
SOCIAL EPISTEMOLOGY IN INFORMATION STUDIES: a consolidation

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Abstract

The present paper aims to provide new details and information on the intellectual context in which social epistemology was born, including aspects such as its theoretical influences, intellectual contexts, and main characteristics. As methodology it presents an analysis of the writings on social epistemology by Jesse Shera and Margaret Egan selected from different and sometimes rare sources and collection. After an the analysis, the paper addresses the relationship between the historical social epistemology proposed by Margaret Egan and Jesse Shera as a discipline to investigate the foundations of librarianship and the contemporary social epistemology proposed by Steve Fuller as a program of a “naturalistic approach to the normative questions surrounding the organization of knowledge processes and products.” Both these proposals are outlined as an interdisciplinary project that is based on both philosophical epistemology and the scientific sociology of knowledge.

Keywords: Social epistemology; Jesse Shera; Margaret Egan; Sociology of knowledge

1 Introduction

In the second half of the 20th century, when the name Information Science started to be used, Margaret Elizabeth Egan and Jesse Hauk Shera developed their project of “social epistemology” at the University of Chicago Graduate Library School (GLS). This new discipline would deal with the foundations of Librarianship first, and, in a second stage, with the intellectual foundations of Information Science. Although several approaches have been competing in the Library and Information Science (LIS) field, in our view, none of them has provided a better theoretical foundation for LIS than social epistemology. After the death of Jesse Shera, several authors have continued or proposed epistemological programs that could be also used as theoretical frameworks for LIS, some of them acknowledging Egan and Shera’s

social epistemology, such as Steve W. Fuller's social epistemology, while others dismissing their whole epistemological project, such as Luciano Floridi's philosophy of information.

Zandonade (2004) provided a detailed outline of Shera's project, its reception, and link to Fuller's social epistemology. The present paper follows up that study with new details and information on the intellectual context in which social epistemology was born, including aspects such as its theoretical influences, the intellectual milieu, and main characteristics. We also study the relationship between the historical social epistemology proposed by Margaret Egan and Jesse Shera, as a discipline, to investigate the foundations of librarianship and the contemporary social epistemology proposed by Steve Fuller as a program of a "naturalistic approach to the normative questions surrounding the organization of knowledge processes and products." Both these proposals are outlined as an interdisciplinary project that is based on both philosophical epistemology and the scientific sociology of knowledge.

2 Methodology

We collected and analyzed some of the key writings on social epistemology by Jesse Shera and Margaret Egan. Some of these sources belong to Tarcisio Zandonade's personal collection on Jesse Shera that has been gathered throughout his research and life experience. Some of these publications are very rare and hard to access in the present day. During our analysis, we worked with twenty items out of a hundred and seventy-one that were initially selected. While a few of them only cited the phrase "social epistemology," most of them carried concise descriptions of "social epistemology." The substantial propositions in those twenty works are presented in the section "Social Epistemology as Theoretical Foundation for Information Science" as a "consolidation" of the concept (see Appendix 1).

The first known bibliography of Shera's work was compiled by Gretchen M. Isard for the period 1931-1971. This bibliography was originally published in *Toward a Theory of Librarianship* (Rawski 1973). This bibliography was later revised, expanded (including publications from 1972 to 1982), and annexed to Conrad H. Rawski's entry on Jesse Shera for the *Encyclopedia of Library and Information Science* (1985). A copy of this full bibliography is appended to Zandonade's PhD dissertation *As Implicações da Epistemologia Social para uma*

Teoria da Recuperação da Informação [Implications of Social Epistemology for a Theory of Information Retrieval] (2003). This expanded bibliography stops at the 26 reviews published in the *American Reference Books Annuals* (ARBA), v. 6, (1975), 7 (1976), 8 (1977), 9 (1978), 10 (1979), and 11 (1980). These ARBA volumes were serially numbered as 452, 453, 454, 455, 456, and 457 (Rawski 1985 p. 370–371). These 26 items were individually numbered in a different order, from 452 to 477-to represent the full number of Shera’s publications. From 477 onwards, 13 posthumous publications were numbered as 478-490, including a very important item (Egan and Shera 1949) that had not been included in the original list (Zandonade 2003 p. 79–80).

Out of the total 490 bibliographic items, Zandonade’s private collection holds copies of 433, therefore missing 57 publications (11.84%) that were not analyzed. A great number of publications, however, are reproduction, so the total number of unique works authored by Shera accounts for a lesser total. Out of the 176 selected publications, 20 works that mentioned the subject of “social epistemology” were analyzed. We did not consider any of the 74 articles published at the *Wilson Library Bulletin Column: 1961–1968 – Without Reserve*, 40 of them republished in Shera’s *The Compleat Librarian* (1971a), due to their superficial character. On the other hand, “social epistemology” was not found in the 29 *American Documentation editorials*, three *Bibliographies* (considered as a single publication), 125 *Reviews*, and 26 *Reviews in American Reference Books Annual*. It should be noted that out of the 12 *Reports*, none on them is included in Zandonade’s collection. As for the 24 works that were finally used, 20 items are considered to be directly related to social epistemology and four to human processes that are studied by social epistemology. The 20 works pertaining to social epistemology that name the subject as such were classified according to the nature of the bibliographic units as follows: (a) three *Books* including substantial chapters on social epistemology (Shera and Egan 1951; Shera 1970; Shera 1972a); (b) four *Parts of Books* including *Papers, Articles, Commentary* (Egan and Shera 1953; Shera 1963; Shera 1965b; Shera 1968c); (c) two entries in *Encyclopedias* (Shera 1968d; Shera 1980); and (d) 12 *Journal Articles* (Egan and Shera 1952; Shera 1956a; Shera 1961a; Shera 1961b; Shera 1965a; Shera 1968a; Shera 1968b; Shera 1968e; Shera 1971b; Shera 1972b; Shera 1973; Shera 1982). The four works pertaining to subjects closely related to the human processes studied by social epistemology are Egan and Shera (1953), Shera (1968a),

Shera (1968b), and Shera (1968e). The following Table is the statistics of Egan’s and Shera’s literature collection on social epistemology:

Table 1 – Bibliographic units

| | A | B | C |
|--|------------|------------|-----------|
| Books | 15 | 12 | 3 |
| Parts of Books: Papers, Articles, Commentary | 68 | 42 | 4 |
| Journal Articles + Encyclopedia entries | 125 | 114 | 14 |
| Wilson Library Bulletin Columns: 1961–1968 | 74 | 74 | – |
| American Documentation Editorials | 29 | 29 | – |
| Reports | 12 | 0 | – |
| Bibliographies | 3 | 3 | – |
| Reviews | 125 | 125 | – |
| Reviews in American Reference Books Annual | 26 | 26 | – |
| Posthumous and Excluded Articles | 13 | 8 | 3 |
| TOTAL | 490 | 433 | 24 |

Source: from de authors

Legend:

A – Total of publications by Egan and Shera

B – Number of publications obtained for research

C – Number of publications with the phrase ‘social epistemology’

3 Results

3.1 Theoretical influences and context of social epistemology

From his job at Scripps in 1931 to his death in 1982, Jesse H. Shera built an intense professional and academic career. For around twelve years of that long period (from 1946 to 1959), Shera conducted academic research and worked in close collaboration with Margaret E. Egan. Both scientists were active in the subject of education for librarianship, pioneers in the pavement of a safe way to the “new librarianship.” Shera was adamant in driving the profession and the discipline through the inescapable upgrade to documentation and, eventually, to information science. He was critical of “a serious questioning by the ‘invading’ non-librarians of library goals and objectives, by an open contempt for librarianship itself. The invaders wanted no

part of library education as a preparation for their work, rejected the techniques of the librarian despite the fact that they themselves re-invented methods that had long ago been either adopted or discarded by the librarians, and in no circumstances did they want themselves to be stigmatized as librarians” (Shera 1968e p. 46).

Both Margaret Elizabeth Egan and Jesse Hauk Shera were American scholars and highly educated scientists, respected and devoted supporters of the library profession and education. Egan was a librarian and a communication scholar and Shera was a librarian and an information scientist. Margaret Egan developed her career almost completely under Jesse Shera’s shadow. In fact, it has been noted that she might have played a much more important role in the development of the social epistemology project than it has been commonly acknowledged (Furner 2004). Shera initially disliked librarianship and “had a brief period of flirtation with sociology and social sciences,” before graduating “with honors in English literature from Miami University, in 1925” (Wright 2013 p.2-3). None of them were a philosopher or a sociologist, what then was their purpose and drive for starting an interdisciplinary study of the scientific sociology of knowledge and philosophical epistemology if they had not been formally educated in those areas?

In order to understand how two “outsiders” as Egan and Shera took on such as philosophical and scientific project, it is important to understand the state of affairs of epistemology and sociology of knowledge at the University of Chicago at that moment. In several occasions, Shera recognized his philosophical and scientific stand, for instance when stating that librarians must look to “symbolic interactionism” for the proper foundation of a theory of librarianship: “This term, first named by Herbert Blumer in 1937, is rooted in the social psychologies of William James, Charles S. Peirce, Charles H. Cooley, John Dewey, and George Herbert Mead” (Shera 1982; 1983).

“Symbolic Interactionism” is a term that Shera chose as an alternative for “social epistemology” at the end of his life (Shera 1983 p. 386), while, in other occasions, he used the expression “social cognition” (Shera 1972b). His hesitation for definitely naming the project, that was initially called “social epistemology” as suggested by Egan but sometimes attributed to Shera himself with the *caveat* that it was chosen “for the lack of a better one,” could be perceived as a feeble belief in his own thinking, especially for someone that was convinced that

“the maturity of an area of knowledge is reflected in the degree of standardization of its nomenclature” (Shera 1951 p. 85). The sporadic choice of “social cognition” and the final “symbolic interactionism” do not improve Shera’s mental fuzziness in this regard.

The philosophical and scientific context in the United States during the first half of the 20th century was very explicit. The new “way of thinking” (*Weltanschauung*, “conception of the universe,” “ideology”) of modern philosophy was modeled by the methods and results of science, particularly in Astronomy and Physics, developed since the 17th century. In addition, both the *philosophus naturalis* and the “man of science” lived in the same character, in the same key figures, during the making of science. It should be noted that the term “scientist” was coined in English in 1833, at the request of the poet and philosopher Samuel Taylor Coleridge (1772-1834), by William Whewell (1794-1866), “one of the most important and influential figures in Britain from the 19th century,” As a consequence, the “way of seeing the world” of educated people transformed the philosophical ideas that came after science in the 17th century (Snyder 2000).

Bertrand Russell, in his analysis of the *History of Western Philosophy*, stated that almost all the characteristics that distinguish the modern world from the one of earlier centuries can be attributed to science that had its most spectacular triumphs in the 17th century. Also in this century modernity began as an attitude change in face of the world. The new conceptions then introduced by science had profound implications in modern philosophy (Russell 1946 p. 511-515). The philosopher Francis Bacon (1561-1626) was the founder of the inductive method of modern philosophy and was also a pioneer in systematizing the logic of the scientific method (Bacon 1620 [1900]). His utopia, published posthumously in 1627 in *Sylva Sylvarum* under the title *New Atlantis*, stands out among other works (Bacon 1627 [1643]) and was a major influence for Paul Otlet, who at the age of 14 wrote his own utopia *L'Ile du Levant* (1882). Otlet reshaped Baconian utopia and this would lead, in the last years of the 19th century, to create with Henri La Fontaine the movement called “documentation.”

The whole philosophy of the 19th century was generally dominated by Kant’s *idealism* and Hegel and the German *idealists*. However, there were also other influential schools that were developed in the 19th and first half of the 20th century, such as: *British Utilitarianism* [Jeremy Bentham (1748-1832), James Mill (1773-1836), John Stuart Mill (1806-1873), Henry Sidgwick

(1838-1900), Hastings Rashdall (1859-1924), and George Edward Moore (1873-1958)]; *Evolutionary Naturalism; Classic Positivism; Dialectical Materialism and Marxist Communism; Pragmatism* [Charles Sanders Peirce (1839-1914), William James (1842-1910), John Dewey (1854-1952), and Ferdinand C. S. Schiller (1864-1937)]; *Neo-Italian Idealism and Personalism; North American Neo-Realism* [Ralph Barton Perry (1876-1957), Edwin B. Holt (1873-1946), William Pepperell Montague (1873-1953), Walter B. Pitkin (1878-1953), Edward Gleason Spaulding (1873- 1940), and Walter T. Marvin (1872-1944)]; *British Neo-Realism* [George Edward Moore (1873-1958), C. Lloyd Morgan (1852-1936), Samuel Alexander (1859-1938), Bertrand Russell (1872-1970), Alfred North Whitehead (1861-1947), Thomas Percy Nunn (1870-1944), Charlie Dunbar Broad (1887-1971), John Laird (1887-1945), Cyril Edwin Mitchinson Joad (1891-1953), Henry Habberley Price (1899-1985), and Alfred Cyril Ewing (1899-1973)]; and *North American Critical Realism; Logical Positivism; Analytic Philosophy* [George Edward Moore (1873-1958), Bertrand Russell (1872-1970), Ludwig Wittgenstein (1889-1951), and John Wisdom (1904-1993)]; *Cambridge Philosophy; Oxford Philosophy; Neo-Scholasticism and neo-Thomism; Phenomenology; and Existentialism* (Sahakian p. 1968).

The main philosophical influence that Margaret Egan and Jesse Shera assimilated at the University of Chicago was *Pragmatism*. In this vein, the philosophers Shera (1983) mentioned include: Charles Sanders Peirce (1839–1914), an American philosopher, logician, mathematician, and scientist who is sometimes known as “the father of pragmatism;” William James (1842–1910), one of the founders of modern psychology and a relevant pragmatist philosopher; John Dewey (1859–1952), an American philosopher, psychologist, and educational reformer whose ideas have been influential in education and social reform. He wrote about many topics, including epistemology, metaphysics, aesthetics, art, logic, social theory, and ethics; George Herbert Mead (1863–1931), an American philosopher, sociologist, and psychologist, primarily affiliated with the University of Chicago where he was one of several distinguished pragmatists. Mead is regarded as one of the founders of social psychology and of what has come to be referred to as the Chicago sociological tradition; and Charles Horton Cooley (August 17 p. 1864–May 7 1929), an American sociologist. Elsewhere, Egan and Shera (1952) also mentioned the influence of another sociologist: Talcott Parsons (1902–1979), an American sociologist of the classical tradition, best known for his social action theory and structural functionalism.

3.2 Characteristics and consolidation of Egan and Shera's social epistemology

Egan and Shera's project of social epistemology was originally presented as one of the possible approaches to bibliographic organization. This approach was presented as a philosophy for both classificationists and classifiers, i.e., for both the developers of the standards and the librarians applying classification systems, cataloging rules, and any other mechanism to do bibliographic control. This alternative was suggested in relation to the theoretical inconsistencies of the knowledge organization systems and as a theoretical foundation for an area that was struggling to gain a theoretical status:

There are two ways in which bibliographic control [bibliographic organization] may be considered – internally and externally. It may be examined from the standpoint of the librarian and scholar who devises and uses it – but in this case the examination will probably lead to no more than a series of disjointed observations concerning particulars. The other way is to view it against its background of intellectual activities in general. The sociologist might view it as one part of the more general problem of communication, since in its entirety it involves (1) communication within a group of specialists, (2) communication between various groups of specialists, and (3) communication between specialists and lay public (Egan and Shera 1949 p. 17; Shera and Egan 1951 Preface, vi).

In the winter of 1949, Egan and Shera published a short essay that was certainly prepared as an announcement for the 1950 Fifteenth Annual Conference of the Graduate Library School, July 24-29, 1950, on “Bibliographic Organization.” In the second paragraph of this essay, quoted above, Egan and Shera stated that “bibliographic control” could be studied following two approaches: (a) The vision of the librarian and of the scientist who develop and use the mechanisms of bibliographic control (an inside view); and (b) the view of the sociologist (of knowledge), in which bibliographic control “against the background of intellectual activities in general” (an outside view) could be viewed as part of the “more general problem of communication” (that in its totality examines the communication among scientists and between these and the lay public). When Egan and Shera wrote this announcement, they proposed social epistemology to be originated only from the sociology of knowledge. Epistemology, of any kind, was not even mentioned here yet.

Thus emerges the need for a new discipline – perhaps a science – of communication. This is not understood as a plea for a reworking of the old field

of mass communication, or even for more of the communication studies, so called, with which the language arts have recently been identified. (Shera 1956b p. 7; 1961b p. 769).

However, Egan and Shera stressed that their proposal was different from those of their contemporary communication studies. Their proposal (social epistemology) was much closer to the way sociologists would approach the problem in a scientific way:

The sociologists approach would seem to be potentially fruitful in that it would tend to promote a generalized body of knowledge and set up operating principles closely related to the structure of scholarship and its techniques of transmission (Egan and Shera 1949 p. 17; Shera and Egan 1951 Preface p. vi)

On the other hand, Shera did not rule out the importance of epistemology: We are here concerned with an epistemological discipline, a body of knowledge itself (Shera 1961b p. 769).

This epistemological approach also revealed knowledge organization to be dependent upon the views of its time. This view is a key contribution to the area of knowledge organization.

To the philosophical bases of classification the Middle Ages added little that is relevant to our present purposes except by an insistence upon a theological orientation, to reaffirm the doctrines of the essential unity of knowledge and to demonstrate how the focus of thought about the organization of knowledge can be altered in response to current changes in the philosophy of a period or an age (Shera and Egan 1951 p. 74).

Even a cursory examination of the history of the classification of the sciences emphasized the extent to which any attempt to organize knowledge is conditioned by the social epistemology of the age in which it was produced (Shera and Egan 1951 p. 82).

These remarks also show the connection of the social epistemological project to the history of science, an aspect that continued to be developed:

Man knows with some exactness how scientific knowledge is accumulated and transmitted from one generation to another; historians of science, for example, have become increasingly interested in the growth of scientific knowledge. (Shera 1956b p. 7; 1961b p. 769; 1972a p. 111).

It should also be noted that both the genesis and most of the development of Egan and Shera's social epistemology predated Kuhn's "The Structure of Scientific Revolutions" (1962), arguably another influential and relevant contribution to the epistemological approach to knowledge organization. In any case, the influence of the history of science (or rather the

sociology of science) in Egan and Shera was opposed to the individualistic approaches to knowledge in Philosophy:

Philosophers for generations have speculated about the nature of knowledge, its sources and methods, and its limits of validity [and relation to truth]. But the study of epistemology has always evolved about the intellectual processes of the individual (Egan and Shera 1952 p. 132; Shera 1956a p. 70; 1956b p. 7; 1972a p. 111; 1973 p. 89; 1980 p. 456).

Until relatively recently times, epistemology was a branch of speculative philosophy, concerned with how we know (Shera 1972a p. 111; 1973 p. 89).

But almost invariably the study of epistemology has been seen against the background of the intellectual processes of the individual (Hans Reichenbach, Michael Polanyi, and Karl Mannheim; Egan and Shera 1952 p. 132; 1956a p. 70; Shera 1956b p. 8; 1961b p. 769; 1972a p. 112; 1973 p. 89).

According to Shera, epistemology, in its individualistic approach, seemed to be a stagnate field that had been superseded by psychology in certain aspects. This understanding of epistemology by Egan and Shera is an aspect that we will discuss later. Psychology, on the other hand, was also said to be focused on individualistic and mentalist approaches. Thus, neither psychology nor “traditional” epistemology was apt for providing a theoretical foundation for LIS in the social context. None of them seemed to allow generalizations:

But neither epistemologists nor psychologists have developed an orderly and comprehensive body of knowledge concerning intellectual differentiation and the integration of knowledge within a complex social structure (Shera 1980 p. 463).

As a consequence, Egan and Shera looked at Sociology as a main source of inspiration and a solution for the creation of a new scientific discipline:

The sociologists, though they have directed their attention towards the behavior of men in groups, have emphasized basic emotional drives and motivations and have paid scant heed to the intellectual forces shaping social structures (Egan and Shera 1952 p. 132; Shera 1956a p. 7; 1961b p. 769; 1972a p. 112; 1980 p. 463).

Yet that such intellectual forces are extremely important, particularly in the formal, as opposed to the informal, structures of society, is an inescapable observation. One is forced to conclude, then, that 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 – a discipline founded on sound research techniques and methods that will not only result in understanding and appreciation but also make possible future national planning and implementation (Egan and Shera 1952 p. 132; Shera 1956b p. 8).

We highlight here that the name “social epistemology” was not consistently or definitively used. This term was probably chosen to emphasize the influence of the sociological approach while stressing the differences from the “individualistic” epistemology.

The new discipline that we here envisage (and which, for want of a better name, we have called social epistemology) should provide a framework for the effective investigation of the entire complex problem of the intellectual process of society – a study by which society as a whole seeks a perceptive relation to its total environment (Shera 1961b p. 769).

The study of the ways in which a society achieves an understanding relationship with its environment is what Margaret Egan called ‘social epistemology’, and it is fundamental to a theory of librarianship (Shera 1965a 241; 1972a 112; 1973 89).

But what I have called “social epistemology,” is still a mystery (Shera 1971b p. 79).

Although the terminological aspects were never completely clear in the project, Shera also stated that social epistemology is a type of epistemology, as “knowledge of knowledge” is the foundation of LIS:

librarianship as the management of knowledge is also rooted in epistemology – the knowledge of knowledge itself – and especially social epistemology, the way in which knowledge is disseminated through a society and influences group behavior (Shera 1961a p.169).

In this sense, Shera seemed to acknowledge the importance of philosophy and epistemology in his proposal, at least as a starting point, while also emphasizing the interdisciplinary influence of the many areas in which a broader LIS program might lie. In spite of all the influences, social epistemology should be a brand new and unique thing, as he and the rest of colleagues at the GLS were striving to institutionalize LIS as a new discipline.

Though “social epistemology” should have its own corpus of theoretical knowledge, it should be truly interdisciplinary in its heavy dependence upon many fields – sociology, anthropology, linguistics, economics, the physiology of the human nervous system, psychology, mathematics, and information theory, to name but a few of the most conspicuous areas (Shera 1968c p.9; 1972a p. 113; 1980 p. 463).

The influence of sociology consistently stands out among the others. Egan and Shera transitioned from a philosophical approach to knowledge to a sociological approach to

knowledge. The social aspects of the communication of information in libraries were always opposed to individualistic approaches to information:

It will lift the study of intellectual life from that of the individual to an inquiry into the means by which society, nation, or culture achieves an understanding relationship with the totality of the environment, and its focus will be upon the production, flow, integration, and consumption of all forms of communication throughout the entire social pattern (Egan and Shera 1952 p.132; 1956a p.70; Shera 1956b p.8; Shera 1961b p.769).

The library as a social invention is concerned with the improvement of the individual, but through the improvement of the individual it seeks the advancement of society. Individuals not only make the society, society continually reshapes the individual; this is perhaps the most important key to dynamics of the library. The basic bonds through which individuals achieve unity in a culture is through the communication of information. A culture, almost by definition produces a “transcript,” a record in more or less permanent form that can be transmitted from generation to generation (Shera 1961a p. 169; 1968c p. 8–9; 1972 p. 112).

The research problems of this new theoretical foundation proposed by Shera also reflect this leap from individual cognition to social cognition. The importance of the history of knowledge is also emphasized here:

If the librarian’s bibliographic and information systems are to be structured to conform as closely as possible to man’s uses of recorded knowledge, the theoretical foundations of his profession must eventually provide answers to such questions as:

The problem of cognition – how man knows.

The problem of social cognition – the ways in which society knows and the nature of the socio-psychological system by means of which personal knowledge becomes social knowledge.

The problem of the history and philosophy of knowledge as they evolved through time and in variant cultures.

The problem of existing bibliographic mechanisms and systems and the extent to which they are in congruence with the realities of the communication process and the findings of epistemological inquiry (Shera 1968c p.10; 1973 p.89).

On the other hand, the mechanisms that librarians have to deal with this social communication of knowledge are the knowledge organization systems. The following quote sets knowledge organization as one of the main objects of social epistemology and arguably of LIS.

The importance of the history and sociology of knowledge for knowledge organization is also highlighted.

Traditionally, the tools and methods of the librarian for the control of his collection – his classification schemes, subject headings, indexes, and other devices for the subject analysis of bibliographic units – have been based on the assumption of permanent, or relatively permanent, relationships among the several branches of knowledge. Thus they tend to become largely inflexible, closed, fragmented and non-holistic systems in which each unit of information is fitted (Shera 1968c p.10; 1972a p.114).

Finally, at the end of his career, Shera also proposed the term “symbolic interactionism” to name the project. This term, in addition to stress the influence of semiotics and the pragmatist authors, also denoted the importance of the representation of information in graphic records. This aspect could also be seen as a link and common theoretical ground for the LIS and the Documentation movements on both sides of the Atlantic.

I submit that librarians must look to “symbolic interactionism” for the proper foundation of a theory of librarianship. This term, first named by Herbert Blumer in 1937, is rooted in the social psychologies of William James, Charles S. Peirce, Charles H. Cooley, John Dewey, and George Herbert Mead.

The term symbolic interaction refers to the process by which people relate to their own minds and the minds of others; the process by which individuals take account of their own or others needs, desires, means and ends, knowledge and like motivations [...] The term “symbolic” includes the representations of those requirements through a system of commonly understood linguistic or other representational activities such as gestures, whereby the content of the communicated message is transmitted to, and understood by, the intended recipient. Such a discipline reminds librarians that their area of concern is based on social phenomena and that it provides for the contributions of philosophy, linguistics, and psychology in the formulation of its unique purpose. That purpose is to make accessible the graphic records of man’s culture, that he may understand the totality of the environment in which he finds himself, and his own place in it (Shera 1982 p.14; 1983 p. 386-387).

3.3 Epistemology as in social epistemology

The philosophical studies of knowledge during the 20th century have been perhaps the most important area of philosophy (Fuller 1987). Various philosophical schools adopted different perspectives in relation to these studies. These different schools have adopted a variety of terminology that is sometimes chaotic and contradictory. Different amplitudes of existing

semantics from language to language, and from culture to culture have contributed to this disorder (Fuller 1993; 2001).

The use of the term “epistemology” in Egan and Shera’s project is consistent with the Anglophone tradition that uses it as the only term for the study of knowledge. The term “epistemology” was introduced in British Philosophy by James Frederick Ferrier (1808–1864), a Scottish metaphysical author (Ferrier 1875) [1]. Epistemology, one of the main branches of philosophy, is a term frequently confused in the literature with other philosophical terms such as Theory of Knowledge, Gnoseology, and Philosophy of Science. In the glossary of her *Curso de Teoria do Conhecimento e Epistemologia* [Course on Theory of Knowledge and Epistemology], Inês Lacerda Araújo (2012) defines these terms as follows: “Epistemology is the area [of philosophy] concerned with knowledge, especially scientific knowledge, its sources, its criteria, its validation forms, its scope, and limits;” “Theory of knowledge is the area of philosophy that investigates the sources, criteria, limits, competence of knowledge, in schools of thoughts, trends, and main authors;” “Gnoseology is synonymous with theory of knowledge, the study of γνῶσις, [another] Greek word meaning ‘a knowing,’ ‘knowledge’” (Araújo 2012 p. 211-214, in translation) [2].

Although Ferrier’s use of the term “epistemology” might be perceived as an “apparent simplification” of the area of study of knowledge, this is not completely truth. In fact, Ferrier divides the problem as follows: “what is known, and what is knowing”, which comprises epistemology (what is known?), and theory of knowledge (what is knowing?). We believe that Shera, as many other contemporary philosophers, had trouble in distinguishing both branches in Ferrier’s definition. Egan and Shera seemed to understand philosophical epistemology just as an individual epistemology (“what is knowing,” the area that should be called theory of knowledge, as did Russell in his entry for the Encyclopedia Britannica 1920), ignoring that it also comprehends “what is known?” (i. e., a social epistemology). Thus, Egan and Shera proposed a transition “from a philosophical to a sociological theory of knowledge,” in the tradition of Comte and sociology in which the individual would be replaced by human society as the subject of knowledge (see Elias 1970 p.36-37). However, as Fuller asserts, epistemology “is always already social, “as it speculates on knowledge as a rational human product. Therefore, the unique

innovation of “social epistemology” would be relevant if “social” in “social epistemology” is understood as “sociology of knowledge.”

Availing himself of his knowledge of sociology and social sciences, Shera explained that “the phenomena [generated by the ‘documentalist-information specialist] is [sic] specially interesting to the student of the sociology of professionalization as an example of the desire of an alien group to change the terminology of the invaded, and thus present at least the outward manifestations of a new discipline” (Shera 1968e p.46-47). Are not we presently faced with similar ‘phenomena’ in the organization of knowledge in digital contexts?

The most developed plan for a “social epistemology” project was devised by Shera and Egan in the aforementioned four problems that librarians had to solve in order to obtain tools and systems of information organization according to the epistemological and communicational advances. The first of those four problems – “the problem of cognition – how man knows” is a question for the theory of knowledge, i.e., the speculative study of the process of knowledge in the mind of the knower. This problem is now investigated by empirical sciences, originally by Psychology of learning, and more recently by the cognitive sciences, neuroscience, anthropology, and others. In several occasions, Shera proposed that computers had to be studied not only to improve technical library operations, but also for a better understanding of the operations of the human mind.

The second question, “the problem of social cognition,” deals with “the ways in which society knows,” having in mind that “cognition” is a term reserved for the internal process of knowing, while outside of the human mind the term to be used is “knowledge” or “science.” Moreover, while stating that “the nature of the social-psychological system by means of which personal knowledge becomes social knowledge,” Shera reversed the order of the construction of social knowledge: “social epistemology is related to, but in a sense is the reverse of, the sociology of knowledge. The latter deals empirically with the social determination of knowledge to discover the extent of influence of social factors upon ideas, and seeks to isolate those influences in society by which knowledge is conditioned” (Shera 1972a p.129). The evolution of the history and philosophy of knowledge (and why not the “theory of knowledge” or even “epistemology?”) is certainly the background for the understanding of the current state of affairs. The fourth problem is the key question for “social epistemology,” “a question that has to be

investigated for the congruence of “the communication process” and “the epistemological enquiry.” The investigation of the last problem in social epistemology has also direct implications for a theory of information retrieval (Zandonade 2003).

3.4 The legacy of social epistemology: from Jesse Shera to Steve Fuller

During the 1980s, after the death of both authors, Egan and Shera’s project of social epistemology almost fell into oblivion within the restricted academic and professional community of Library and Information Science. Egan and Shera’s social epistemology was submerged into an ocean of knowledge and we only were able to retrieve eleven authors working with this topic during this decade. Some of these authors and works include Mueller (1984), Wright (1985), and Froehlich (1987, 1989a, 1989b). A second group of fifteen authors on the subject also came up in the 1990s. Outside the area of proto-scientific LIS, the term “social epistemology” could not be found in the literature.

An eminent exception is the journal “Synthese,” that dedicated a whole issue to social epistemology in October 1987. This special issue, edited by Frederick F. Schmitt, included contributions from seven eminent philosophers:

Stewart Cohen, Knowledge, context, and social standards;

Hilary Kornblith, Some social features of cognition;

Frederick F. Schmitt, Justification, sociality, and autonomy;

Keith Lehrer, Personal and social knowledge;

Alvin I. Goldman, Foundations of social epistemics;

Steve Fuller, On regulating what is known: a way to social epistemology;

Margaret Gilbert, Modelling collective belief.

The emergence of this publication, apparently from nowhere, raised the following question: Is there any connection between the social epistemology of this group of philosophers and Egan and Shera’s project? The key question in our analysis of Social Epistemology has been: Is there any relation between Fuller’s program of Social Epistemology and Shera’s discipline of Social Epistemology? We believe that there is a connection indeed, as a strong link

can be found in the first paragraph of the first chapter of Fuller's book "Social Epistemology," entitled "An Overview of Social Epistemology:"

The fundamental question of the field of study I call social epistemology is: How should the pursuit of knowledge be organized, given that under normal circumstances knowledge is pursued by many human beings, each working on a more or less well-defined body of knowledge and each equipped with roughly the same imperfect cognitive capacities, albeit with varying degrees of access to one another's activities? (Fuller 1988 p.3).

This fundamental question can be recast into the following propositions:

- (a) Many humans seek knowledge;
- (b) Every human being works on a body of knowledge which is more or less well defined;
- (c) Every human being is equipped with approximately the same imperfect cognitive abilities;
- (d) Human beings (a, b, c) have varying degrees of access to (epistemic) activities from each other;
- (e) Given (a, b, c, d), how should the search of knowledge be organized?

Propositions (a) through (d) are obtained through an empirical approach to Sociology, with respect to the "normal circumstances" in which these findings are made. The key elements of these statements reflect the nature of the central theme of social epistemology: the social organization of the pursuit of knowledge. From these assumptions, social epistemology focuses on seeking the best possible organization of the pursuit of knowledge. This represents the normative side of Social Epistemology, i. e., "On Regulating What is Known: A Way to Social Epistemology." New proposals can also be obtained from these statements:

- (f) Social epistemology has a normative interest that is the achievement of the best possible organization of cognitive work;
- (g) The change in the social relations of producers of knowledge affects the products of cognitive pursuits of knowledge;
- (h) The social epistemologist is the ideal epistemic planner.

The combination of proposition (d) *humans (a, b, c) have varying degrees of access to (epistemic) activities from each other*, by Fuller, with the fourth research problem stated by Jesse H. Shera [*The problem of existing bibliographic mechanisms and systems and the extent to which they are in congruence with the realities of the communication process and the findings of epistemological inquiry*] makes clear that the question posited by Shera is a problem of special social epistemology, while the question of Fuller is a problem of general social epistemology. Thus, both projects are connected and potentially complementary. Finally, we are convinced that this proposal of connecting both projects will promote theoretical research at graduate programs of Information Science around the world and will bring into action the technical organization of knowledge in the current “information society.”

4 Conclusion

This paper has provided a revision of Shera and Egan’s project of social epistemology. It follows up Zandonade (2004) while it analyzes further writings that provide a better text base for a consolidation. The paper extracted the main propositions of these texts and reconciles this consolidation with Fuller’s project of social epistemology, developed outside LIS. Further steps would be the study of the influence of these two social epistemological projects in the LIS literature and the recognition of more recent proposals in the vein of Shera’s project, such as Hjørland’s domain analysis as a true successor and manifestation of social epistemology in LIS today.

Notes

- (1) “This movement determines another whole section of philosophy; indeed, it completes the revolution, or at least we have now merely to find out the truly first question in regard to knowing and the known to have before us the true beginning, the really proximate question of philosophy. This division explores and explains the laws both of knowing and of the known – in other words, the conditions of the conceivable; laying out the necessary laws, as the laws of all knowing, and all thinking, and the contingent laws as the laws of our knowing and of our thinking. This section of the science is properly termed the EPISTEMOLOGY – the doctrine or theory of knowing, just as ontology is the doctrine or theory of being (λόγος τῆς ἐπιστήμης) – the science of true knowing). It answers the general question, “What is knowing and the known?” – or more shortly, “What is knowledge?” The ontology cannot be approached, or even looked at, until this division has been thoroughly explicated” (Ferrier 1875, 47-49).

- (2) “Theory of Knowledge is oftentimes confused with Epistemology. The field of study of Epistemology is interpreted broadly by two lines of thought, both based on the Greek word ἐπιστήμη (scientific knowledge, science). In a more traditionalist sense, it is taken generally as a study of knowledge, its origins, its limits, its value, and, in this regard, as synonymous with Theory of Knowledge or Gnoseology. This latter name is in disuse and was employed only in old manuals of Philosophy. In a more specific sense, Epistemology would be the same as the Philosophy of Science, or more exactly, the critical study of the principles, hypotheses, and the production of knowledge in the various sciences, focusing on its structure, value, the goals of scientific knowledge, its characteristics, its boundaries, as well as the methodological characteristics of each area. It is in this sense that we consider Epistemology.” (Araújo 2012, vii-viii, in translation).

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Appendix 1: Consolidation of Egan's and Shera's Social Epistemology

There are two ways in which bibliographic [organization] may be considered – internally and externally. It may be examined from the standpoint of the librarian and scholar who devises and uses it – but in this case the examination will probably lead to no more than a series of disjointed observations concerning particulars (Egan and Shera 1949 p. 17; Shera and Egan 1951 Preface p. vi).

The other way is to view it is against its background of intellectual activities in general (Egan and Shera 1949 p. 17; Shera and Egan 1951 Preface p. vi).

The sociologist might view bibliographic [organization] as one part of the more general problem of communication, since in its entirety it involves (1) communication within a group of specialists, (2) communication between various groups of specialists, and (3) communication between specialists and lay public (Egan and Shera 1949 p. 17; Shera and Egan 1951 Preface p. vi).

To the philosophical bases of classification the Middle Ages added little that is relevant to our present purposes except by an insistence upon a theological orientation, to reaffirm the doctrines of the essential unity of knowledge and to demonstrate how the focus of thought about the organization of knowledge can be altered in response to current changes in the philosophy of a period or an age. (Shera and Egan 1951 p. 74).

Even a cursory examination of the history of the classification of the sciences emphasized the extent to which any attempt to organize knowledge is conditioned by the social epistemology of the age in which it was produced. (Shera and Egan 1951 p. 82).

Thus [because of the force of communication] emerges the need for a new discipline – perhaps a science – of communication. This is not understood as a plea for a reworking of the old field of mass communication, or even for more of the communication studies, so called, with which the language arts have recently been identified. (Shera 1956b p. 7; 1956b p. 69; 1961b p. 769)

The sociologists approach would seem to be potentially fruitful in that it would tend to promote a generalized body of knowledge and set up operating principles closely related to the

structure of scholarship and its techniques of transmission. (Egan and Shera 1949 p. 17; Shera and Egan 1951 Preface p. vi).

Bibliographic control is thus seen to be one of the instrumental devices in our modern system of graphic communication. (Egan and Shera 1949 p. 17).

We are here concerned with an epistemological discipline, a body of knowledge itself. (Shera 1961b p. 769).

We are concerned here with a body of knowledge about knowledge itself. (Shera 1956a p. 69).

We are, therefore [tools for access to knowledge have received almost no attention], here concerned with the need for a new epistemological discipline, a body of new knowledge about knowledge itself. (Shera 1956a p. 69; 1961b p. 769; 1972a p. 111; 1973 p. 89; 1980 p. 456).

The manner in which knowledge has developed and has been augmented has long been a subject of study, but the ways in which knowledge is coordinated, integrated, and put to work is, as yet, an almost unrecognized field for investigation. (1956a p. 60–70; Shera 1956b p. 7; 1961b p. 769; 1973 p. 89; 1980 p. 456).

Man knows with some exactness how scientific knowledge is accumulated and transmitted from one generation to another; historians of science, for example, have become increasingly interested in the growth of scientific knowledge. (Shera 1956b p. 7; 1961b p. 769; 1972 p. 111).

Philosophers for generations have speculated about the nature of knowledge, its sources and methods, and its limits of validity. But the study of epistemology has always evolved about the intellectual processes of the individual. (Egan and Shera 1952 p. 132; 1956a p. 70; Shera 1956b p. 7; 1972a p. 111; 1973 p. 89; 1980 p. 456).

Until relatively recently times, epistemology was a branch of speculative philosophy, concerned with how we know. (Shera 1972a p. 111; 1973 p. 89).

The evolution of the science of psychology, however, left epistemology relatively poor in intellectual substance. (Shera 1972a p. 111; 1973 p. 89).

Today, “scientific epistemology,” to use Eddington’s term, has transformed the earlier philosophical and speculative approach into a scientific, a largely theoretical study that is concerned primarily with what man cannot know, i. e., the limits, constraints, on human knowing, but almost always these limits were seen against the background of the intellectual processes of the individual (Shera 1972a p. 111; 1973 p. 89).

In the terminology of cybernetics, these limits are referred to as “constraints” on knowing. Such constraints may be physical, biological (or physiological), psychological, or determined jointly by the environment and the organic and electronic structuring of the human body. (Shera 1972a p. 111).

Psychologists have carried the philosophers’ speculations into the laboratory, and they have made some progress in understanding mental behavior – but again, of the individual. (Egan and Shera 1952 p. 132; 1956a p. 70; Shera 1956b p. 8; 1961b p. 769; 1972a p. 111; 1980 p. 463).

But almost invariably the study of epistemology has been seen against the background of the intellectual processes of the individual (Hans Reichenbach, Michael Polanyi, and Karl Mannheim). (Egan and Shera 1952 p. 132; 1956a p. 70; Shera 1956b p. 8; 1961b p. 769; 1972a p. 112; 1973 p. 89).

But neither epistemologists nor psychologists have developed an orderly and comprehensive body of knowledge concerning intellectual differentiation and the integration of knowledge within a complex social structure. (Shera 1980 p. 456).

Yet it is no more necessary for such an attempt to wait until final answers at the individual level have been attained than for social psychology or economics to wait complete knowledge of individual behavior within their spheres. The “macroscopic” and the “microscopic” methods have each something to contribute to the other. (Egan and Shera 1952 p. 132).

The sociologists, though they have directed their attention towards the behavior of men in groups, have emphasized basic emotional drives and motivations and have paid scant heed to the intellectual forces shaping social structures. (Egan and Shera 1952 p. 132; Shera 1956a p. 7; 1961b p. 769; 1972a p. 112; 1980 p. 463).

Yet that such intellectual forces are extremely important, particularly in the formal, as opposed to the informal, structures of society, is an inescapable observation. One is forced to conclude, then, that 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 – a discipline founded on sound research techniques and methods that will not only result in understanding and appreciation but also make possible future national planning and implementation. (Egan and Shera 1952 p. 132; Shera 1956b, p. 8).

The new discipline that we here envisage (and which, for want of a better name, we have called social epistemology) should provide a framework for the effective investigation of the entire complex problem of the intellectual process of society – a study by which society as a whole seeks a perceptive relation to its total environment. (Shera 1961b p. 769).

But librarianship as the management of knowledge is also rooted in epistemology – the knowledge of knowledge itself – and especially social epistemology, the way in which knowledge is disseminated through a society and influences group behavior. (Shera 1961a p. 169).

The problem of information and how it is used involves the whole spectrum of man's behavior. It involves, of course, as we have seen, certain mathematical expressions. It involves the dissemination of knowledge, information, through society – what I have called social epistemology for want of a better term. All fields of knowledge are relevant to epistemology, and I don't think that the problems that we will be dealing with here can rightly shut it out. (Shera 1963 p. 16; 1965b p. 4; 1968c p. 8; 1968d p. 314; 1972 p. 112; 1980 p. 456).

The study of the ways in which a society achieves an understanding relationship with its environment is what Margaret Egan called 'social epistemology', and it is fundamental to a theory of librarianship. (Shera 1965a p. 241; 1972a p. 112; 1973 p. 89).

But what I have called "social epistemology," is still a mystery. (Shera 1971b p. 79; 1972b p. 788).

The derivation of the term is readily apparent. Epistemology is the theory of the methods and foundations of knowledge, especially with reference to the limits and validity of knowledge;

and through it the philosopher seeks and understanding of how the individual achieves a perceptual or knowing relationship to his environment. (Egan and Shera 1952 p. 132).

[Social epistemology] it will lift the study of intellectual life from that of the individual to an inquiry into the means by which society, nation, or culture achieves an understanding relationship with the totality of the environment, and its focus will be upon the production, flow, integration, and consumption of all forms of communication throughout the entire social pattern. (Egan and Shera 1952, p. 132; 1956a p.70; Shera 1956b p. 8; Shera 1961b p. 769).

The library as a social invention is concerned with the improvement of the individual, but through the improvement of the individual it seeks the advancement of society. Individuals not only make the society, society continually reshapes the individual; this is perhaps the most important key to dynamics of the library. The basic bonds through which individuals achieve unity in a culture is through the communication of information. A culture, almost by definition produces a “transcript,” a record in more or less permanent form that can be transmitted from generation to generation. (Shera 1961a p. 169; 1968c p. 8–9; 1972 p. 112).

It should lift the study of intellectual life from that of a scrutiny of the individual to an inquiry into the means by which a society, nation, or culture achieves an understanding of the totality of stimuli that act upon it. (Shera 1973 p. 89).

The focus of this new discipline should be upon the production, flow, integration, and consumption of all forms of communicated thought throughout the entire social fabric. From such a discipline should emerge a new body of knowledge about, and a new system of, the interaction between knowledge and social activity (1956a p. 70; Shera 1956b p. 8; 1961b p. 769; 1968c p. 9; 1972a p. 112; 1973 p. 89; 1980 p. 456).

Though “social epistemology” should have its own corpus of theoretical knowledge, it should be truly interdisciplinary in its heavy dependence upon many fields – sociology, anthropology, linguistics, economics, the physiology of the human nervous system, psychology, mathematics, and information theory, to name but a few of the most conspicuous areas. (Shera 1968c p. 9; 1972a p. 113; 1980 p. 456).

In recent years there have appeared two important books that are aimed in the direction of providing a foundation for the kind of discipline here anticipated. The first is Machlup’s “The

Production and Distribution of Knowledge in the United States”, Princeton University Press, 1962; and Frederick Harbison and Charles A. Myers, “Education, Manpower, and Economic Growth”, New York, McGraw-Hill, 1963. Neither work could properly be called “social epistemology” as the term is here employed, but each is dealing in certain ways with the problems with which social epistemology is concerned. (Shera 1968c p. 9; 1972a p. 112).

In recent years William Goffman, Dean of the School of Library Science, Case Western Reserve University, has been working on a mathematical approach to the dissemination of scientific ideas and, together with Dr. Vaun Newill, formerly of the Medical School faculty of the same university, has been developing an analogy between the dissemination of scientific knowledge and the spread and the spread of epidemics. (Shera 1972a p. 112–113).

Now, there exists a very important affinity between librarianship and social epistemology, for librarianship is based on epistemological foundations. (Shera 1961b p. 769; 1968c p. 9; 1972 p. 113).

This mastery implies not only a thorough understanding of the nature of that knowledge, but also an appreciation of the role of knowledge, but also an appreciation of the role of knowledge in that part of society in which he operates. (Shera 1968c p. 9; 1972a p. 113).

If the librarian’s bibliographic and information systems are to be structured to conform as closely as possible to man’s uses of recorded knowledge, the theoretical foundations of his profession must eventually provide answers to such questions as:

The problem of cognition – how man knows.

The problem of social cognition – the ways in which society knows and the nature of the socio-psychological system by means of which personal knowledge becomes social knowledge.

The problem of the history and philosophy of knowledge as they evolved through time and in variant cultures.

The problem of existing bibliographic mechanisms and systems and the extent to which they are in congruence with the realities of the communication process and the findings of epistemological inquiry. (Shera 1968c p. 10; 1973 p. 89).

Traditionally, the tools and methods of the librarian for the control of his collection – his classification schemes, subject headings, indexes, and other devices for the subject analysis of

bibliographic units – have been based on the assumption of permanent, or relatively permanent, relationships among the several branches of knowledge. Thus they tend to become largely inflexible, closed, fragmented and non-holistic systems in which each unit of information is fitted. (Shera 1968c p. 10; 1972a p. 114).

The structure and communication of knowledge, by contrast, form an open system which changes as the functions and needs of the individual and society shift to accommodate the increasing differentiation of knowledge as well as its consolidation resulting the coalescence of two or more disciplines. (Shera 1968c p. 10; Shera 1972a p. 114).

I submit that librarians must look to “symbolic interactionism” for the proper foundation of a theory of librarianship. This term, first named by Herbert Blumer in 1937, is rooted in the social psychologies of William James, Charles S. Peirce, Charles H. Cooley, John Dewey, and George Herbert Mead. (Shera 1982,p. 14; 1983 p. 386).

The term symbolic interaction refers to the process by which people relate to their own minds and the minds of others; the process by which individuals take account of their own or others needs, desires, means and ends, knowledge and like motivations. (Shera 1982, p. 14; 1983 p. 386–387).

Among sociologists this phenomenon is frequently as “social interaction.” In the definition of symbolic interaction the word might denote instrumental activities that animals, as well as human beings, direct toward their environment. (Shera 1982 p. 14; 1983 p. 386–387).

These instrumental activities, sometimes referred to as action or as psychological activities, relate to the organism’s requirements and the conditions and resources in the environment that are relevant to meeting those requirements. (Shera 1982 p. 14; 1983 p. 386–387).

The term “symbolic” includes the representations of those requirements through a system of commonly understood linguistic or other representational activities such as gestures, whereby the content of the communicated message is transmitted to, and understood by, the intended recipient. (Shera 1982 p. 14; 1983 p. 386–387).

Such a discipline reminds librarians that their area of concern is based on social phenomena and that it provides for the contributions of philosophy, linguistics, and psychology

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in the formulation of its unique purpose. That purpose is to make accessible the graphic records of man's culture, that he may understand the totality of the environment in which he finds himself, and his own place in it. (Shera 1982 p. 14; 1983 p. 387).

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