning (Mai, 2013), despite the fact that the sign is for the exchange of meaning between my friend and me only. The information is private because the existence and the meaning of the sign are not shared with others. It is like a note to oneself, a scribble that only I can decipher. It is information for me only—at least that is what my friend has intended it to be. Also, my need for the sign on a tree—the information—is temporal because I am only going to be in the woods for a few days. As a matter of fact, I will not need the sign—the information—once I can identify the edible leaves, when I *know* how to identify edible leaves in this particular forest. The need for information will disappear, and so will the information—the sign will become useless. It is like scratching off the scribble in my notebook once it does not represent a piece of information any more.

Although there have been many discussions about the concept of information in IS, there has not been conceptual discussion about private information. Practically speaking, it seems to make sense not to discuss private information because most information systems do not deal with private information; rather, they are concerned with information that we want to collect, store, preserve, and organize for present and future retrieval. Unless the scribble in my notebook or the sign on a tree turns out to be useful or entertaining for public consumption, or something important in history, there is no point in collecting, storing, preserving, and organizing the temporal and private information.

Nevertheless, there are two important reasons to consider private information *conceptually*. First, we can investigate the notion of subjective information against private information. Although there seems to be some level of agreement about the discursive construction of information, clarifications of the differences between subjective and private information are lacking. The two concepts are seemingly overlapping and synonymous in many discussions. The confusion is unfortunate because the two con-

cepts invoke different research questions and different methodologies concerning the study of information. Second, the conceptualization of private information provides the background in explicating the *communicative process* of constructing information in information systems—in particular, the situational understanding of *information-as-thing* (Buckland, 1991). For the very act of databasing (Bowker, 2005) implies there is an *agreement* as to what *ought* to be known and retrieved at present and in the future, and so data are collected, stored, preserved, and organized for their potential to inform.

Private versus Subjective Information

Let us first consider *private information*. How and when is information private? Information is private when its meaning is shared by at least two people (including the present and future self) or a group of people but is not known or understood by others in a community. The information is private because the meaning of such only works in a closed communication system, but the creation of such information can be intended or unintended.

When I lived in the university residence a long time ago, once in a while I would see milk bottles left outside of room 319. I vaguely knew that the bottles signified something for the roommates of that room, but the meaning was not shared with me; it was private information shared among the occupants of room 319. Like the sign on a tree, the meaning of the sign was only shared privately. The private information existed within a communication system, and the creation and inscription of such information was intended. Also, consider a codebook that a schoolboy created to communicate with his friends. The rationale for creating and using the codebook was to encrypt communication such that no one else other than those who were given the codebook would understand the meaning of the encrypted messages. The creation of this private information was also intended.

Yet, private information can be unintended. Say, David has a somewhat awkward habit of turning his coffee cup upside down as a way of saying “I have had too much coffee today already.” Everyone in the family knows about the meaning of the upside-down cup and is accustomed to seeing it on the breakfast table. A houseguest, however, would be surprised, even baffled, by David’s act—that is, until the meaning of the upside-down cup is explained. After which, the meaning of the upside-down cup is now shared not only among family members but also with the houseguest; and the meaning is understood as such in a particular setting. We do not usually consider this information *public*, however, unless it conveys the same meaning to a larger community. For example, in the North American context, one does not turn the cup upside down in order to let the waiter know that you have had too much coffee for the day and do not want more refills.

Nevertheless, private information must be interpreted *situationally*. If a child sees the very same sequence of codes that look like the ones he has been exchanging with his friends on a family vacation in Italy, he would not think that his friend is sending him a message there. And David's family would not consider that all the upside-down cups in a restaurant mean that people have had too much coffee. Private information must and has to be understood within certain contexts. When private information is seen out of context, the sign—the secret codes, the coffee cup, and the sign on a tree—becomes meaningless, or conveys completely different meanings.

But is private information *subjective*? Let us look up the definition of *private* and *subjective* in the *Oxford English Dictionary*:

Private: Restricted to one person or a few persons as opposed to the wider community; largely in opposition to *public*.

Subjective: Of, relating to, or proceeding from an individual's thoughts, views, etc.; derived from or expressing a person's individuality or idiosyncrasy; not impartial or literal; personal, individual.

Subjective information is information that shapes our mind with our *own* interpretation and understanding in relation to one's feelings, intentions, and opinions. When we encounter artistic forms of expression, such as music, paintings, poems, and plays (if we shall call them *information*), how a piece of work moves me may be totally different from how it affects others. The information is subjective in the sense that the meaning of such is only experienced by me. I might feel differently or have a different opinion about Sartre's existentialism a day or a year later, but this subjective information does not matter to others, for the meaning of the text as I have interpreted it is not, nor ought to be, *communicated with or totally understood by others*. The situation will change, of course, if I were to publish a scholarly article with the intention of communicating my experience with others; my interpretation will then become *public* and be subject to contestation and criticism.

In Habermas's (1984) discussion of formal ontological categories, the subjective realm references our personal desires, intentions, and feelings. The mental states are subjective not because they cannot be shared but because the understanding as such—for example, how I feel about a piece of classical music—can never be totally understood by others in completely the same way because they have different experiences that create their subjective being and experiencing of the world. Hence, unlike private information, subjective information does not operate within a communication system until one shares the feeling or opinion about a piece of work or an instance of information with others.

While subjective information is also understood situationally, the situation in question is mainly concerned with the state of one's mind.

Encountering a real-world situation may invoke past experiences, thoughts, and feelings that create an instance of subjective information; however, this instance is different from understanding the meaning of private information. *Private information*, as we have been using the term, operates within a communication system and hence a shared meaning is a necessary condition and the situation (or context) is a sufficient condition, whereas *subjective information* operates within one’s mind, and unless one intends to share the meaning with others, a shared meaning is not a necessary condition. Hence, private information and subjective information should be understood differently, although in both cases, the instance of information is interpreted within a certain context—a *situation*. But how is the distinction between private and subjective information important for information science?

The cognitive viewpoint of information science (Belkin, 1990; Brookes, 1980) is most concerned with subjective information—specifically, the interaction between information and mental or knowledge states—and may have been instrumental in introducing the user’s perspectives in IS. However, if we were to study subjective information, we would study the mechanical processing of such information in our brains or the psychology of interpretation. These studies are largely undertaken in brain sciences, neurosciences, and psychology; often, these studies attempt to correlate neurological effects and stimuli and mental reasoning. The object of such kinds of study is not “information,” but the workings of our brains and minds. In other words, the study of the interaction between information and mental states, strictly speaking, is not a study of information but how our brains function or how we feel about certain things—say, how a piece of music moves us. These topics are very much worth exploring and studying, but it seems that we cannot study subjective information on its own in IS, not to mention that the study of information in the sense of subjective information has resulted in the conceptualization of information that implicates a causal relationship between information and human minds (Ma, 2012a).

Private information, private as it is, is of no concern to those outside of the small group where the meaning is shared. Hence, private information has been of little interest to IS—unless the information is to become more broadly public.¹ Indeed, we have always been interested in personal correspondences in special collections and the like; that is, when private information becomes *public* and is open for public consumption, scrutiny, or appreciation. All in all, the investigation of private and subjective information turns us to see how Wilson’s (1977) notion of public knowledge would be most relevant to IS, and how public knowledge is inherently objective.

Let us go back to our story about a sign on a tree.

Public Knowledge

Remember that the sign on a tree is an example of private information that was shared between my friend and me. The information of that sign was not legible or even seen by others; for them, the physical tag on or modification of the tree was not informative. But if I join a hiking club and share the meaning of the sign on a tree with the club members, then this private information becomes more public. This information—the sign on a tree—is still somewhat private, but before long, the sign on a tree has been mentioned in blog posts and online forums. The sign on a tree is no longer understood by only my friend and me but by a community of hikers. The private information has become public as the existence and the meaning of the sign are now known within and outside of the community of hikers. The sign is for public consumption as long as one knows about its existence and meaning.

If one is an avid hiker, one could find many signs in the woods. Some tell you what plants are edible or poisonous; some indicate directions, while others are inherently private, such as “Leo and Shadow were here.” Hikers alike depend on the information—the signs on trees—to navigate the woods, to find food and water, and to avoid harmful substances and predatory animals. They agree that the signs are informative, or at least potentially informative (for example, if one gets lost). For those who have no interests in the woods or hiking, these signs may be generally useless and are not informative in the same way as for those hiking, for they rarely, if ever, go into the woods or see the signs, but they would likely agree that these signs are information.

But, say, one fine day, the newly elected mayor, who has not been in the woods since her fifth-grade field trip, pays a visit to the national forest. Never mind the natural wonders—the mayor knows little about what food looks like before it is prepared and cooked; indeed, she has been living and working in very hygienic (artificially, that is) environments since childhood. Messiness and untidiness bother her. When she sees the scars on the trees, meaningless to her (as such, they are scars, not signs!), she suggests a beautifying project of the forest by removing the signs, or scars.

The community denounces the proposal immediately. They reason that the markings on the trees are not scars, but signs: they have meanings, they are information, they should be public knowledge! Without them, people would get lost in the woods, and they would not be able to distinguish food from poison. The signs are information that *ought* to be preserved, not erased. Fortunately, their reasons are accepted; it is clear that there is a consensus among the community members that the signs should be treated as information, as public knowledge. The signs on trees are there to stay.

Not only are the signs not to be erased, but new displays and catalogs are created for deciphering the signs and for preserving cultural heritage.

In the future, few would argue that the displays and the catalogs are not information, although very few would know about the story of the erasure of the signs on trees.

THE OBJECTIVITY OF PUBLIC KNOWLEDGE

Thus, one may ask: Can we draw a line between private information and public knowledge? In the case of the upside-down coffee cup, we could argue that it is certainly a case of private information, since the meaning of the sign is only shared among family members within a certain context. It is also clear that the information is not going to be preserved for public consumption in the future, but may be recited orally to future generations as a fond memory of the family.

In the case of the signs on trees, we could not pinpoint a time in history when the signs are no longer private information and have become public knowledge—that is, what we usually refer to as *information* in IS. Nevertheless, the construction of public knowledge is inarguably social and discursive and largely depends on the justification that the signs—the information—*ought* to be considered as information. In an ideal situation, what ought to be information shall be an agreement, or at least a consensus, among the community members (Buckland, 1991). This means, as well, however, that signs can be contested as not being informative for a given public. Public knowledge is constituted by the ability of community members to contest the meanings of signs and practices in relation to the world—that is, to contest what is and is not considered to be informative and/or cultural heritage. The contestation, as in the case of the sign on a tree, is based on *reasons*: the justification given to the claims of information. The sign in and of itself is not self-evident as information or public knowledge.

While group consensus alone does not constitute knowledge, such consensus is required for information claims (Ma, 2013). What makes information “public” is that its *claims*, not its *signs*, are negotiated through communicative action. Public knowledge refers to signs, records, and practices that we ought to preserve and organize for public consumption and future retrieval. In this sense, public information is an “objective matter” (Wilson, 1983)—*objective* because the cultural forms and social norms that make up knowledge claims are common, large-scale tokens for agents’ communicative actions.

The norm that something ought to be collected, preserved, organized, and made accessible, in other words that something ought to be considered as public knowledge, is not subject to individual members’ behaviors or attitudes. In the story of the sign on a tree, the consensus depends on cultural and social norms that see something as a meaningful sign that has social meaning in its deployment. Such signs are recognized as important information, and the “ought” signifies the moral imperative that the

information or sign be preserved. That is to say, even if a person did not agree that the sign leads to knowledge, he or she would still agree that the sign should be preserved based on the moral imperative—what is called “conceptual norms” in Brandom’s (1994) philosophy, quoted at length here:

Interpreting a community as exhibiting original intentionality is taking its members to adopt the discursive scorekeeping stance toward each other. The content-conferring norms and proprieties that an interpreter who attributes discursive scorekeeping practices takes to be implicit in them have a number of important structural features. Central among them is the fact that the conceptual norms implicit in the practices attributed to a community outrun the nonnormatively specifiable behavioral discriminations members of that community are disposed to make. For this reason, conceptual norms can be understood as *objective*, and so as binding alike on all members of a discursive community, regardless of their particular attitudes. This feature of attributions of linguistic practices secures the sense in which concepts and the commitments they involve concerning appropriate circumstances and consequences of application can be understood to be *shared*, in spite of the many differences of attitude that correspond to the different scorekeeping perspectives of the discursive practitioners who keep track of each other’s statuses. (p. 631; emphasis in original)

Conceptual norms have objective status because they are embedded in practices as a result of the “discursive scorekeeping” of community members, and also because the conceptual norms are binding among the members, like “rules” in Wittgenstein’s (1958) language-game. The conceptual norms for retaining the signs on trees are based on the reasons accepted by the community, regardless of their individual opinions about it. It is thus the communicative action that serves as the bases of conceptual norms. Consequently, the notion of information in cultural heritage carries the sense of recognized signs that constitute normative-objective status. All these norms are the intellectual and practical frameworks that constitute the evidentiary nature of information. As a consequence, the cognitive authority of information professionals involves their preservation of such signs in their moral, social, and cultural contexts (Wilson, 1983).

CONCLUSION

This paper began with the question, can information be subjective and/or objective? in order to explore the nature of information that is most relevant to IS. To answer the question, we have investigated the notion of private information against subjective information and public knowledge. Information is private when the meanings of a sign or a practice are only shared among certain members, but not with a community at large, although we understand that sometimes there may not be a clear boundary between private and public information. We have also made clear that

private information is not equivalent to subjective information because subjective information is only relevant to a person’s own interpretation or opinion, and the meaning of such is not shared by and can never be fully understood by others. Notwithstanding, we make sense of information—private, subjective, or public—*situationally*.

Further, we have come to the conclusion that when information is perceived as public knowledge, it must be objective in the sense of “agreed upon” and so constitutes the signs, both tangible and intangible, for knowing activities and knowledge. What is information in the present depends on agreements as to the relation of words and signs in regard to *knowledge claims*. But knowledge claims require contestation and negotiation of the various different senses of the world within a common language, which reflects and gives linguistic cohesion to a life-world. A sign on a tree or a two-hundred-year-old ritual is not self-evident as public knowledge, as information; rather, it is the claims of information that make a sign or a practice public knowledge. Ideally, as in our story of the sign on a tree, and perhaps in the case of Wikipedia (Reagle, 2010), the information claims are based on the reasons raised by the members of a community. The communicative process implies the importance of conceptual norms in making public knowledge.

The role of conceptual norms entails that we ought to consider history and cultures, and more importantly, we ought to think about the behavior of collectives rather than personal psychology when studying information-related phenomena. This is not to deny the importance of agency, but the concepts of *collective agency* and *collective responsibility* are well worth exploring.

Nevertheless, as a community or society grows, authority is often given to “experts” for making decisions on behalf of the public. Wilson (1977) states that “social recognition of a group is the process that converts private beliefs into public knowledge” (p. 17). In fact, most information stored, preserved, and organized today is not usually co-constructed by the public based on communicative actions; rather, the construction of information infrastructures and the making of public knowledge are the responsibility of information professionals, broadly construed. As the quantity of digitized and born-digital data is increasing by the second, increasingly it is in the hands of information professionals, who hold the authority bestowed by the public to determine what may become public knowledge. To think of information as “objective” then, leaves us with the questions concerning the collective responsibility in collecting, preserving, and organizing information, including what we call “big data.” If information professionals are to be the stewards and record-keepers of our past, present, and future, let us not forget the considerable moral obligations and historical transmissions of institutions by which we serve.

NOTE

1. The use of private information in big-data analytics warrants a separate treatment, however.

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