Social Epistemology and LIS: How to Clarify Our Epistemic Objectives

Don Fallis
School of Information Resources and Library Science
University of Arizona
fallis@email.arizona.edu

ABSTRACT

Many different objectives for libraries and other information services have been proposed. Most commonly, these objectives focus on properties of the collection itself: the quality of the materials, the demand for the materials, the comprehensiveness of the materials, the accessibility of the materials, etc. However, these properties are only valuable because they are instrumental to achieving a more fundamental *epistemic* objective: viz., that users of the information service acquire knowledge. In this paper, I discuss how *epistemic value theory* might be used to clarify the epistemic objectives of information services.

RÉSUMÉ

Plusieurs objectifs différents pour les bibliothèques et des autres services d'information ont été proposés. Plus fréquemment, ces objectifs accomodent sur les propriétés de la collection elle-même : la qualité des matériaux, la demande des matériaux, la compréhensibilité des matériaux, l'accessibilité des matériaux, etc. Cependant, ces propriétés ne sont de valeur que parce qu'elles jouent un rôle-clé dans la réussite d'un objectif épistémique plus fondamental : à savoir que les utilisateurs de la service d'informatique apprennent de la connaissance. Dans cette communication, je discute comme *epistemic value theory* pourrait être utilisée pour clarifier les objectifs épistémique des services d'information.

SOCIAL EPISTEMOLOGY AND LIS

Most of our knowledge of the world is acquired through communication with other members of society. And much of this socially-acquired knowledge is transmitted via recorded information (books, journals, web sites, etc.). Libraries and other information services facilitate knowledge acquisition by collecting, organizing, and providing access to this recorded information.

Fifty years ago, Margaret Egan and Jesse Shera claimed that in order for libraries and other information services to effectively carry out this task, "a new discipline must be created that will provide a framework for the effective investigation of the whole complex problem of the intellectual processes of society" (Egan and Shera 1952, 132). The name that they gave to this new discipline was *social epistemology*.

Much research has subsequently been carried out that falls within the scope of Egan and Shera's conception of social epistemology (e.g., research in bibliometrics, information retrieval, and the sociology of knowledge). However, according to Egan and Shera, this

discipline should "not only result in understanding and appreciation but also make possible future national planning and implementation" (Egan and Shera 1952, 132). And, if this discipline is to support planning and decision making, it is not sufficient to simply understand the epistemic processes of society. We also need to be clear about the objectives that we are trying to achieve (see, e.g., Kirkwood 1997, 10).

In section 2, I argue that the fundamental objective of an information service is to facilitate the acquisition of knowledge. In section 3, I show how *epistemic value theory* (see, e.g., Levi 1962 and Goldman 1999) can be used to clarify the epistemic objectives of an information service. I illustrate the use of epistemic value theory by analyzing a simple collection management decision. In section 4, I respond to some potential objections to the application of epistemic value theory to LIS.

THE FUNDAMENTAL OBJECTIVE OF INFORMATION SERVICES

A number of different objectives for information services have been proposed. Most commonly, these objectives focus on properties of the collection itself: the quality of the materials, the demand for the materials, the comprehensiveness of the materials, the accessibility of the materials, etc. (see, e.g., Baker and Lancaster 1991). However, these properties of the collection itself are not intrinsically valuable. They are only valuable because they are instrumental to achieving a more *fundamental* objective.

One suggestion is that this fundamental objective is to promote the interests of society, whatever they happen to be. For example, Shera claims that "the aim of librarianship ... is to maximize the social utility of graphic records" (Shera 1961, 770). In a similar vein, Hamburg et al. claim that "ideally we would like to measure the library effect on societal objectives" (Hamburg et al. 1972, 110).

As I discuss below, Hamburg et al. go on to suggest a different fundamental objective on the grounds that it is too difficult to measure the contribution of an information service to social utility. However, even if we set measurement difficulties aside, there is good reason to think that promoting social utility is not the fundamental objective of an information service. Namely, it seems that an information service can achieve its objectives in any given case even if it fails to promote societal objectives. For example, suppose that an individual goes to the library looking for information on how to build a house. If this individual acquires the knowledge that she needs about house building, then the library has achieved its objective—even if this patron does not actually end up building a house (cf. Baker and Lancaster 1991, 14).

Hamburg et al.'s alternative suggestion is that the fundamental objective of information services is to maximize the "exposure of individuals to documents of recorded human experience" (Hamburg et al. 1972, 111). However, there is good reason to think that increasing patron exposure to recorded information is not the fundamental objective of an information service. Namely, it seems that an information service can fail to achieve its objectives in any given case even if it succeeds in increasing patron exposure. For example, exposing patrons to false or misleading information would not seem to be a way of

achieving the fundamental objective of an information service. In other words, the problem is that patron exposure to recorded information does not take into account the quality (or lack thereof) of the information.

Now, it might be the case that patrons do not come back to a service that provides them with false information. If so, information services would have to provide information that met certain quality standards in order to succeed in increasing patron exposure. Unfortunately, empirical studies indicate, to the contrary, that "public library patrons do not differentiate better books from the poorer books" (Baker and Lancaster 1991, 103).

But, even if there were such a connection between quality and exposure, it would not make patron exposure the *fundamental* objective of information services. Exposure to recorded information is clearly a critical *means* to the fundamental objective of information services. Even so, to take increasing patron exposure to be the fundamental objective of information services would be to confuse means with ends. And this sort of confusion can get in the way of making good decisions (see, e.g., Kirkwood 1997, 22).

With all this in mind, my suggestion is that the fundamental objective of information services is an epistemic one. Namely, information services want to facilitate the acquisition of knowledge (by providing access to recorded information).[7]

Before continuing, I should make a couple of points about what is *not* being suggested here. First, it is not being suggested that the only objectives that information services have are epistemic. Information services often do have additional *non-epistemic* objectives. For example, one of the objectives of public libraries is to provide entertainment in the form reading materials. Nevertheless, the principle objective of almost all information services is an epistemic one. Second, it is not being suggested that there are no non-epistemic constraints on how the information service promotes this epistemic objective. For example, an information service needs to facilitate the acquisition of knowledge in an ethical way (see, e.g., Woodward 1990).

Now, there are a number of practical difficulties with taking the fundamental objective of an information service to be an epistemic one. First, the goal of knowledge acquisition will typically be a combination of several different epistemic objectives. For example, an information service might want to provide "knowledge that can give meaning to life" and/or provide "information to answer factual questions" (Neill 1982, 73). And, as we will see below, these different epistemic objectives can sometimes come into conflict.

Of course, the problem of conflicting objectives is faced by most organizations. In fact, such conflicts are standard in non-profit organizations like libraries (see Kirkwood 1997, 19). This cannot be avoided. For example, suppose we were to take increasing patron

[7] Hamburg et al. do note that this epistemic objective is an objective of information services. (And they correctly point out that exposure to recorded information is a critical means to facilitating knowledge acquisition.) However, they reject it as the fundamental objective of information services on the same grounds that they reject promoting social utility as the fundamental objective (see Hamburg et al. 1972, 110-111). I respond to their worry below.

exposure to recorded information to be the fundamental objective of information services. Since there are different types of exposure (e.g., "browsing exposures to ten different documents" versus "in-depth exposure to one document" (Hamburg et al. 1972, 113)), we would still run into the problem of conflicting objectives.

Second, it is more difficult to measure the achievement of epistemic objectives than it is to measure, for example, properties of the collection itself. Even so, in order to make good decisions, information services need to identify their true objectives rather than those objectives that happen to be easier to measure. We do not want to be like the proverbial fool who looks under a lamppost for his keys, even though he lost them elsewhere, simply because the light is better under the lamppost.

In the next section, I propose a framework for clarifying what the epistemic objectives of information services are and for dealing with conflicts between these objectives.[8]

EPISTEMIC VALUE THEORY AND OLD ENCYCLOPEDIAS

Collection management is one area where information services make decisions with epistemic consequences. For example, suppose that a librarian has to decide whether to remove (i.e., weed) an old edition of an encyclopedia from a collection. Since patrons may be led into error by out-of-date information, there are potential epistemic costs to retaining this edition. However, there are also potential epistemic costs to removing the item. For example, it is possible that this edition contains at least a few pieces of valuable information that are not found in the more recent editions.[9]

Interestingly enough, precisely this sort of scenario was portrayed in an episode of the television show *Picket Fences*. One of the kids, Zachary, does a report for school and everyone is horrified by the racist content (viz., that blacks are less intelligent than whites). It turns out that Zachary was innocently reporting "facts" that he found in an old edition of the *Encyclopædia Britannica* in the school library.[10]

In deciding whether to remove the old edition of the encyclopedia from the collection, the librarian has to consider at least two epistemic objectives. On the one hand, the librarian wants patrons to acquire true beliefs on topics that are of interest to them. And,

---

[8] Even if one wants to insist that promoting social utility is the fundamental objective of information services, these epistemic objectives are the primary means to that end. In particular, they are the means that are under the greatest control of the information service. As a result, it is useful in terms of decision making within information services to clarify what these epistemic objectives are.

[9] In a similar vein, John Stuart Mill has famously argued that, because even predominantly false doctrines may contain a grain of truth not available elsewhere, such doctrines should be freely disseminated (see Mill 1978, 44-46).

[10] The problem here is clearly an epistemic one (viz., that Zachary had acquired false beliefs). The problem is not with the social disutility of those beliefs. In fact, Zachary's report was intended to increase social utility (by suggesting that the white kids help the black kids).

on the other hand, the librarian does not want patrons to acquire false beliefs. Unfortunately, these two objectives come into conflict in this decision. As a result, the mere fact that an information service wants to facilitate the acquisition of knowledge does not dictate a particular course of action in this case.

Now, if the more recent editions of the encyclopedia contained all the accurate information from the old edition (and simply left out the inaccurate information), then there would be no conflict between these two epistemic objectives. As a result, the decision about whether to remove the old edition of the encyclopedia from the collection would be simple. Admittedly, even in that case, it might be useful to retain the old edition as a resource for historians. In particular, this edition of the encyclopedia might be used to learn (a) facts about what people believed at the time it was published rather than (b) facts about the world. In discussing this example, however, I will make the simplifying assumption that the encyclopedia is being used to learn facts about the world.

So, how should the librarian go about making this decision that involves conflicting epistemic objectives?

Fortunately, we do not have to start completely from scratch. It is often useful to look at how people have dealt with similar sorts of decisions (see Kirkwood 1997, 21). And there is an existing body of work on clarifying epistemic objectives and dealing with conflicts between these objectives.

Value theory is a framework for clarifying the objectives of a decision maker and for dealing with conflicts between these objectives (see, e.g., Kirkwood 1997). *Epistemic value theory*, in particular, is a framework for those cases where the objectives in question are purely epistemic. For example, the goal of science is to acquire knowledge about the world. In other words, the objectives of scientists are (for the most part) epistemic. As a result, a lot of work has been done in the philosophy of science toward clarifying the epistemic objectives of scientists (see, e.g., Levi 1962).[11]

As I will discuss in the next section, there is a wide range of potential epistemic objectives. However, the objectives of acquiring true beliefs and avoiding error are the most commonly discussed (see, e.g., Levi 1962; Annis 1978, 213; and Goldman 1999, 5). And, as we have seen, these are the two epistemic objectives that are at the core of the old encyclopedia example.

In order to make a decision that involves conflicting objectives, a decision maker has to determine the relative importance of each of his or her objectives (see Kirkwood 1997, 53). Thus, the appropriate decision in the old encyclopedia example depends on the relative importance of these two objectives to the information service. The ratio of these weights is essentially the *degree of reliability* that the information service is aiming to achieve.

---

[11] Work on epistemic value theory is not restricted to the philosophy of science. For example, R. W. K. Paterson discusses how to develop an epistemic value theory for education (see Paterson 1979). And epistemic goals in education are likely to be very similar to the epistemic goals of an information service.

Different epistemologists have taken different positions on the relative importance of these two epistemic objectives. René Descartes and David Hume, for example, suggest that the objective of avoiding error should be given substantially more weight than the objective of acquiring true belief. In particular, Hume claims that "there is a degree of doubt, and caution, and modesty, which, in all kinds of scrutiny and decision, ought for ever to accompany a just reasoner" (Hume 1977, 111). By contrast, Alvin Goldman essentially takes the position that these two objectives should be weighted equally (see Fallis 2000, 310). And, at the other end of the spectrum, William James suggests that "a rule of thinking which would absolutely prevent me from acknowledging certain kinds of truth if those kinds of truth were really there, would be an irrational rule" (James 1979, 31-32). In other words, the epistemic objective of acquiring additional true beliefs always trumps worries about falling into error.

Isaac Levi, however, makes a compelling case that epistemic value theory *per se* does not dictate any particular degree of reliability. All other things being equal, acquiring more true beliefs is epistemically valuable. And, all other things being equal, acquiring fewer false beliefs is epistemically valuable. However, different individuals who "are attempting to replace doubt by true belief ... [may] ... exercise different 'degrees of caution' in doing so" (Levi 1962, 56).

In general, appropriate epistemic standards are highly dependent on context (see Annis 1978, 215). They depend on why this particular individual is trying to acquire knowledge on this particular topic at this particular time. For example, appropriate epistemic standards depend on what the costs of being wrong in a particular case would be. As a result, the degree of reliability that Descartes and Hume advocate may be appropriate for those individuals engaged in philosophical inquiry. However, it may not be appropriate for those individuals concerned with more mundane matters.

With regard to information services, different users may easily have somewhat different epistemic objectives. In particular, the degree of reliability that they demand from an information service may be different (see Fallis 2000, 311). For example, a scientist doing research will typically require a greater degree of reliability than a student doing an assignment.[12] As a result, it is unlikely that an information service will be able to aim for a degree of reliability that is in line with the epistemic objectives of each of its users. Thus, an information service should aim for the degree of reliability that best serves the epistemic objectives of its users overall.

Finally, it should be noted that an information service does need to aim for some particular degree of reliability. As B. C. Brookes points out, "it is important ... for the saving of user costs for the ... librarian to make known precisely what services he can provide as explicitly to the users as possible" (Brookes 1970, 18). Similarly, it is important for users to know what standards of accuracy they can expect (and rely on) from an information service.

[12] This has to do with, among other things, the cost of being wrong in the two cases.

OBJECTIONS TO EPISTEMIC VALUE THEORY

There are certainly potential objections to epistemic value theory and to its application to LIS. In this section, I respond to two of these objections.

First, in my discussion of the old encyclopedia example, I have tacitly assumed that all true beliefs have the same epistemic value. But this is clearly not the case. In fact, there are a number of respects in which different true beliefs might have different epistemic value. However, epistemic value theory does not preclude taking into account epistemic values beyond the objectives of acquiring true beliefs and avoiding error. For example, Goldman notes that an individual's degree of interest in a particular topic can have an effect on the epistemic value of true beliefs on this topic (see Goldman 1999, 88-89). As a result, the appropriate decision in the old encyclopedia example may depend on how important the accurate information that has been left out of subsequent editions is to the patrons of the library.

In a similar vein, Paterson's notion of "cognitive richness" (Paterson 1979, 95) and Jean Tague-Sutcliffe's notion of "informativeness" (Frické 1998, 386) probably also need to be incorporated into a fully articulated epistemic value theory.[13] In fact, there are a number of other dimensions to epistemic value. For example, Goldman also notes that the *speed* at which an individual acquires a particular piece of knowledge can have an effect on its epistemic value (see Goldman 1999, 93). The epistemic value of speed is, of course, reminiscent of Ranganathan's admonition to "save the time of the reader" (Baker and Lancaster 1991, 15). It is also a component of Tague-Sutcliffe's theory. As Frické points out, "late arrivals, among documents, tend to lose their ability to meet an information need" (Frické 1998, 387).

Second, some information scientists might object to the preeminent place of *truth* in epistemic value theory. As Marc Meola points out, a number of information scientists take knowledge to be socially constructed (see Meola 2000, 174). In other words, knowledge is whatever is taken to be knowledge within a particular community or culture (cf. Goldman 1999, 7). Thus, for a social constructivist, knowledge of a particular proposition does not require that that proposition be true in any objective sense.

There are at least two responses to the worries of the social constructivists. First, epistemic value theory is simply a framework for clarifying epistemic objectives and for dealing with conflicts between these objectives. Epistemic value theory *per se* does not dictate any particular objectives. Acquiring true beliefs and avoiding error seem to be fairly common epistemic objectives. However, if these are not the objectives of a particular information service, epistemic value theory can still be used to clarify *its* epistemic

[13] Informativeness by itself does not take into account the potential conflict between acquiring true beliefs and avoiding error. As a result, Martin Frické seriously overstates the case when he claims that Tague-Sutcliffe's theory "can be put to use to solve all the major information retrieval measurement and evaluation problems" (Frické 1998, 388).

objectives whatever they happen to be.[14] Second, as Meola goes on to point out, information scientists typically do seem to be concerned with promoting (objectively) true beliefs and avoiding error (see Meola 2000, 174). For example, reference services are typically evaluated with respect to the degree to which they provide *accurate* information to patrons.

CONCLUSION

The fundamental objective of information services is to facilitate the acquisition of knowledge. Epistemic value theory provides a framework for clarifying epistemic objectives and for dealing with conflicts between these objectives. In this paper, I have tried to show how epistemic value theory might be used to clarify the epistemic objectives of information services. But further work needs to be done to determine more precisely what these objectives are.

REFERENCES

Annis, David B. 1978. A contextualist theory of epistemic justification. *American Philosophical Quarterly* 15:213-19.

Baker, S. L. and F. W. Lancaster. 1991. *The measurement and evaluation of library services*. Arlington, Virginia: Information Resources Press.

Brookes, B. C. 1970. The viability of branch libraries. *Journal of Librarianship* 2:14-21.

Egan, Margaret and Jesse Shera. 1952. Foundations of a theory of bibliography. *Library Quarterly* 44:125-37.

Fallis, Don. 2000. Veritistic social epistemology and information science. *Social Epistemology* 14:305-16.

Frické, Martin. 1998. Jean Tague-Sutcliffe on measuring information. *Information Processing & Management* 34:385-94.

Goldman, Alvin I. 1999. *Knowledge in a social world*. New York: Oxford.

Hamburg, Morris, Leonard E. Ramist, and Michael R. W. Bommer. 1972. Library objectives and performance measures and their use in decision making. *Library Quarterly* 42:107-28.

Hume, David. 1977. *An enquiry concerning human understanding*. ed. Eric Steinberg. Indianapolis: Hackett.

James, William. 1979. *The will to believe*. Cambridge: Harvard.

Kirkwood, Craig W. 1997. *Strategic decision making*. Belmont, California: Duxbury.

Levi, Isaac. 1962. On the seriousness of mistakes. *Philosophy of Science* 29:47-65.

Meola, Marc. 2000. Review of *Knowledge in a social world* by Alvin I. Goldman. *College and Research Libraries* 61:173-74.

Mill, John S. 1978. *On liberty*. ed. Elizabeth Rapaport. Indianapolis: Hackett.

Neill, S. D. 1982. Knowledge or information: A crisis of purpose in libraries. *Canadian Library Journal* 39:69-73.

Paterson, R. W. K. 1979. Towards an axiology of knowledge. *Journal of Philosophy of Education* 13:91-100.

[14] Even if truth is left out of the picture, an information service still needs to have some epistemic objective that takes into account the quality of the information provided. Simply maximizing informativeness or exposure, for example, would not be sufficient to insure quality.

Shera, Jesse. 1961. Social epistemology, general semantics and librarianship. *Wilson Library Bulletin* 35:767-70.

Woodward, Diana. 1990. A framework for deciding issues in ethics. *Library Trends* 39:8-17.