The Foundations of Information Science in Social Epistemology

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ABSTRACT

While it is generally acknowledged that Information Science is an interdisciplinary field, several professions have made claims to the domain, and have tried to trace its foundations in terms of their respective disciplines. It is argued that the only adequate foundation must be transdisciplinary, lying in the field of social epistemology. This paper characterizes social epistemology, appropriates some contemporary thinkers for its agenda, and examines some prevailing theories about the foundations of information science.

Information science is an interdisciplinary science, drawing on the resources of library science, computer science, psychology, sociology, management science, communications and other fields. In many applications to the design, implementation and evaluation of particular systems, it is enhanced by particular subject specialties or orientations: e.g., management science in MIS environments, chemistry in chemical research institutes. In fact, there have even emerged schools of information science oriented toward a subject specialty: e.g., medical information science, based in the same rationale as subject specializations in librarian-ship, that one cannot address the information requirements of a user group unless one understands the topic with which those users are concerned.

One's conceptualization of the nature of information science is usually shaped by the setting and field in which he/she is doing teaching and research. At the moment, four orientations seem to dominate: those promulgated by computer science departments, management science departments, communications departments, and library schools. The fact that each of these have laid turf claims to information science further validates its essential interdisciplinary character. But these diverse claims have simultaneously muddied the issue of its foundations, since each field somehow believes its aspect to be central, and proceeds to trace origins in terms to its respective foundations. For example, Tefko Saracevic[1] in his treatment of the phenomenon of relevance, arguably the central concern of information science, employs the Shannon-Weaver model and information theory as the fulcrum for his discussion, an orientation consonant with his communications background. Similarly, Houser[2], from a library orientation, discloses his biases in the title of his article: "Documents: the Domain of Library and Information Science."

This theoretic malaise is exacerbated by the crisis in the social sciences of their problematic scientific character and their attempts to legitimate themselves by modelling themselves on the natural sciences. This crisis no less infects the field of information science. A sampling of the Journal of the American Society for Information Science reveals a plethora of articles obsessing on empirical approaches to information studies, approaches that emulate natural science methodologies. Many critics, Habermas[3], Giddens[4], Merleau-Ponty[5], and Gadamer[6], to name a few, have all pointed out the differences of the two fields, and in fact some (Nesse[7], Bernstein[8]) have pointed out that these differences are not as great as one might gather from popular mythol-ogy.

This problem is tied to seeking a new foundation for post-modernist, post-Cartesian thought. Most of the conceptual structures that bolster contemporary science find their originating expression in the thought of Rene Descartes. Descartes's objective in light of the confusion of religious doctrine with "scientific method" handed down from the Middle Ages, was to constitute an absolutely secure foundation for natural philosophy. He wanted to establish an indubitable premise from which would flow in a rigorous manner all the truths of philosophy, physics and mathematics. The nature of such a project is tied to a
need for absolute clarity and certainty. The torturous way Descartes moved to his need for absolute clarity and certainty. Richard Bernstein to conceive of "Cartesian anxiety" [8], a condition of the desire for cognitive invulnerability alloyed by Descartes through appeal to a magnificent deity, a god who would not allow us to be deceived.

But Cartesianism and its attendant features, like the dualism of the mind and the body, plague the scientific enterprise and its emulators, including Information Science. And Cartesian anxiety pervades such thinkers as Robert Fairthorne[9] who insist that information science have clearly defined boundaries. Both the nature of the Cartesian project and its consequences have become suspect, even pernicious. Not only that: the nature of science as a method for discovering reality has become questionable. The work of Kuhn[10] and others have shown that the foundations of the natural or physical sciences are based upon interpretive schemes known as paradigms. Richard Bernstein points out [8] that the distance between the natural sciences, Naturwissenschaften, and the human sciences, Geisteswissenschaften, is not very far. So-called facts are not detachable from theory. Data and theory are codeterminants and "meanings in natural science are determined by theory; they are understood by theoretical coherence rather than correspondence to facts" [8, P. 33]. The natural sciences do not produce absolute truth, even less so do the human sciences. This assertion is not intended to denigrate the work of the natural science or its products. It only asserts that there are no absolute foundations, but sequences of interpretive schemes (hermeneutics) within which science works and which it conveniently forgets. In effect, science is a demythologizing myth whose mythic nature is obscured by its useful products. This assertion is not intended to denigrate the work of the natural science or its products. It only asserts that there are no absolute foundations, but sequences of interpretive schemes (hermeneutics) within which science works and which it conveniently forgets. 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The theme that integrates these areas is the problem of relevance: what users of a information system want is relevant information, information that applies to the problems or decisions that emerge in the context of their life or work style. To emulate Aristotle's notion of a good act in terms of information requirements, what users want is the right information: of the right quality, to the right extent, at the right time, in the right manner, in the right circumstances, with the right motive. Arguably, relevance is the central concern for information science, because it is the tacit or explicit criterion that users employ in judging the output of information systems. While some have tried to elude or clothe the problem of relevance through the introduction of alternate or more precise terms, it seems clear that such tactics are ruses or facades, as Tefko Saracevic [1, p. 328] points out, for avoiding or sidestepping this primordial concern.

Much of the research work in information science has been oriented toward developing and extending the quantifiable dimensions of relevance. This work has hit a law of diminishing returns. There are many reasons for this. First of all, it seems clear that this phenomenon is not a simple quantity that is capable of being easily measured. Attempts to quantify it are part and parcel of the attempt to legitimate information science as a science on the model of a natural science. Furthermore, the impasse in relevance theory and the failure of a dominant paradigm in information science are related to the same problem: a currently inadequate and inappropriate theoretical basis. In particular, a theoretical basis that would suffice needs to flow from postmodernist, critical and/or hermeneutic orientations, and should pass beyond and below the various disciplinary claims. The proper transdisciplinary foundation for information science must lie in the field of social epistemology.

(3) Information resources management. This area is the most recently emerging and rapidly growing area. It is an approach not created by, but validated by the Federal Paperwork Reduction Act, and driven by the realization of information as a legitimate resource and of the need to integrate and coordinate the heterogeneity of information resources in an organization. And (4) user studies. This aspect is fostered by the realization that the basis for information provision is an understanding of the user or epistemic community that the information system or network serves. Around these areas hover some other concerns: for example, bibliometrics, information policy, the growth of knowledge, etc.

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What is social epistemology and why has it emerged as a field of inquiry? Epistemology as it was conceived is the study of the nature, origin, structure, methods, foundations, extent, criteria, validity, and kinds of knowledge. In traditional philosophy which reached its culmination in modern philosophy with Descartes, there was an attempt to ground knowledge in some absolute foundation that would guarantee its validity and certainty. But if we accept the post-modernist position, there are no absolute foundations, and that means that any claims for absolute knowledge must be abdicated, including any claims about the absolute essence of man or the absolute nature of the external world. Man is self-interpreting through and through: in his history he has invented categories by which he interprets himself, including his essence about what it means to be what the world is. Charles Taylor puts it aptly in Human Agency and Language when he asserts: "If we are partly constituted by our self-understanding, and this in turn can vary according to the various languages which articulate for us a background of distinctions of worth, then language does not derive the self from the always-already-interpreted world, it also helps constitute our lives." [11] pp. 9-10. Thus we are each born into a history and a culture that gives us a set of distinctions and interpretations about what it means to be: this set of assumptions is what Heidegger calls our facticity[12] and what Gadamer calls our prejudices (not in a pejorative sense, rather pre-judgments that we inherit by being born into a particular culture at a particular time). This implies, therefore, that whatever we call knowledge comes out of a cultural, historical horizon and goes back into a cultural, historical horizon; any sense of grounding knowledge is related to this opaque base. Put another way, whereas the Cartesian project was to derive the world, other people and knowledge from a secure foundation from within the self (as an implication of Descartes' infamous cogito, ergo sum), the new social epistemology project in some sense is to derive the self from the always-already-existing social and cultural world from within which the self interprets and creates itself. Knowledge, even and especially self-knowledge, cannot be divorced from the cultural horizon in which it appears. The classical project of an epistemology that moves from a knowing subject to the world has to be abandoned for an epistemology that is social through and through. If our knowledge is essentially social or intersubjective in character, then any epistemology divorced from its social roots is an epistemology in bad faith. To be born into history is to take on originally unconsciously a tradition of meanings as facts, to make these meanings the basis out of which we will search and develop our own meanings. The social world always-already-exists and it is appropriated (not properly by an I--which is later developed by K it, by the set of distinctions given to it) as an anonymous and generalized background which becomes the vehicle of all its interpretations. It is like the level of lighting in a room: it guides our sight but it is itself not seen, although through it things become manifest.

The term 'social epistemology' is not new. According to Patrick Wilson[13] in his book, Second-Hand Knowledge: An Inquiry into Cognitive Authority, the term was used by Egan and Shera some 30 years ago, although Shera credits Egan for coining the phrase. While Wilson demonstrates in his work how cognitive authority is an essential aspect of social epistemology and has been taken in other directions. A new journal has recently appeared on the market, entitled Social Epistemology. It is edited by Steve Fuller, a philosopher at the University of Colorado. In the inaugural issue in the "statement of purpose," he sketches his perspective of the field. According to him, "social epistemology" is defined by philosophers "as truths that are believed for the right sorts of reasons" or by energetic scientists as "whatever allows us to control more of the world more reliably." [14] p. 1. As information scientists interested in the collection, filtering and dissemination of knowledge, it is precisely these right sorts of reasons that we would like to ascertain. In fact, it is perplexing for an information scientist to read "identifying the primary sources of knowledge -- written matter -- is easy enough" [14, p. 4], because apart from its being in the form of a text, a unit of stabilized expression, it is in fact quite difficult to select what is considered to be knowledge or where that text stands in the spectrum of the "right sorts of reasons." Thus assuming that knowledge exists in texts somewhere, the focus of the journal is "specifying the exact social function served by this written matter," or "how the particular set of texts will affect the social order" [14, p. 1]. This is indeed an interesting problem and one of considerable consequence to information science, given the fact that although onera" are often the mediators and facilitators of a dissemination process that bears upon changes in the social order.
meanings and evolutions of those meanings in a particular discipline, might call thought in action), in a set of practices. These common meanings are difficult to delineate because they reside in and behind language, in consciousness and outside of it in operative intentionality (what we might call thought in action), in a set of practices.

At any event, while it is easy to agree with Fuller's view that social epistemology be concerned with the distribution of knowledge on the social order, it also must be concerned with the social validation of knowledge, including such issues as to how texts acquire authority and researchers and research institutions acquire cognitive authority, in short with what the right sorts of reasons are that encourage our belief. Cast in an Aristotelian framework, it seems to be a matter of phronesis, practical wisdom, knowledge about doing, about living well and doing well. In fact, one may argue that the ideal objective of information science is a phronesis about phronesis, practical wisdom about what stands for practical

wisdom in a given domain, or to put it another way, having the right sorts of reasons for determining where the right sorts of reasons are in a field. When people are directed to or receive an information source, they would prefer insofar as that is possible or desirable, to be directed to what is currently regarded as knowledge in that domain. Is that not really what the issue of relevance is all about, at least, in Saracevic's terms, the subject literature view of relevance [1, p. 329], but also the connection between the system's view of relevance (taking "into account that selection from the literature to the system influences effectiveness of the source" [1, p. 331]) and the destination's view of relevance (which "has to take into account that answers can only be provided only within the subject knowledge and the subject literature" [1, p. 331]). What is relevant are those bits of information that form or establish or validate the "right reasons" for believing a particular text or assertion within the context of a literature and a set of practices. This is not simply a matter of the individual, because the individual's work, even if creative, arises out of and defines itself in terms of an already-given social milieu. While an individual is a judge of document relevance, he/she is not an absolute judge.

In this respect, one must be careful to walk a narrow road that avoids neither into subjectivity or objectivity (especially since the antifoundationalist position herein advocated rejects such dualisms). This de-centering of the subject as an absolute judge of relevance, does not mean that we strike away human beings as reasoning and acting beings. As Sidden points out in his theory of structuration:

The call for a theory of the subject involves a defined break with positivistic standpoints in philosophy and with the Cartesian cogito. 'Consciousness', as a property of human beings, is not be to be taken as a given, a phenomenon which is the starting point for analysis. But while correctly posing the requirement for a theory of the subject, and in turn arguing that this involves a 'de-centring' of the subject, structuralist thought has tended to dissolve subjectivity into abstract structures of language. A de-centring of the subject must at the same time recover the subject as a reasoning, acting being. Otherwise the result is an objectivist type of social theory, in which human agency appears as the determined
outcome of social causes. ... In the theory of structuration, I argue that neither subject (human agent) nor object ('society', or social institutions) should be regarded as having primacy. Each is constituted in and through recurrent practices. The notion of human 'action' presupposes that of 'institution' and vice versa.

While Giddens' theory of structuration needs further evaluation, at least his perspective is to be enjoined in the cause of understanding the phenomenon of relevance in information science. It is the case that the praxis is the ground for information systems design, and for understanding user groups and information seeking behavior, as Robert Taylor so rightly advocates in 'Value-Added Processes in Information Systems'[15]; and it is this praxis that forms the basis of relevance judgments for user communities. Bourdieu and Marx[16] have advocated a notion of "epistemic communities," knowledge-oriented work communities for whom epistemic criteria, that is, those concerned with the production and use of knowledge, dominate and over-ride other kinds of criteria [16, p. 108]. The problem with such a conception is that, in a typical Cartesian fashion, it divorces the cognitive from the evaluative or ethical; and that while some of the explicit criteria of practicing a science can be made apparent, there are many implicit or tacit criteria that are not obvious and perhaps cannot be made obvious. In fact, it seems that a better term might be an "axiological community" because shared values (including cognitive ones) are the basic condition for the formation of a community and bind members together, both at the conscious and unconscious level, in choice and in practices.

Before developing these themes further, one major attempt at the foundations of information science should be reviewed. In 1980 Brookes wrote a series of articles on the foundations of information science. While in general his approach and sensibility are appallingly, he is victim via Popper (or perhaps through his interpretation of Popper) of Cartesian anxiety. Popper disclaims the Cartesian project and at some level he succeeds, but at the same time he (and Brookes) embraces the dualism that he ostensibly disavows. For example, Popper writes: "Since Descartes ... the theory of human knowledge has been largely subjectivist; knowledge has been regarded as a specially secure kind of human knowledge. The essays in this book [Objective Knowledge] break with a tradition that can be traced back to Aristotle -- the tradition of the common sense theory of knowledge ... ... I regard the commonsense theory of knowledge as a subjectivist blunder. This blunder has dominated Western philosophy" [17]. Despite this assertion, Popper and Brookes seem to be caught in the tradition of Cartesian dualism. Brookes[18] asserts: "What information science needs at its roots, it seems to me, is an objective rather than a subjective theory of knowledge" [p. 127]. This assertion endorses the tradition that he is supposedly rejecting, by appealing to the naive subject-object dichotomy. Brookes continues by describing the three worlds of Popper. World 1 is the physical world. This world is furnished with matter, energy and radiation. In this world everything is physical. World 2 is the world of subjective human knowledge or 'mental states.' Here Popper and Brookes admit that there is information and feelings and only that. World 1 is, so to speak, a world of pure exteriority and world 2 is a world of pure interiority. World 3 is "the world of objective knowledge, products of the human mind as recorded in languages, the arts, sciences, technologies--in all the artifacts humans have stored and scattered around the earth" [18, p. 127]. While the worlds are interdependent, they also operate independently of each other. The real world 3, the world of objective knowledge, is the concern of information science. According to Brookes:

Popper's World 3 should commend itself to library and information scientists because, for the first time, it offers a rationale for their professional activities which can be expressed in other than purely practical terms. Natural scientists and technologists explore and exploit World 1 and deposit their records and artifacts in World 3. Social scientists and humanists study and reflect World 2 and the interactions of World 2 with World 1; they, too, deposit their records and artifacts in World 3. Pure mathematicians invent abstractions; and work out their interrelations, a study within World 3 itself, and they too deposit their records in World 3. So the practical work of library and information scientists can now be said to collect and organize for use the records of World 3. And the theoretical task is to understand the interactions between Worlds 2 and 3, to describe and explain them if they can and so to help organizing knowledge rather than documents for more effective use [18, p. 128].

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On the surface, this position seems plausible. But given my previous remarks, the notion of a pure physical world is an illusion, in the sense that it is meaningless to talk about a reality "out there" independent of any perception or interpretation. Even if it were a convenient intellectual construct, it is not clear that it is particularly useful. It assumes that science is non-interpretative and describes representational (not clear that it is particularly useful.

But subjective and objective are not bare given, but are co-determinants. I grasp myself as a subject only by relation to a correlate of the world, and it is within this relation (which is primary as Merleau-Ponty [5] argues in his thesis of the primacy of perception) that the I and the not-I are sorted out, evolve and are interpreted. This means that the primordial given is not the physical world, but the world-as-perceived, the lived world, within which the relative polarities of subjectivity and objectivity are developed, not given, and certainly which are never entirely distinct. Not only that: the world-as-perceived is not simply a given, but an interpreted given.

If a three world scheme is attractive, it must be restructured. World 2 is the world-as-perceived, the world-as-lived. From this perceptual given that two worlds (1 and 3) are derived or overlaid. The so-called physical world, the scientific world is derived as an abstraction from this perceptual world by means of an interpretive hermeneutic. That is, by means of a paradigmatic metaphor and theory, the world is described, seen and manipulated in a certain light towards a certain end, i.e., control (for Habermas[3], the 'interest' of the empiric-analytic sciences). Paradigms determine our interpretation of the world; techne, the act associated with producing or making (Aristotle) manipulates it. But science alone is not prey to a hermeneutic: world 3, Popper's world of objective knowledge must be understood as the cultural world, the perceptual world overlaid by techne: artifacts, tools, environments, etc. These artifacts are always already-interpreted with the horizon of human experience. Brookes and Popper engage in some double think when they discuss this world:

It is now possible to imagine a burst of radiation emitted by some nuclear catastrophe which could extinguish all human life on Earth and yet leave our artifacts intact. As all radiation decays, there would come a time when it would be feasible for non-human forms of intelligent life, from some other planet possibly, to arrive on this desolate Earth and find the human artifacts scattered around the scene. On including the intact libraries, and, as man has already decoded the Minoan scripts, gradually decode our documents. It would thus be possible for our visitors to recover what man had learned about his worlds. In other words, once human knowledge has been recorded, it attains a degree of permanence, an objectivity, an accessibility which is denied to subjective knowledge of individual humans. A gifted human may acquire wide knowledge, deep wisdom and spiritual insights but all this is lost when he dies except for that which he has recorded in some artifact. [38, p. 128]

While it is true that artifacts as expressions of an intentionality have a kind of autonomy, or independence from mental states, it is a fragile independence and Brookes and Popper (or Brookes' interpretation of him) miss the vital issue. On the hand, it assumes that artifacts can be interpreted outside of the context of the intentionalities that set up the artifact. It may be the case that visitors could construct some semblance of meaning about the artifact, but it is only possible for beings, for whom a culture, a language and history were essential features, and who had similar forms of an objectivity and the same forms of embodiment. What could a chair mean to an intelligent fish? A coke bottle to a monkey and a coke bottle for a Zulu tribe (as in the South African film, The Gods Must Be Crazy) may have variations in meaning, but given the Zulu's cultural history, it was a gift from the gods, and a troublesome gift at that. Given a radically different perceptual structure and a radically different cultural context, the meaning of the artifact would be lost. In the science fiction novel set in the future, A Canticle for Liebowitz, a fragmented shopping list becomes a sacred text. In short, objectivity is at least a misleading characterization of the durability of artifacts, for it fails to address the hermeneutic required to create, sustain and reconstruct its meaning. When Brookes says of human knowledge which is recorded: "These artifacts are no longer subjective and inaccessible but objective and accessible to all who care to study them," what is disturbing is not that they are in the world, but that interpretation is ignored -- there are subjectivities that have to interpret those so-called objectivities, and in fact it is the various mistakes of catalogers and indexers that have lost...
information for humanity. It is incomprehensible to speak of "an epistemology without a knowing subject" as Popper is want to do and which Brookes endorses. Brookes hints at the richness of the cultural and perceptual world when he argues for understanding the role of information in both the verbal and non-verbal dimensions. He also recognizes that Popper's conception of World 3 is too tidy: "World 3... in spite of all the efforts of librarians to classify the documents they have collected, is not the tidy world of immediately accessible knowledge that Popper appears to present." [18, p. 130]. But still his approach is plagued by Cartesian dualism and does not sufficiently appreciate how the tacit information which is extrasmotic provides the basis for the explicit information and cultural sense. Rather than subjective in character it is intersubjective or transsubjective in character. As Merleau-Ponty notes in Signs [19] "I borrow myself from others. I create others from my thoughts. This is no failure to perceive others: it is only on the basis of a common cultural history that both our identity and differences are determined and interpreted. Our absolute self-givenness. I am given to myself through culture, a history and a language, and any residues of these in artifacts demands that history, that culture and that language to make any sense.

These issues are difficult ones, and the issues to which Brookes falls prey are understandable in light of the long-standing Cartesian tradition. What is required is an extensive project for providing a new conceptual basis for information science, which binds together the shared meanings, practices and values, which form the context for the judgment of relevance. Methodologically, the work of Dervin[20] may facilitate access to that matrix.

Some work has been done on relevance: e.g., by Alfred Schutz. Schutz with Heidegger and Merleau-Ponty underwent considerable influence from the same thinker, Edmund Husserl, the father of phenomenology. One of Husserl's preoccupations was understanding the world in the natural attitude, that is, how most people appropriate life in the living of it, not in a reflection about it. Thus for Husserl, at least for part of his task, there was considerable attention devoted to the Lebenswelt, the life-world. This attention prompted the primacy of the 'working world' for Schutz.

For Schutz, the lifeworld is a shared, intersubjective world and this 'working world' is the paramount reality (all other worlds are derivatives of it). Even the so-called objectivity of the lifeworld has intersubjective referents (for example, all artifacts point to the existence of other human beings, their purposes and projects) and the self itself is defined in terms of this intersubjective horizon. The categories and therefore in some respects even the existence of the emotions I feel are provided by the culture or tradition. And Schutz, perhaps not as strongly as Heidegger, believes this originary acquisition includes strong norms.

Our stock of knowledge provides an interpretive matrix, a scheme of reference, which can be applied to past experience or which can anticipate future alternatives. These schemes are called by Schutz frames of reference. The world as experienced in the natural attitude has a familiarity about it since what has happened in the past is generally expected to continue in the future unless some problematic situation arises. This familiarity occurs, according to Schutz, because we experience the world in terms of typifications. Our experience of the world is relatively coherent, ordered and related: the things we encounter are related to our projects and other people and suggest typical or general ways of dealing with them. These typifications seem very close to Eleanor Rosch's[21] notion of prototypes and how natural categories are formed, when they are expanded beyond natural objects to include typical behaviors. For Schutz, these typifications occur at the preconceptual level, that is, they operate below the level of reflective consciousness. Now these typifications or which typifications to evoke become unsettled when some problematic situation comes into play, as when a child, upon spotting a penguin, asks what kind of an animal it is. With additional processing -- by expanding the typification -- it is located by family resemblance to the prototypical bird.

Regarding the issue of why a typification emerges in a given context, Schutz suggests the notion of relevance. The systems of relevance determine what belongs to a project in context with which the individual must come to grips, but also what features are characteristically typical to this given context.
Ronald Cox in his work on Schutz's Theory of Relevance[22] sums up: "What is relevant to a person in his current situation and for his current purposes preserves to select certain traits for subsumption under a typification. To be sure, this inclusion will be dependent upon the way in which the subject itself is viewed, but again this is dependent upon the scheme of interpretation being brought to bear" [pp. 9-10].

For Schutz, the lifeworld in its everydayness or in the natural attitude, as a world of working, is the paramount reality. However, within this world are subworlds as modifications or derivations of this lifeworld. In "Multiple Realities,"[23] Schutz writes: "We speak of provinces of meaning and not of sub-universes because it is the meaning of our experiences and not the ontological structure of the objects which constitutes reality. Hence we will call a certain set of our experiences a finite province of meaning if all of them show a specific cognitive style and are -- with respect to this style -- not only consistent in themselves but also compatible with one another" [p. 230]. While he prefers (against James) to talk of finite provinces of meaning rather than subworlds, these worlds include the world of fantasy, religion etc. However, we must be cautious with the term, 'meaning'; that is, true to the phenomenological tradition, meaning could be made explicit for a Cartesian mind. In fact, to the degree that Schutz seems to move towards the more idealist dimensions of Husserl, he moves contrary to Heidegger and to the position advocated in this paper which insists that meaning emerges within an obscure horizon -- the horizon of facticity that cannot be justified or rationalized.

However, some conclusions can be drawn about what already has been discussed. (1) In order for the theoretical forefront of information science to progress, the field of social epistemology must rigorously be pursued and integrated. A proper approach to social epistemology entails a anti-foundationalist, post-modernist philosophy. (2) Many of the experiments in information science are suspect and tell us very little about relevance, ripped out as they are from the Lebenswelt in which bona fide relevance can occur. Imposed experiments [e.g., as asking undergraduates to match "relevant" document surrogates, such as abstracts, and information requests or problem statements] have no sense of the practices of a field or endeavor or its "rights sorts of reasons." (3) The relevance of documents is part of a system of relevances whose root is the lifeworld (Lebenswelt) or praxis. This also is the ground for phronesis, and if information science is to proceed in its sense of a that dispensation (much in the manner of Giddens "double hermeneutic" [4, p.7]), it must grasp essentially diverse "information use environments" [15].

Approaches like Saracevic's are troubling. He asserts that "relevance is considered as a measure of the effectiveness of a contact between a source and destination in a communication process" [1, p. 321]. First of all, effectiveness of contact does not guarantee information transfer or relevance. There is an effective contact between a librarian and a patron when the librarian declares that he/she does not have information on a subject. While the example is radical, the point is that communication is a necessary but not sufficient condition for information transfer or relevance. Furthermore, the Shannon-Weaver model that Saracevic employs seems to suggest that source and destination are self-contained, isolatable points, and to the degree that we may have a document and a receiver of that document, that is true. But it is also naive: the source is a compendium of signs and symbols that have a meaning only for an interpretation that sets that document in the horizon of the subject knowledge and its potential application for a particular knowledge-seeker. The source requires an interpretation or hermeneutic process (and a meaning is a person with a certain facticity must come upon it and learn what it says given his background and its background) and this meaning then establishes a framework for its relevance for the subject knowledge whose partial aspect lies in the literature, but whose most dynamic aspect lies the collective consciousnesses of those who participate and practice in the work. Similarly, the potential destination is ultimately a consciousness in its dialectic with some problem or theme in the field and with those that participate in the work.

A more robust theory than those of Saracevic or Brookes needs to be elaborated. It is hoped that this paper has laid down some guidelines for its evolution in social epistemology.

REFERENCES


