Chapter 3
Conceptual exploration

> *Que la Bibliothèque soit un objet scientifique, voilà une assertion aujourd'hui largement acceptée. Comme objet de l'histoire, elle est au confluent de l'histoire politique, de l'histoire sociale et de l'histoire culturelle. Car elle est à la fois une institution (un établissement public), un objet social (dédié au partage du savoir et de la culture), et un artefact (construit sur un héritage, un projet et un environnement spécifiques)*[1]. (Bertrand 2010, 9)

Outline

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[1] That the library should be an object of science, is an assertion that is widely accepted today. As an object of history, the library is at the confluence of political history, social history and cultural history. For the library is at the same time an institution (a public agency), a social object (dedicated to the sharing of knowledge and culture), and an artefact (constructed on the basis of a specific heritage, project and environment). (My translation)

3.1 Introduction

Libraries exist in contemporary and historical contexts. To understand LIS relations across national boundaries and in global settings, and to compare LIS across national, cultural and societal boundaries, we have to take these contexts into account. Many understandings of LIS are possible. My aim in this chapter is not to develop a general conceptual framework for international and comparative librarianship. This would require a general theory of LIS, which is beyond both the scope of this book and the capacity of its author. Instead, I attempt here to tease out a few key concepts and explore some conceptual frameworks that may be useful for research in international and comparative librarianship. This chapter does not contain nearly as many citations as the first two. The scope is so vast that I cannot even begin to cite a representative segment of the literature. Instead, much of it is based on my personal experience and insights.

3.2 The need for theory[2]

Naïve empiricism

In Chapter 2, Section 2.4, I asserted that much of the literature of international librarianship was descriptive and operational in nature, and that it was poorly conceptualized and failed to apply theory from LIS or other social sciences disciplines. In Section 2.5 I asserted that, although there were some notable exceptions, only a small proportion of the literature of comparative librarianship made any contribution to theory. The dominant paradigm of most of the literature can be characterized as "naïve empiricism". This refers to the belief, devastatingly critiqued by Popper (1961, 106), that in research the facts should speak for themselves, a belief which overlooks the role of concepts and theories in determining which data are to be collected and analysed (Carr 2000, 441). Use of the term "naïve empiricism" is not intended to imply that empiricism is *per se* naïve, although it has been used as a pejorative label in debates between empiricists and scientific realists (Boyd 2002). The term is widely used, with somewhat different meanings, in various disciplines, e.g. in the teaching of mathematics, where it refers to the most naive or basic of the four levels of proof that students are found to employ (E. J. Knuth and Elliott 1998), and in counseling psychology, where S. R. Strong (1991) has contrasted "theory-driven" or "Galilean" science with Aristotelian science, which focuses on the observable characteristics of events. Strong describes naïve empiricism as "a loose collection of beliefs about science that conform closely to … Aristotelian science" (1991, 206) and which is characterized by an assumption that observation can be unbiased as well as by an over-emphasis on the gathering of facts, a fixation on research methods, and a reliance on external validity rather than theory development. Often the term is used, without explanation or definition, as a general term of disapproval, but here I use it essentially as described by S.R. Strong (1991) and Anyon (1982).

Applying this term to educational curriculum research, Anyon identified two kinds of naive empiricism:

> The first kind is the simple emphasis on collecting and processing data, and the building up of ad hoc generalizations that attempt to explain the data. These explanations are in terms of the

[2] In this section I make extensive use of an article published in *Journal of documentation* (Lor 2014).

> data, or they are in terms of observed regularities between characteristics or variables. …[T]his type of social science is somewhat circular, and such explanations are only, in the most naïve way, explanatory… merely descriptive of the relationships that they discuss. The second type of naïve empiricism emphasizes the construction of sophisticated hypothetical-deductive systems based on the regularities that have been observed. These hypothetical-deductive systems… are more complicated but … still descriptive and not explanatory" (Anyon 1982, 34).

Anyon argued that data is not objective, since what one collects or counts depends on one's conceptual scheme. Thus the first kind of naive empiricism consists in collecting and manipulating data that one finds 'out there' without any awareness of the assumptions on which such research activities are based. The second kind of naive empiricism is concerned with reliance on "theoretical constructs or abstractions that are not embedded in a developed theoretical system" (p.35). Such theory does not constitute adequate explanations of social reality. [3]

In international and comparative librarianship too, we find evidence of both forms of naïve empiricism. Often, data is being collected and patterns are observed without being framed theoretically (cf. McKechnie and Pettigrew 2002), or theories are constructed that are essentially circular, referring only to their own theoretical constructs and not connecting to socially explanatory theory. This is coupled with a widespread lack of awareness of the metatheoretical assumptions implicit in international comparisons, which in turn leads to methodological decisions being taken by default. The upshot is that the bodies of work comprising international and comparative librarianship lack connectedness and have so far failed to contribute as much to the theoretical basis of library and information science as they could have.

Theory

It is necessary to clarify here what is meant by 'theory'. In a discussion of the "building blocks of science", Mouton (1996, 180–208), a social scientist, described the body of social knowledge as a hierarchy consisting of four layers, which I depict in FIGURE 3.1 as a pyramid.[4] Starting at the bottom, concepts are the primary or most fundamental building blocks. One level up, concepts are combined in statements. Statements can be about meaning, making semantic claims, as in theoretical and operational definitions, or they can be empirical statements. The latter, which make epistemic claims about the world, may be factual (descriptive) or explanatory (for example a hypothesis stating a causal relationship to account for observed facts). Since statements alone are inadequate for an understanding of social phenomena, at the next higher level they are combined into conceptual frameworks.[5] At the highest level Mouton placed research paradigms or research traditions.

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[3] Whereas Anyon described two forms of naïve empiricism, Bernstein (1976, 228) appears to have distinguished between "naïve empiricism" and "more sophisticated forms of empiricism": "…the case for a naturalistic understanding of the social sciences is based upon dubious interpretations of the natural sciences. These fluctuate between forms of naïve empiricism that emphasize the collecting and processing of data – that is, building from the ground up – and more sophisticated forms of empiricism that emphasize the construction of deductive explanatory systems."

[4] A diagram by Mouton (1996, 180) served as my point of departure, but Mouton cannot be held responsible for the pyramid depicted here.

[5] For a discussion of the role of theory in hypothetical-testing and hypothesis-generating research, and the distinction between theoretical and conceptual frameworks, see Imenda (2014). Types of theory relevant to the information sciences are discussed by Gregor (2005) and Sonnenwald (2016).

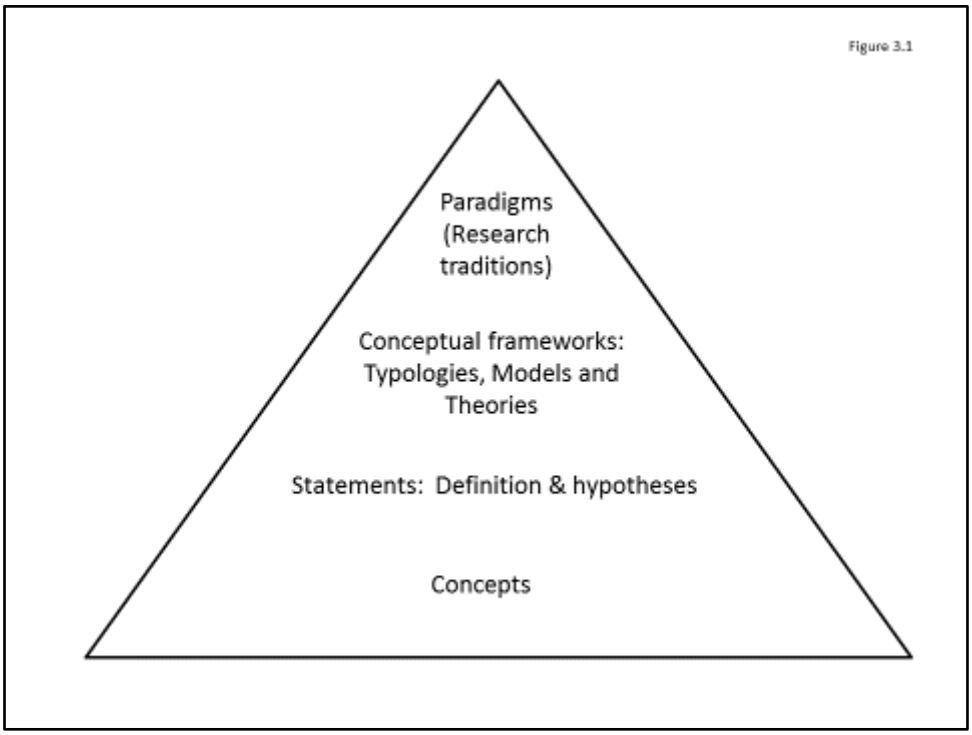

FIGURE 3.1: The hierarchy of concepts, statements, conceptual frameworks, and paradigms

Mouton distinguished between three kinds of conceptual frameworks: typologies, models, and theories. In typologies phenomena are classified in terms of common characteristics. An example[6] is the typology of colonies in Sub-Saharan Africa proposed by Mufwene (2002, 10–14), who, writing about the fate of African languages in the 21st Century distinguished between trade, exploitation and settlement colonies. While a typology is essentially a static representation of a class of phenomena, a model provides a dynamic framework setting out relationships within a phenomenon.[7] Models typically have a heuristic function, that is, they suggest possible relationships to be investigated. As Hjörland (2000, 521) has pointed out, models help us to "visualize how something might work and what variables should be taken into account", but the problem with testing models is that this process "does not question the assumptions on which the model was built". Examples are found in LIS theses and dissertations in which sets of trivial hypotheses are tested using sophisticated inferential statistics, but where the "so what?" questions are not answered. Returning to Mufwene's typology, we could relate the extent and degree of permanence of European settlement to the implantation of European institutions. In colonies with more numerous and permanent European settlement, European institutions are implanted by settlers primarily for their own use. Such a simple model of colonial influence might suggest ways of looking at post-colonial library development in Sub-Saharan Africa.

Although the borderline between models and theories is not always clear, a theory goes further than a model in providing explanations of relationships. A widely cited definition of

[6] The African example is my own. Mouton cannot be held responsible for it.
[7] An example cited by Mouton (1996, 197) is the well-known model of the communication process of Shannon and Weaver (1949), which is described later.

theory was formulated by Kerlinger (1979, 64): "A theory … is a set of interrelated constructs (variables), definitions and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena." Pursuing the relationship between European settlement in Sub-Saharan Africa and library development, we might formulate a theory relating the extent and permanence of European settlement (which was inhibited by climate and diseases in the more tropical territories) to delays and disparities in library provision to African inhabitants, explaining this in terms of racist attitudes on the part of the more numerous settlers in territories with cooler climates. Settlers in territories such as the "White Highlands" of Kenya and other temperate regions of Eastern and Southern Africa, having come to stay permanently and having more to lose than colonial officials, sent to tropical countries, who normally returned "home" to retire after their spell in Africa, developed more intransigent racist attitudes. These were manifested *inter alia* in segregated and sub-standard library facilities for Africans in those countries. Thus the model relating European civic institutions to European settlement has given rise to a more complex theory of library development in which causal explanatory factors are identified.

Grand and less grand theory

Describing theory "as an attempt to distinguish appearance or observable characteristics from essence; to get behind empirical data", Anyon (1982, 35) has emphasized that theory should be grounded in data and there should be a reciprocal relationship between theory and data: the one should inform the other. Further, for Anyon, theory has to be "socially explanatory". I understand this to imply that we need to find a middle ground between two extremes. At the one extreme we have rudimentary theories, little more than models, which merely attempt to explain empirical findings in terms of statements relating to the data. The other extreme is that wide-ranging 'grand theory' that consists of "a set of umbrella concepts designed to explain a broad range of social phenomena, and robust enough to act as the conceptual framework for a variety of research programs dealing with empirical data", for example Marxism and rational choice theory (Hamilton 2005, 14). Although they may be plausible and widely accepted, such theories are too abstract and too far removed from what can be empirically observed, to be of immediate use in designing a research study. Instead, they provide spaces for reflection and theorizing.[8]

LIS has not produced grand theory. In fact, although some use is made of theory from other fields such as psychology, sociology or management, LIS has produced very little theory of any significance (cf. Hjørland 1998 on information science). In my view this applies *a fortiori* to comparative LIS. Here some notions have emerged that might conceivably be situated in relation to grand theory. One example is the notion, possibly related to Max Weber's famous work *The Protestant Ethic and the Spirit of Capitalism* ([1905] 2002), that the differences in library development in northern and southern Europe are related to the

[8] There are as many views on what constitutes theory as there are theorists. This also applies to 'grand theory'. For some authors grand theory is less 'grand' (in the sense of all-encompassing) than for others. For example, Blute and Armstrong (2011) have pointed to a re-emergence of 'grand theories' of the scientific and scholarly process and have identified ten such theories (to which they also refer as 'general theories') in that field. These clearly are of much narrower scope than the grand theories referred to by Hamilton. See also Glazier and Grover (2002), who in relation to LIS distinguished between substantive, formal and grand theory. Greer, Grover and Fowler (2007, 46–47) provided examples of these three levels: Kuhlthau's theory of information-seeking behaviour as an example of substantive theory, Maslow's original theory of human motivation as an example of formal theory, and Bertalanffy's General systems theory as an example of grand theory.

religions (Protestant vs. Catholic) adhered to in those regions. Echoes of this are found in explanations of differences in public library development by authors from predominantly Catholic countries such as France, for example Hassenforder (1967, 107–9) and Bertrand (2006, 123–25). Another is the role of climate in library development (Benge 1970, 144–45). But the connections to grand theory have not been made.

If neither low-level models nor grand theory are appropriate for LIS, this suggests that we need theories of the middle range, defined by Merton (1968, 39) as:

> ...theories that lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behavior, social organization and social change.

Morgan and Wildemuth (2009, 42), citing Poole (1985), stated that "Middle-range theories are concrete enough to clearly apply to phenomena of interest to a professional field like information and library science, while simultaneously being abstract enough to apply to settings beyond the context in which they were developed." Geels (2007) has suggested that middle range theory is difficult to pin down as calls for it are often expressions of discomfort with the state of theory in a field. Writing about middle range theory in the field of science and technology studies, he proposed that such theory should not address the whole of that field but "focus on limited themes and topics... make explicit efforts to combine different topics in an analytical model and ... search for patterns and explanatory mechanisms" (2007, 635). Is this happening in international and comparative librarianship?

Theory in international and comparative librarianship

In international and comparative LIS I would suggest that we need to aim for greater connectedness – finding theoretical explanations that can apply to more than one comparative study and seeking to borrow from, or link to, theory from other social science disciplines. In this way we might arrive at criteria for a less haphazard choice of countries, societies or cultures to study and compare, and find clues for the explanation of the findings. In comparative LIS, which is the more scholarly of the two fields, we nevertheless see few cases where authors explicitly construct a theory to frame and design their study and to interpret their findings (cf. McKechnie and Pettigrew 2002). Where theory exists, we do not see it being taken up and developed by later investigators. For example, in studies of LIS development in former British and French colonies in Africa a great deal of useful material has been generated. The study of library development in Senegal by Maack (1981) provides excellent material for a comparative study of colonial influences on library development in anglophone and francophone West Africa. Maack (1982) herself developed this topic in an insightful article relating library development in two anglophone and two francophone West African countries to colonial policies as well as library traditions of Britain and France respectively. Although this theme has also been touched on in the seminal work on African librarianship by Sturges and Neill (1998) and in various regional surveys of more limited scope, e.g. Spear (1971), Kotei (1976), Saunders and Saunders (1994), Maack (1986; 2001) and Akinyotu (2003), it has not yet received the sort of systematic treatment that would generate theory and provide a framework for further comparative study. Such a framework should suggest further hypotheses and guide the identification of countries to be compared. Thus a theory of colonial influence on LIS might be tested by expanding it to former Portuguese and Belgian colonies, to former colonies of substantial European settlement (e.g.

Angola, Kenya, Zimbabwe), and to former colonies in other regions of the world. Further independent variables such as the duration of colonial rule and the conceptions and state of LIS in the colonizing powers themselves, suggest themselves in the construction of a theory of library development in former colonial territories. In such a theory the nature and extent of library development and its post-independence trajectory might be related to a country's colonial past if other variables (demographic, economic, cultural, etc.) are held constant. In this connection it is worth mentioning the work of R.V. Williams (1976) on the identification of indicators of library development in Latin America, which he followed up with an attempt, somewhat inhibited by a quantitative, empiricist approach, to construct a general theory of library development (Williams 1984). Studies conducted in international librarianship provide raw material for such analyses, but in comparative LIS each investigator seems to start from scratch, so that theory is neither built nor tested that could be used, first in an attempt to explain what has so far been reported in the literature, and secondly, to select additional cases for study.

Neither in international nor in comparative studies in LIS is much use made of theoretical insights from other social science disciplines, such as the various theories on the diffusion of innovations, cultural change, policy borrowing, development and post-coloniality. There are of course exceptions, for example a study by Yu (2008) on modern library development in East Asia in which she used Gramsci's (1992) theory of cultural hegemony, and studies of LIS education and research using Whitley's (2000) theory of the intellectual and social organization of the sciences in Nordic countries (e.g. Aarek et al. 1992; Al-Aufi and Lor 2012). Dalbello (2008; 2009) studied the influence of culture on digital libraries, using inter alia Hofstede's (1980) typology of national organizational cultures. Some authors have not only utilized theory but have also contributed to theory development. In a comparison of library professionals in France and the USA, Maack (1985) developed a conceptual framework for a cross-cultural study of feminization and professionalization. Rebecca Knuth (1999) developed a theory according to which national school library development followed an American or a British model or a third, combined model. She also referred to the influence of these models on school library development in developing countries. Imaginative conceptualization can make comparisons more insightful. In a study of nationwide consortia, Shachaf (2003) proposed a life cycle model. She followed an ecological approach and used theory derived from the management literature of inter-organizational analysis. The examples cited here are not the only exceptions. However, many other comparative studies are quite devoid of any explicit theory.

Some of the theoretically more interesting work in international and comparative LIS seems to come from the fringes of LIS, at the "harder" information science end of the LIS continuum. An example is the comparative study by Chatfield and Alhujran (2009) of e-government service delivery in Arab countries, where a model of developmental stages was employed. Another example is the study by Chang (2011) of the manifestations of culture in the design of English-language and Chinese-language websites of multinational corporations, in which Hofstede's model of five cultural dimensions was used.

Useful insights may come from comparative studies of LIS by investigators from outside our field. In a study of the impact of globalization on the public libraries of developing countries, Ignatow (2011), a sociologist, drew on a wide range of social science theory which relates factors such as economic liberalization and migration, economic development, democracy, international non-governmental organizations, and ethnic and religious homogeneity and heterogeneity, to public educational and cultural organizations other than public libraries. He

developed a set of six hypotheses for empirical testing. It is noteworthy that most of the references in his article are to non-LIS material. In a related study of the relationship between public library development and democratic systems of government in three developing countries, Ignatow et al. (2012) used sociological theories of social capital to construct a theoretical framework for their investigation. In some of this work we see the makings of theory which extends beyond the confines of explanatory schemes for single studies.

3.3 The library concept

It is hardly necessary to argue that different understandings of what is meant by the term 'library' will be significant in international and comparative *librarian*ship. For example, in discussing public libraries in Africa, do a South African community resource centre and a Botswana village reading room count as public libraries? And is a French *bibliothèque municipale* directly comparable with the public library of a similarly-sized city in the UK or USA?

The library historian Michael Harris (1999, 1) provided the following "working definition" for the term 'library': "…it is assumed that a library is a collection of graphic materials arranged for relatively easy use, cared for by an individual or individuals familiar with that arrangement, and accessible to at least a limited number of persons." This definition was clearly devised to include a wide range of institutions, from the earliest times. It also includes archives during the earlier period when no distinctions were made between them and libraries. But today library users may make heavy use of networked digital resources to which the library facilitates access but which are not 'collected' by the library. Are collections still so central to the concept of a library? A rapid excursion through definitions of the term 'library' – which is not necessarily limited to brick and mortar libraries – reveals that this concept is centred on a number of partly overlapping categories, among which I single out documents, information, and knowledge.

Documents

Documents, records/the record, or collections are prominent in most of the older definitions of the library. In the *Online dictionary for library and information science*[9] the term 'library is defined as "a collection or group of collections of books and/or other print or nonprint materials organized and maintained for use (reading, consultation, study, research, etc.)" The "human record" is central to a somewhat more nuanced definition – of librarianship rather than libraries –by Michael Gorman (2009, 149–50):

> I propose a definition of librarianship that is centred on the human record – that vast assemblage of messages and documents (textual, visual and symbolic) in all formats created by humans since the invention of written and human communication. Given that focus, library studies are seen as the field of those professionals who assemble and give access to sub-sets of the human record (collections); who list and organize those sub-sets so that they can be retrieved; who work to ensure that records of those subsets are integrated to allow universal access to the whole human record; who are dedicated to the preservation and onward transmission of the human record; and who give help and instruction in the use of the human record.

[9] http://www.abc-clio.com/ODLIS/odlis_l.aspx, retrieved 2016-03-28.

Bates (2007) proposed a spectrum of the information disciplines, placing library, archives and museum science at one end of the spectrum under "disciplines of the cultural record" and information science, informatics and information systems at the other under the "sciences of information". All are concerned with the "universe of documentation". Libraries and archives, which collect documents, along with museums, botanical gardens, zoos, etc., are "collections disciplines". Thus documents and collections are seen as defining libraries. Discussing the relationship between librarianship and information management, Suominen (2004, 143) categorized librarianship as "metadocumentation", a term she used "to denote professional and social as well as disciplinary practices … which essentially start from documents". In her view, the disciplinary basis for librarianship is to be sought in "bibliographical science with a historical emphasis on the book (or document)".[10] An Italian definition by Serrai (1995) quoted by Vitiello (2009, 317) also placed emphasis on the library as a collection of documents and of information about them for purposes of retrieval and the discovery of useful documents.[11] In Italy and other countries of continental Europe it appears that the book still takes a central place in librarianship. In Italy the training of librarians as well as the administration of libraries remains closely associated with care of *i beni culturali* (cultural heritage). Guerrini's *Biblioteconomia: guida classificata* (2007), an encyclopaedic compendium of librarianship, gives a prominent place to such matters as bibliography, cataloguing and classification. Here too, bibliology,[12] the discipline which studies the production techniques and physical description of the printed book, and by extension, of other products of the printing press (Tavoni 2007, 38), has an honourable place in librarianship and academic curricula. In Poland, Migoń (2012) placed bibliology alongside library science and information science as one of the three distinct disciplines. Great emphasis on the scholarly bibliographic description, care and restoration of the book heritage, sometimes at the cost of neglecting services to general readers, has been a characteristic of librarianship in Southern Europe. That is not to say that this scholarly emphasis is absent elsewhere, but here the emphasis seems to be more pronounced.

Information

The 20th Century saw a shift from documents to information, although both the notion and the importance of information in society go back much further (Black 1998; Black and Schiller 2014). Ideas developed by Paul Otlet at the International Institute of Bibliography in the late 19th Century foreshadowed by half a century the development of information science in the English-speaking world. In particular, Otlet developed the procedure of "divorcing a book's content from its author and his or her authorial intentions" and extracting from books "what was their new contribution to knowledge" (W. B. Rayward 1997, 191). This information was recorded on cards to build a huge, universal bibliographic index (the *Répertoire bibliographique universel*, referred to in Chapter 1). Later image and full-text files were also built up as part of this ambitious undertaking. Essentially, this meant that information was

[10] Heavy emphasis on the centrality of the book may have negative consequences in LIS education, where in some countries it has stifled the broadening of LIS curricula.

[11] In full: *La biblioteca è un'organizzazione di documenti e delle notizie che li riguardano, tale che sia possibile e facilitato il reperimento dei documenti cercati, in quanto già noti e identificati, o l'incontro con quei documenti che si presume possano risultare utili o giovevoli.* The library is an organization of documents and references regarding them, such that it is possible to facilitate the retrieval of sought documents that have already been noted and identified, or the discovery of documents that may presumably prove to be useful or beneficial.

[12] Not to be confused with bibliology as the study of Bible doctrine.

being extracted from its containers and given an independent existence. Augst (2001, 18) interpreted this as a shift from the notion of an apparently unified body of knowledge enshrined in monumental libraries, to "an alternative epistemology subsumed in the term 'information,' with its connotation of 'scattered disjunct fragments of fact.'" The notion of libraries as agencies for providing access to information spread gradually. In English-speaking countries 'special libraries' were at the forefront. It then spread to research libraries, and then ever more rapidly to libraries of all types, in parallel with the development of information science after the Second World War. By the 1970s some librarians were asserting that they were "in the information business". The last quarter of the 20th Century was a time of rapid development in information technology and in information retrieval systems, especially in North America (Wiegand 2015, 131–34). Information had come to be regarded as a strategic resource, a *sine qua non* for organizational survival and competitive societies. Emphasis was placed in library management on efficiency and performance management. Questions were raised about the utility of collections. Research showed that only a small proportion of a library collection accounted for a large proportion of use,[13] while large parts of collections were seldom if ever used (e.g. Fussler and Simon 1969; Broadus 1980). The notion of "just-in-time" information provision was advanced, challenging the older concept of adding materials to collections "just in case" they might be needed, and the notion of 'zero-growth' collections was put forward (e.g. Gore 1974; Gore 1976). This shift in thinking was prompted by many factors. These included changes in the economics of scholarly publishing and the "information explosion", and especially the advent of new information and communication technologies, which made possible detailed indexing and discovery of information on a scale and at a speed Otlet could not have imagined. At the same time, the advent of the Internet gave rise to tantalizing visions of universal access – but also of book-less, virtual libraries, relying entirely on networked digital resources. This raised questions about the future of libraries and librarians.

Since the 1980s a growing reluctance has been noted in the field of LIS to use the word 'library' and its derivatives, such as 'librarian', 'librarianship', and 'library science'. This is evident in the omission of the word 'library' when former 'library schools' are renamed, individually (e.g. Childers 1998) or collectively (as 'i-schools'), and in the subsuming of library studies under 'information science' and 'information/knowledge management'. It also occurs in the post designations of librarians (where the word 'librarian' may be replaced by 'analyst', 'coordinator', 'officer', specialist', etc.)[14] and in the names of libraries, sometimes renamed as 'information centres', 'media centres', 'resource centres', etc. This suggests that the library is an embarrassment to information scientists as well as to librarians who want to project a modern image. In the past two decades (cf. Cronin 2001), the absent word 'library' has been referred to ironically as the 'L-word'.[15] The debate about the nature and purpose of libraries is ongoing, at a pace which differs by type of library and from country to country.

The ambiguity of the contemporary position of the library is reflected in the abbreviation LIS, which can stand for "library and information science/studies", or "librarianship/library and information services", that is, when the L-word is not suppressed and subsumed under a

[13] It is no coincidence that during this quarter-century, the emphasis shifted from library and collection use studies to studies of *information* needs and uses.

[14] For a long list of library job titles, see Real Job Titles, http://www.michellemach.com/jobtitles/realjobs.html, accessed 2016-04-14. However, the overwhelming majority of the job titles listed here still include the word 'librarian'.

[15] Coincidentally "The L Word" was also the name of an American television series dealing with "non-heterosexually identified" ('lesbian') women, which aired during 2004-2009 (Kern 2012).

phrase such as "information studies". In its accreditation standards for master's programmes the American Library Association (2008), provided the following definition:

> The phrase "library and information studies" is understood to be concerned with recordable information and knowledge and the services and technologies to facilitate their management and use. Library and information studies encompasses [sic] information and knowledge creation, communication, identification, selection, acquisition and description, storage and retrieval, preservation, analysis, interpretation, evaluation, synthesis, dissemination and management.

In highly critical comments, Crowley (2008, 131) pointed out that omitting the words "library and" would make little difference, since the definition is "overwhelmingly information-oriented". It does, however, offer a discreet genuflection to knowledge.

Knowledge

Seeing the library as an agency for the transmission of information raises awkward questions. Can the library survive without collections, but as a bundle of information-related functions, many of which must be carried out in competition with other information agencies? These include content creators themselves, publishers, the press, media, Google and social media, many of which are more pervasive and economically powerful than libraries. This would make libraries vulnerable to cut-backs, closure, take-overs, or privatization of potentially profitable functions. Responses to these threats have taken various forms. A key theme is a new emphasis on knowledge and learning. An example of such as response is a statement by Crawford and Gorman (1995, 5):

> Let us state, as strongly as we can, that libraries are **not wholly or even primarily about information** [their emphasis]. They are about the preservation, dissemination, and use of recorded knowledge in whatever form it may come … so that humankind may become more knowledgeable; through knowledge reach understanding; and, as an ultimate goal, achieve wisdom.

Underlying this statement is a reference to the well-known DIKW (data – information – knowledge – wisdom) model, mostly attributed to R. L. Ackroff, but probably of older origin. It is often shown as a pyramid with data at the bottom and wisdom on top (Ma 2012, 720). In FIGURE 3.2 I add "understanding" [16] to depict a hierarchy with five levels and two feedback loops to indicate that understanding feeds back into knowledge, through theory construction, and that theory gives rise to investigation, which adds to the body of data.

[16] More sources are cited in Wikipedia, https://en.wikipedia.org/wiki/DIKW_Pyramid, accessed 2016-04-02, which mentions that Ackoff included an 'understanding' tier, but he did not present the hierarchy graphically.

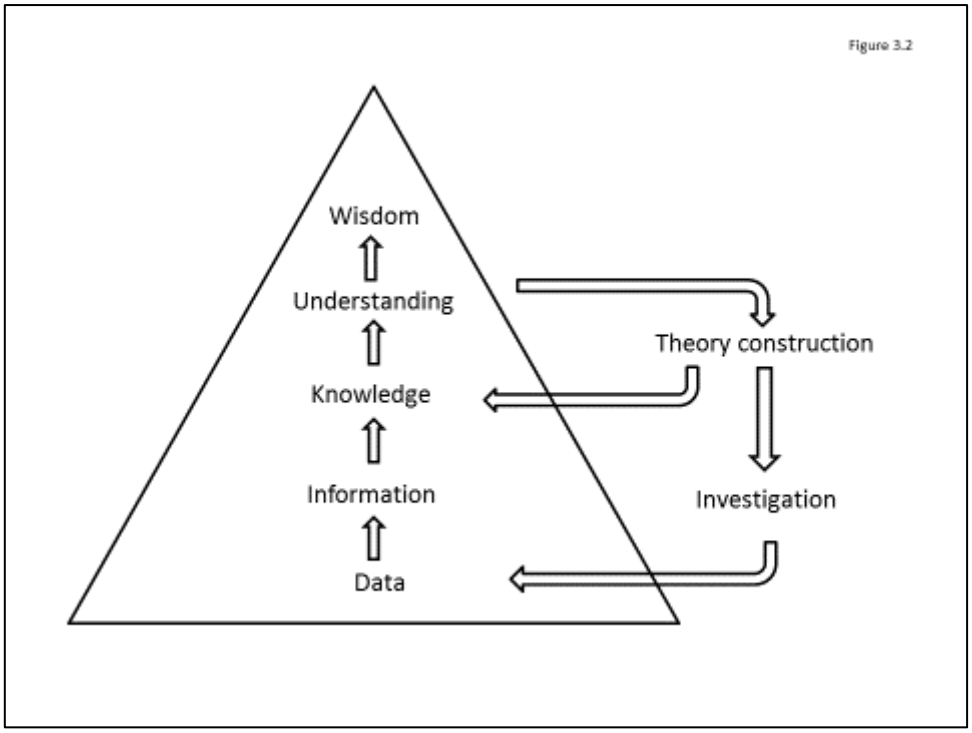

FIGURE 3.2: The DIKW MODEL expanded

The upward arrows in the diagram represent a supposed process of how data is transformed into information, information into knowledge, and so forth. It is also aspirational, suggesting that wisdom is the ultimate goal, rather than profit or success. It is reminiscent of the 19th Century aspiration of public librarians to uplift the population through knowledge, and of the ideals of the scientific universalists who wanted to harness knowledge to ensure world peace, as discussed in Chapter 1. The upward arrows also suggest a progress of increasing abstraction and complexity. At the apex of the pyramid we find wisdom, the most elusive concept in this sequence. Knowledge is more difficult to seize and measure than information, information more difficult than data.[17] The shift of emphasis in libraries from information to knowledge should not be seen in isolation. Rather, it reflects a broader societal shift, as shown in the emergence of the notion of the knowledge economy and the knowledge society.[18] The shift from the rhetoric of the information society to that of the knowledge society may reflect a realization that in light of the far-reaching societal changes in a globalizing world, the concept of 'information' is too limited in its connotations, whereas 'knowledge' implies a resource that is "is richer, more structured, more organized, more complex and more qualitative than 'information'" (Lor and Britz 2007, 389). The "Access to Knowledge" (A2K) movement also reflects this shift.

The emphasis on knowledge is manifested in various ways. One is an emphasis on learning. The increasing attention being paid to the teaching of information literacy is one

[17] To the extent that this progression conveys increasing uncertainty and incompleteness, it is tempting to see here a post-modern element, a questioning of the older metaphor of the 'building blocks' of knowledge.
[18] UNESCO prefers the plural, 'knowledge societies', a term motivated as follows by Abdul Waheed Khan, at the time UNESCO's Assistant Director-General for Communication and Information: "…*the concept of 'knowledge societies' includes a dimension of social, cultural, economical, political and institutional transformation, and a more pluralistic and developmental perspective"* (Khan 2003).

manifestation, along with the more general notion of librarians as teachers – particularly relevant in US academic libraries, where librarians aspiring to 'faculty status' have to demonstrate that they are active in teaching and research. Crowley (2008, 11) asserted that "the paradigm of *education*, redefined by twenty-first Century culture as *learning*, represents a meta-model that is much more descriptive of the work of academic, public and school librarians than information". Supporting learning is their primary purpose, not a by-product of an information purpose (Crowley 2008, 34). Even the installation of 'maker-spaces" in public libraries can be interpreted as involvement in the creation of knowledge, in this case "knowing how" rather than "knowing that", to use the distinction made by Ryle ([1949] 2000).

Another manifestation is a growing emphasis on knowledge creation. This is reflected in the wide-spread adoption of learning commons in academic libraries and in the increasing involvement of librarians in data curation. A notable exponent of the role of libraries in the creation of knowledge is R. David Lankes, who has stated that "the mission of libraries is to improve society through facilitating knowledge creation in their communities"[19] In an article published in 2007, Lankes, Silverstein and Nicholson (2007, 17) stated their belief that "Knowledge is created through conversation. Libraries are in the knowledge business. Therefore, libraries are in the conversation business." They cite a range of library activities as evidence that libraries are places "where we facilitate conversation". These include the teaching of information literacy and critical thinking, book groups, reference interviews, building library collections and preservation work of library materials – none of which appear to be significantly new or different, but which are reinterpreted in light of conversation theory. According to this perspective, "the best knowledge comes from an optimal information environment, one in which the most diverse and complete information is available to the conversant(s)" (2007, 18). These ideas were elaborated, with a great deal of theory, in Lankes's subsequent book, *The atlas of new librarianship* (Lankes 2011) and on its companion website.[20] Quite how new a departure the mission Lankes has formulated is, is open to question,[21] but it does serve to encourage librarians to rethink their roles in their communities and in relation to knowledge creation.

In this connection constructivist learning theory provides useful perspectives on knowledge. 'Psychological constructivism' is concerned with the way individuals acquire knowledge, not as passive recipients, but in an active process of constructing new knowledge on the foundation of previous learning, using what they already know (Hoover 1996). 'Social constructivism' adds the notion that this process has an important social and political dimension. Social constructivists are concerned with how "… the public bodies of knowledge are constructed – the disciplines of science, math, economics, history, and so forth, and even the common-sense and commonly-held understandings of the surrounding world that are conveyed to all new members of a sociocultural group" (Phillips 1997).[22] Summarizing from an educational technology perspective, Hsiao (2006) stated that learning involves

[19] New librarianship, http://davidlankes.org/?page_id=6352, accessed 2016-04-06.
[20] R. David Lankes: new librarianship, http://www.newlibrarianship.org/wordpress/, accessed 2016-04-06.
[21] See, for example, Steve Matthews, http://21stcenturylibrary.com/2011/08/30/book-review-r-david-lankes-the-atlas-of-new-librarianship/, accessed 2016-04-06.
[22] There is a much more radical, and controversial, form of constructivism, according to which scientific knowledge is determined primarily by sociocultural factors, so that knowledge may bear little resemblance to the physical world (cf. Lor and Britz 2010, 658). This is not intended here.

> …meaning-making through active participation in socially, culturally, historically, and politically situated contexts. A crucial element of active participation is dialog in shared experiences, through which situated collaborative activities, such as modeling, discourse and decision making, are necessary to support the negotiation and creation of meaning and understanding. (n.p.)

This lends some weight to Lankes's notion that knowledge is created through conversation, and to the idea that libraries are appropriate venues for building knowledge.

Users

The reference to social and cultural activities also reminds us that libraries exist for individuals or communities in one way or another. Libraries are about service (Gallo-León 2015). The discussion of the library concept so far has focussed on documents, information and knowledge. People have not featured explicitly in it. In the three concepts of the library people are the proverbial 'elephant in the room'. Assumptions about users underlie any discussion of the library. In considering the document-centred library, users may be conceptualized as readers, either present or sometime in the future. In the latter case the library is seen as a repository of heritage or communal memory – themselves complex and often contested concepts. In considering the information-centred library, users may be conceptualized as information-seekers, mostly in relation to tasks that are educational, scholarly, vocational, or professional in nature, or simply involve everyday coping. In considering the knowledge-centred library people may be conceptualized as creators – of art, stories, technology, scholarship, scientific understanding, etc. These are generalizations only, and the categories are not mutually exclusive. For example, heritage and memory are as much concerned with knowledge as with documents, while the HathiTrust's massive digital repository, a store of books mainly digitized by Google from libraries throughout the world, constitutes a treasure trove of raw data which lends itself ideally to collaborative knowledge creation through the intermediary of the HathiTrust Research Center (Bonn 2016) – an example of a creative, high-tech use of a corpus of documents for the creation of knowledge.

FIGURE 3.3 summarizes my exploration of the library concept thus far. In cursive I have added some likely users of document-centred, information-centred, and knowledge-centred libraries respectively. This is speculative and intended for heuristic purposes only. All the categories overlap, and it is not my intention to imply that any category is confined to a watertight compartment, but to suggest some emphases and relationships.

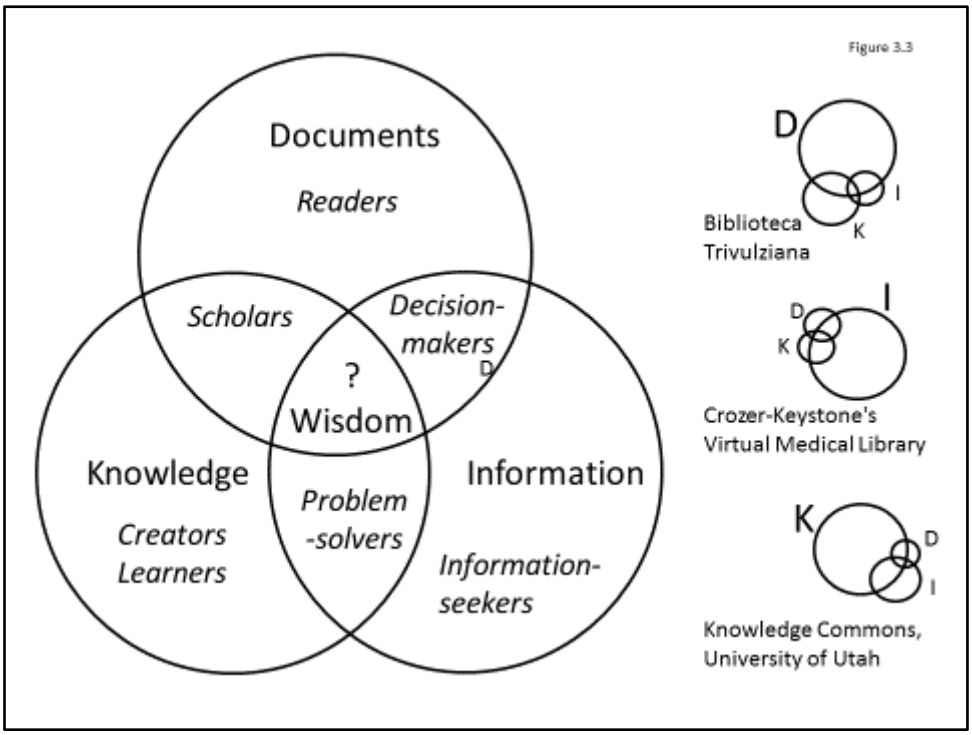

FIGURE 3.3: Concepts of the library centred on documents, information and knowledge
The examples are somewhat arbitrary: D (Documents): Biblioteca Trivulziana, Milan, http://trivulziana.milanocastello.it/ ; I (Information): Crozer-Keystone's Virtual Medical Library, http://www.crozerkeystone.org/healthcare-professionals/crozer-keystone-employees/virtual-library/; K (Knowledge): Knowledge Commons, J. Willard Marriott Library, University of Utah, http://www.lib.utah.edu/services/knowledge-commons/, all accessed 2016-04-08.

Although I have dealt with them roughly in chronological order, the concepts coexist, so that for each individual library one could draw up a profile indicating to what extent it manifests them. This is suggested by the small diagrams on the right hand side of Figure 3.3, which are intended to reflect tentatively the relevant emphases of each of three examples. At any given time, in a given country and in a given library type, particular library concepts may be dominant. This is not to be understood as implying a predetermined trajectory leading to ultimate universal convergence. The key point is that the library concept has multiple dimensions.

3.4 A universal concept?

There is a great variety of libraries, traditionally differentiated by the social institutions, types of organization and types of users they primarily serve. To arrive at a definition, or at least a delimitation of what this book will cover, we need to consider what they have in common.

A fuzzy definition

Here I consider the core mission, the functions of libraries, the object upon which the functions are exercised, and the clients for whom this is done. For the purposes of this book I consider the core *mission* of libraries to be the transmission and curation of recorded

knowledge, including its raw material of data and information. 'Transmission' is not an entirely satisfactory word, for the mission includes elements of care, the addition of some value, and facilitation or mediation of use. I therefore add the word 'curation', extending its meaning beyond its more common connotation of digital data, to refer to the organization and active management of collections for future use. [23]

Libraries pursue this mission, with various degrees of emphasis, by carrying out the *functions* of selecting, collecting, organizing, preserving, providing access to, and mediating the utilization of, data, information and knowledge, primarily recorded knowledge.

The *object* upon which the functions are carried out, is recorded knowledge. It does not have to be in material form; it can be dematerialized (as in virtual, web-based resources) provided that it has been recorded or transmitted in encoded form. Libraries do not have to own the recorded knowledge, although libraries exercise some form of (non-exclusive) control over it through the creation and manipulation of databases of surrogate records (bibliographic data, metadata), and facilitate access to it. Libraries are primarily concerned with records that were created for dissemination, in contradistinction to archives, which deal primarily with records that were created as a by-product of the business or affairs of individuals, organizations and governments. (There is overlap: many libraries have archives, and most archives have libraries.)

Finally, as to the *clients* for whom this is done, a library is a social agency, an organization of, by and for a community, which may be open or limited to a greater or lesser extent, and is not generally profit-seeking.

Thus special libraries, documentation centres, school or community media centres, resource centres, information centres, village reading rooms and suchlike can be seen as falling within the denotation of the term 'library'. To the extent that these reduce their emphasis to a limited number of the functions, restrict their scope to particular forms of recorded knowledge, or limit their services to particular communities of users, they become further removed from the "traditional" library on this spectrum, until they may no longer be recognizable as libraries, at which point I refer to these as "other information agencies" without attempting to delimit them. The boundary between libraries and other information agencies is fluid. Is a telecentre a library? Is an internet café a library? For my purposes a library is an organization or agency that has the mission, and carries out at least some of the core functions, in relation to recorded knowledge, and for a client community, as described above.

The problems we encounter in attempting to define such a basic concept as that of the library, so that it will include the Biblioteca Trivulziana, the Crozer-Keystone Virtual Medical Library, and the University of Utah's Knowledge Commons, but exclude a bookstore, JSTOR, Elsevier, Academic Search Complete, and Google, is a salutary warning that this is not a simple concept, and that we may expect complications when we use it in international and intercultural contexts.

[23] According to the Digital Curation Centre "Digital curation involves maintaining, preserving and adding value to digital research data throughout its lifecycle. The active management of research data reduces threats to their long-term research value and mitigates the risk of digital obsolescence…. curation enhances the long-term value of existing data by making it available for further high quality research", http://www.dcc.ac.uk/digital-curation/what-digital-curation, accessed 2016-04-14.

The library as an agency

I follow Shera (1976, 45) in considering the library to be an agency as distinct from an institution. Shera places institutions within the framework of culture:

> The organization of a culture is a vast tissue of reciprocal activities, differentiated into interwoven systems and subsystems, the pattern of which is determined by social *institutions* [Shera's italics].These social institutions are a cluster of social phenomena, conventions, or formalized structures whereby a society fixes the limits of, exercises control over, and imposes form upon the activities of the members of the society... An institution ... may discharge its functions through agencies, associations (voluntary or compulsory) or other appropriate groups (Shera 1976, 45)

The institutions referred to by Shera are *social* institutions, defined by contemporary sociologists as "complex social forms that reproduce themselves such as governments, the family, human languages, universities, hospitals, business corporations, and legal systems" and are to be distinguished from "less complex social forms such as conventions, rules, social norms, roles and rituals" (Miller 2011). Although the term 'institution' is commonly used to refer to individual agencies such as specific museums, libraries, or colleges, this is not the sense in which the term is used here. Shera (1976, 45) considers the library to be "one of the agencies through which the institution of education exerts its influence".[24] The relationship between institution and agency may be so close that it is difficult to distinguish between the two, but institutions establish the norms of conduct. Shera mentioned the family, law, religion and education as examples of institutions. As a comparison of the examples given by Miller and Shera shows, authorities differ in how many social institutions they recognize. Some count only a small number of overarching social institutions, such as education, whereas others count more, such as universities. In passing, I note that the library as an agency may serve more than one social institution, e.g. education, research, public administration, business and the arts. Reith (1984, 6) observed that of all the agencies of communication, "only the library serves all the institutions of society".

Universality?

The preceding paragraphs suggest that libraries can occur in many manifestations. There is a widespread assumption that the concept of the library is universal. Gupta (1973, 47) stated a belief that the "basic philosophy" of librarianship has "common elements" so that "common denominators" can be found. Thus new ideas should be "analyzed, assessed and evaluated in the total framework of professional outlook". In Chapter 2, Section 2.3, reference was made to the work of Krzys and Litton. The last of their "four laws of world librarianship" read, "Eventually all world variants of librarianship will, through standardization, converge to form a global librarianship. The success of world librarianship will be controlled by the preciseness by which the various elements are standardized" (Krzys and Litton 1983, 197). This reflects an assumption that librarianship and, by implication, libraries, are universal.

A related belief that there are universal values of librarianship is at the basis of Swank's (1963) article on "six items for export", in which he identified six important characteristics of American librarianship that should be shared internationally: the library as an organization of

[24] Shera (1976) also referred to the library as an "instrumentality" (p.46), but on pp. 49 and 51 he referred to it as a "public institution".

books, the evolution of a library profession, the attitude of service, the function of the library as an educational institution, the advancement of intellectual freedom, and the idea of "organized information as a public resource and responsibility" (p.716). More recently Gorman (2009, 150) stated that "[l]ibrary studies are informed by a set of core universal values – intellectual freedom, service to individuals and society, stewardship of the human record, universal access, etc." These bear a strong resemblance to the values set out in his book, *Our enduring values: librarianship in the 21st century* (M. Gorman 2000), which followed an earlier attempt (Crawford and Gorman 1995, 7–12) to update the "five laws of library science" of Ranganathan (1931). However, these "universal values" are not shared universally. Commenting on a statement on library values in which Gorman (2003, 134) expressed an impassioned belief in the "common good" and in values that "comfort the powerless and defend minorities in a world where the profit motive reigns virtually unchallenged", Bertrand (2010, 69) commented from a French perspective:

> If the emphasis of this discourse appears to us to be strange, exotic, if not incomprehensible, it is undoubtedly because, beyond the cultural differences (the naïve and calm patriotism of the Americans and their pride), public libraries in France are not at all seen as playing a comparable role… a possible role as counterweights to "dominant social and political thinking" is neither recognized nor desired. In France libraries are not seen as a means by which citizens can freely form their own opinions.

If such a gulf separates thinking about the roles of libraries in two modern Western democracies, we should not be surprised to find even greater differences in the developing world.

The English word 'library', derived from the Latin *liber*, a book, is rendered in French (where a *librairie* is a bookshop), by *bibliothèque*, in German by *Bibliothek*, and by other Romance and Germanic languages by cognate words derived from the Greek *βιβλίον, biblion*, also meaning a book and θήκη (*theke*, case or place of deposit). The denotation of the word for 'library' does not have the same extension in all languages. In Germany, two movements, both controversial and ultimately unsuccessful, occurred in the 19th Century to introduce American-style public libraries for the general population. In the first public library movement in the mid-1800s, the term used for these libraries was *Volksbüchereien* (people's libraries, the word *Bücherei* being a less learned word than *Bibliothek*); in the second, during the latter half of that century, the term *Bücherhalle (book room or book hall)* was used (Chaplan 1971). Both of these terms were derived from the German *Buch* (book), which is of Germanic origin, in contrast with the more learned *Bibliothek*. In the Netherlands, the earliest form of public library was called a *leeszaal* (reading room). It was a space for reading only and was run on confessional and social lines (catholic, protestant and secular).[25] When lending was introduced at the beginning of the 20th Century, the more learned term *bibliotheek* came into use, but the old term retained the connotation of a popular or people's library and took a long time to disappear. In both Germany and the Netherlands, distinctions between social classes, which have since become less marked, lay at the root of the differences in terminology. A century later, as part of a movement to modernize public libraries, the term *médiathèque* was introduced in France as the designation of a new kind of public library with a wide popular appeal, the name serving to distinguish it from the old-style public libraries that had gone before (Bertrand 2013, 110–11). In Spanish-speaking countries we find the term *hemeroteca*, from the Greek Ἡμέρα (*hemera*, day, short period*)*

[25] Geschiedenis van openbare bibliotheken in Nederland, http://www.isgeschiedenis.nl/nieuws/geschiedenis-van-openbare-bibliotheken-nederland/, accessed 2016-04-14.

and θήκη (*theke*), for collections of serials ranging from daily newspapers to learned periodicals, [26] and in some cases, as in the National Library and the National Periodicals Library of Mexico, these have been formally separate institutions (Mattes 1998, 19).

There is even greater diversity when it comes to the naming of the disciplines. Library science is translated as *bibliothéconomie* in French and *biblioteconomia* in Italian. The term 'library economy' was used in English before the advent of 'library science', for example in the name of Melvil Dewey's pioneering library school, the School of Library Economy at Columbia College (1887-1888), and in James Duff Brown's classic manual of librarianship, the *Manual of library economy* (Brown 1903). The word 'economy' comes from the Greek οἰκονόμος (household management)[27] and suggests a field of frugal, judicious management, as also in 'home economics'. In Germany, where there are no qualms about labelling fields of study in the arts or humanities as *Wissenschaft*, Library Science is *Bibliothekswissenschaft* (literally 'library science'). The Anglo-American combination Library and Information Science is by no means universal. In Spain Library and Information Science is traditionally called *Ciencias de la Documentación* (documentation sciences), or more recently, *Información y Documentación* (information and documentation) (Bereijo 2013, n.p.), but Martinez-Arrelano (2013, n.p.) cited one Spanish university where the term *Biblioteconomía* is used. In Ibero-America, where the US example (LIS) has been influential, the latter term is making way for *Bibliotecologia.* The Greek word -λογία (*-logía*, study of), found in the names of many sciences, emphasizes the scientific nature of the field, bringing Ibero-American terminology closer to that of the USA.

Examples could be multiplied, but from the above it is clear that libraries are named and understood differently in different languages and regions, and that what we have known in the Anglo-American tradition as LIS is carved up differently in different national and linguistic traditions. Given this diversity, are there conceptual frameworks that can be useful in studying and comparing LIS internationally? In considering libraries and information services in international contexts, LIS can be conceptualized using various conceptual frameworks. In the sections that follow, a number of conceptual frameworks and models that may be useful in international and comparative studies in LIS are outlined.

3.5 The conduit metaphor: transmission as a conceptual framework

In 1948 two publications appeared that contributed immensely to laying the foundation of both communication science and the theory of information systems. In that year Claude Shannon published an article setting out a mathematical theory concerning the transmission of signals in telecommunication systems such as the telephone and the telegraph (Shannon 1948). This was reprinted in the following year in a book (Shannon and Weaver 1949). In his contribution to the book, Weaver elaborated on Shannon's theory to put forward a general theory of communication. The resulting model is known as the Shannon-Weaver Model. It is depicted in FIGURE 3.4.

[26] "Hemeroteca", Wikipedia, https://es.wikipedia.org/wiki/Hemeroteca, accessed 2016-04-14.
[27] "Economy", Wikipedia, https://en.wikipedia.org/wiki/Economy, accessed 2016-04-14.

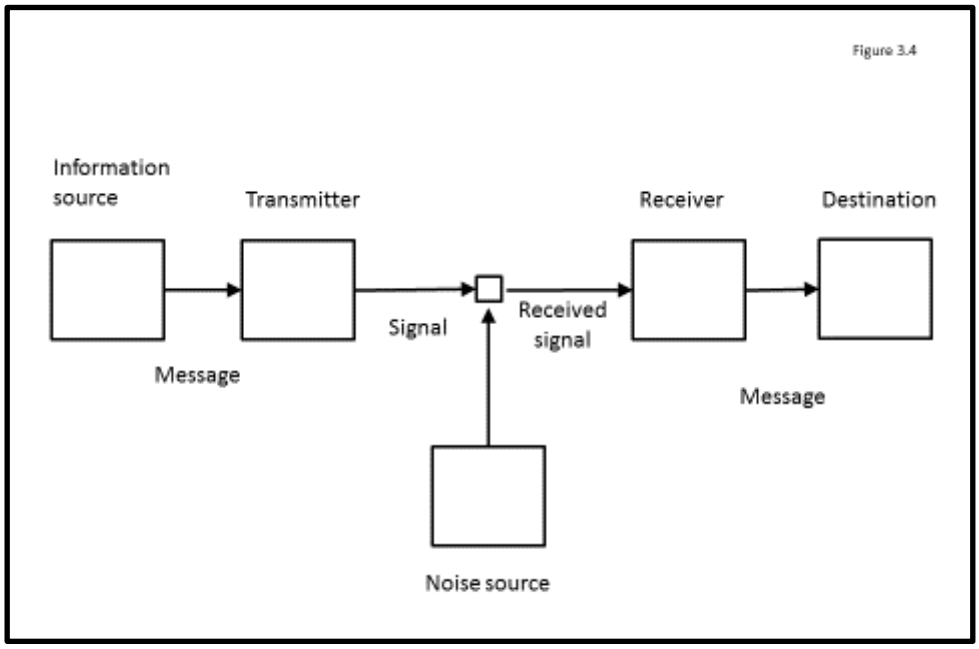

FIGURE 3.4: Symbolic representation of a communication system, after Shannon & Weaver (1949, 98)

This model has been criticized by later communication scientists. Chandler (2014, n.p.) described it as a "dangerously misleading misrepresentation of the nature of human communication", pointing out that it embodies a conduit metaphor in which communication is one-way and in which recipients are passive, and both context and meaning are ignored. Nevertheless it has been highly influential, and established the conduit metaphor as a way of looking at communication and information. It is frequently cited in connection with the definition of information (Ma 2012). Greer, Grover and Fowler (2007, chap. 5) based their "information transfer model" on Shannon and Weaver's communication model. As will be shown below, it is also reflected in models concerned with the role of libraries in communication.

The second major contribution published in 1948 was a book chapter by Harold Lasswell (1948). Lasswell, who belonged to the Chicago school of sociology, was mainly concerned with mass media and propaganda, and his model deals with one-way communication only. In his chapter, entitled "The structure and function of communication in society", Lasswell discussed the act of communication in relation to "the entire social process" (1948, 38), but his influence is particularly due to the five questions he formulated as "a convenient way to describe the act of communication" (1948, 37):

> Who
> Says What
> In Which Channel
> To Whom
> With What effect?

In FIGURE 3.5 this is pictured in a diagram which is reminiscent of the Shannon-Weaver Model shown in Figure 3.4.

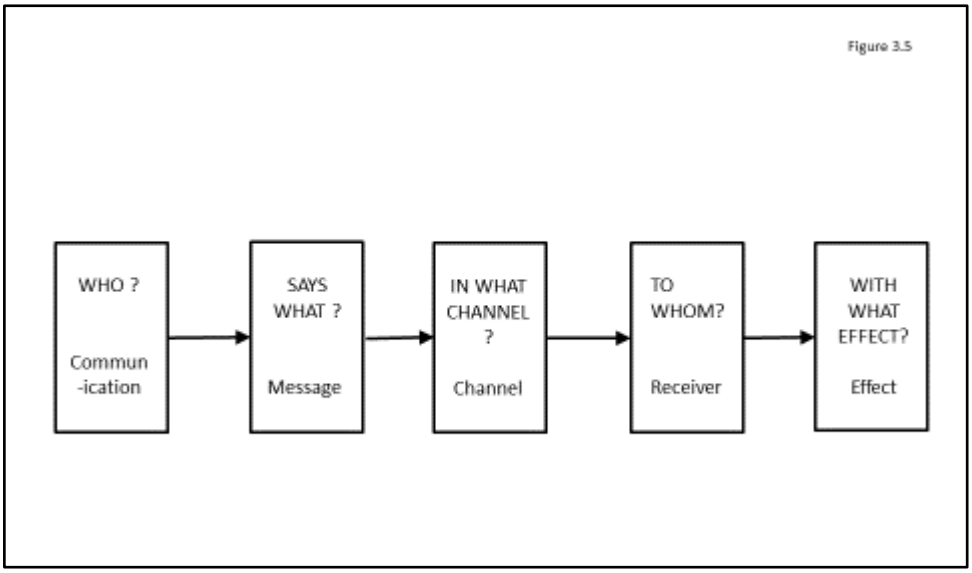

FIGURE 3.5: The Lasswell Model

This model was subsequently expanded by other theorists. Braddock (1958) added the questions "for what purpose" and "under what circumstances" to the Lasswell Formula., but since it was primarily concerned with persuasive communication, in which the communicator intends to influence the receiver (McQuail and Windahl 1993, 14–15), it remained essentially linear. The Shannon-Weaver Model and the Lasswell Formula are considered to be "transmission models" because they emphasise the transmission of messages or signals without much concern about meaning, context or the interaction between senders and receivers.[28] In such models, information is pictured as flowing through pipes or conduits. In LIS this lends itself to the modelling of such matters as scholarly communication.

In a chapter on communicating specialist information, B.C. Vickery (1973) used the Lasswell Formula, deriving from it a formula for the generation and use of scientific and technical information, depicted in FIGURE 3.7, which took into account the overlapping roles of individuals in the field who may act as both sources and recipients.

[28] Cultsock CCMS-Infobase: http://www.cultsock.ndirect.co.uk/MUHome/cshtml/introductory/trancrit.html, accessed 2006-08-31.

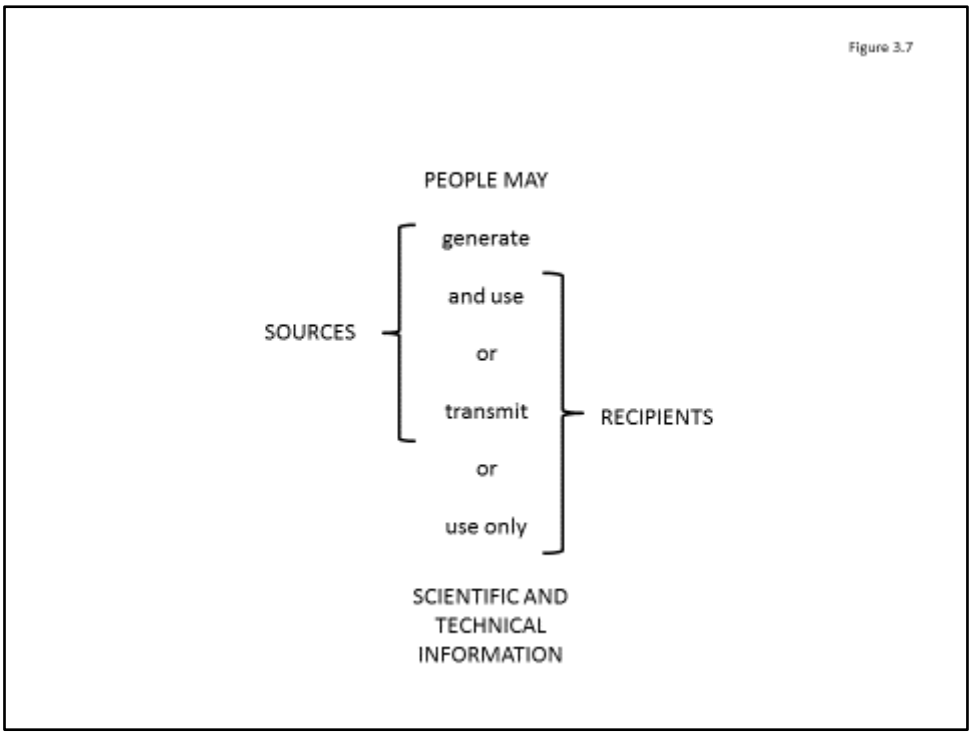

FIGURE 3.7: Vickery's formula for the transmission of scientific and technical information; adapted from Vickery (Vickery 1973, 14).

Vickery also reproduced and created a number of flow diagrams to illustrate "documentary information flow". He introduced the notion of "mediated" transmission to account for cases where a message is not transmitted orally from a speaker to a listener, but by means of a written document such as a letter, and showed that the production of multiple copies to transmit the same message to multiple recipients lengthens the path between the source and the recipient. Documentary information transfer is "indirect, multi-stage, and …replicated", where "replicated" refers to dissemination of the same scientific information in more than one publication. Thus scientific information flows through a system composed of many parts, one of which is a "store", which may be a library or information centre (Vickery 1973, 10–11).

Before turning to the system concept I note that the "longer path" to which Vickery referred implies that each stage in mediated information flow has a delay built into it. This is also the case of libraries and other information agencies. These can be seen as functioning as a reservoir where information or content is collected or concentrated, and held, thereby interposing a delay in the flow. Here the Lasswell formula, which can be expanded more readily to deal with meaning and content, seems more appropriate than the Shannon and Weaver model. In FIGURE 3.6, in which LIS terminology is used, I expand Lasswell's "Channel" to show libraries and other information agencies functioning as reservoirs interrupting the flow of information and offering multiple conduits.

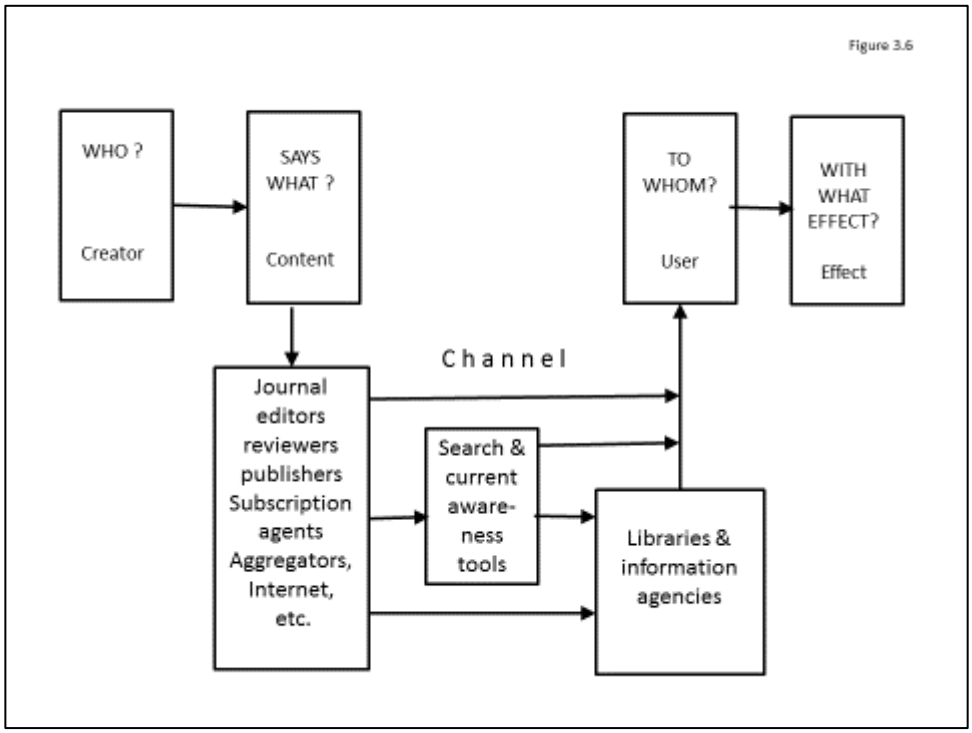

FIGURE 3.6: Expansion of Lasswell Formula to depict scholarly communication

Note that the flow depicted by each arrow can be interrupted by what Shannon and Weaver called 'noise': various disturbances impeding the flow and distorting messages, and that there are 'filters'[29] in place at the various stages. For example, not all content that is produced is accepted for publication by journal editors, not all journals are disseminated by subscription agents or included in the 'big deals' of content aggregators, not all journal are indexed and abstracted, and libraries acquire only a fraction of what is published. It is also worth noting that, while the role of libraries in scholarly (and more general) communication appears to be more or less universal, it may not be regarded as equally significant in all periods and cultures.

It is interesting that in the second edition of his well-known foundations text, Richard Rubin (2004, 2–4) placed libraries in the context of information flows in society (p.2), as part of the "information infrastructure", and situated them in the "information cycle", comprising creators, products, distributors, disseminators and users.[30] The UNISIST model of scientific communication, developed by UNESCO and the International Council of Scientific Unions (1971, 26), subsequently updated by Søndergaard, Andersen and Hjørland (2003) is an ambitious example, with elements of a systems approach. The conduit metaphor also underlies discussions of international "information flow", for example, the flow of information from the developed countries (the 'North') to the developing countries (the 'South') and vice-versa (South-North). These flows have been discussed particularly in

[29] Here I borrow the term 'filter' from the management literature on interpersonal communication, e.g. Montana and Chernov (2008, 330–31), but use it in a different sense.

[30] In the 4th edition, this chapter was renamed "The knowledge infrastructure". Here the knowledge infrastructure is viewed as "a process by which knowledge and information are created, disseminated, and used in a society", and which involves five "actors". These are again creators, products, distributors, disseminators and users. In this case revision has not enhanced clarity.

ethical and political-economic perspectives (e.g. Altbach 1987; Britz and Lor 2003; Lor and Britz 2004), dealing particularly with problems and barriers, which in terms of the conduit model can be seen as examples of filters.

Deconstructing the conduit metaphor, with its implications of content flowing passively through conduits or channels – think of plumbing or irrigation – brings to the surface darker images of disorderly, even threatening, information flows, as in the information 'flood' or 'deluge' – later supplanted by an even more violent metaphor, that of the information explosion.

3.6 Systems frameworks

It is a small step from transmission or information flow models to systems models. Although systems theory has had mixed fortunes, systems thinking is pervasive in the modern world, and very much so in librarianship and information work.

General Systems Theory

The notion of systems goes back to ancient Greek philosophy, and systemic thinking has been fundamental in social theory since the 19th Century. Systems theory was first explicitly formulated by the French philosopher Baron Thiry d'Holbach in the 1770s. It was reinvented in the early 20th Century by a group which included the influential sociologists Talcott Parsons and Robert Merton. In the 1930s Ludwig von Bertalanffy, a Hungarian biologist and philosopher, also reinvented it independently. He advocated an "organismic" conception of biology as an alternative to the more "mechanistic" causal paradigm of classical science (Pickel 2011, 240–41). In the 1950s he extended the scope of his concept beyond biology and set in motion the general systems theory (GST) movement (Bunge 2014). The capstone of his work, his book *General systems theory*, appeared in 1968 (Bertalanffy 1968). The origins and development of systems thinking are complex. At the risk of over-simplification, two major strands can be distinguished: systems philosophy; and systems analysis and development techniques of various kinds.

In developing General Systems Theory, Von Bertalanffy's point of departure was to apply the open systems of Biology to systems in all other disciplines. While the systems studied by physical scientists were seen to be closed in the sense that they do not interact with their environment,[31] in Biology this assumption cannot hold. Organisms die if they are cut off from their environment. They are open systems, which interact with their environment through inputs and outputs which pass through the system boundaries. In many cases it is not known how the system produces the outputs. In such a case the system is considered as a "black box". But when a system is analysed, it is found to be a set of interacting components. Through the interaction of the components the system produces outputs which the set of components could not produce if they did not interact. A system is greater than the sum of its parts. The behaviour of a system cannot be explained simply by examining each of its components in isolation.

If examined these components turn out to be systems too, in this case, subsystems of the system. The system itself is a subsystem of a larger system, a supersystem. Systems are

[31] By now, of course, we know that this generalization is no longer true.

structured in hierarchies. Thus there are different levels of systems. Given that there are also many structural and functional similarities among systems from different disciplines, the question arose whether there exist universal principles of organization which apply in all the sciences (Heylighen 1998). In light of this the term General Systems Theory was used to describe what Kenneth Boulding (1956) called "a level of theoretical model-building which lies somewhere between the highly generalized constructions of pure mathematics and the specific theories of the specialized disciplines" (n.p.). Its protagonists sought to develop "a body of systematic theoretical constructs which will discuss the general relationships of the physical world". Boulding (1956) suggested a hierarchy of nine levels, starting with static structures which he called frameworks, for example the pattern of atoms in a molecular formula. The second level he called "clockworks", which includes both simple and more complex machines; then followed the levels of the "thermostat", the "cell" (the most basic open systems), the "plant", the "animal, "human", "social", and finally the "transcendental" systems. Of greatest interest to us is Boulding's eighth level, that of social organizations. It is, he thought, difficult to separate the individual human as a system from the social systems in which humans live. The behaviour of humans who are not part of society in some form, is practically unknown. At this level of systems, the unit is

> …not perhaps the person – the individual human as such – but the "role" – that part of the person which is concerned with the organization or situation in question, and it is tempting to define social organizations, or almost any social system, as a set of roles tied together with channels of communication… At this level we must concern ourselves with the content and meaning of messages, the nature and dimensions of value systems, the transcription of images into a historical record, the subtle symbolizations of art, music and poetry, and the complex gamut of human emotion. The empirical universe here is human life and society in all its complexity and richness (1956, n.p.).

This is a very broad-brush account. Boulding thought that beyond the fourth level, only very rudimentary theoretical systems had been developed. However, at the human and societal levels the researchers, as humans, have the benefit of inside knowledge. Although we cannot design a machine to produce poetry, we can write it. That General Systems Theory lacked concrete content should not surprise us. General Systems Theory aimed to discover "universal principles of organization" that apply to systems at all levels, ignoring the concrete components (Heylighen 1998, n.p.). The systems thinkers had to recognize that a "general theory of everything" to replace all the special theories of the various disciplines was not feasible: it would be so general as to be almost without content.

Systems analysis

By the time General Systems Theory appeared, various systems engineering and operations research techniques were already in use to deal with "hard" system problems. They had been found to be inadequate to deal with the "complex messy strategic problems" faced by the military in the Second World War. These prescriptive methods, better suited to simpler, more readily definable systems, continued to be used in engineering and business. Later soft systems analysis was introduced to deal with less structured problems (Reis Graeml et al. 2004).

One of the prescriptive methods, systems analysis, is well known to librarians and information scientists. Systems analysis has been defined as "an explicit formal inquiry carried out to help someone (referred to as the decision maker) identify a better course of

action and make a better decision than he might otherwise have made".[32] As a formal method it was developed in the 1950s by the RAND Corporation as part of a programme to create decision-making tools for US defence purposes. The RAND Corporation itself was an outcome of the role of scientists and engineers in the Second World War. Systems analysis was successfully applied in the development of weapons systems, and national security strategy, but its application in the civilian sphere of social policy analysis and scientific policy making from the 1960s onward was less successful. It had been created in an environment of top-down decision making, and its quantitative and technocratic approach was not a good match for complex social problems (Lal 2001). However, systems analysis was widely used in business management, where GST was promoted by Boulding (1956) among others. In their influential management text Koontz and Weihrich (1990, 16–18, first published in 1974) described "management theory and science as a system", listing "applied systems theory", "sociotechnical systems", and "cooperative social systems" as fields of "systems theory" upon which operational-management theory was based.

During the 1950s and 1960s, the poor outcomes of large software development projects led to the growth of software engineering methodologies, including Systems Analysis and Design (SAD), also referred to as the Systems Development Life Cycle (SDLC) (Ramakrishnan 2012). Systems analysis and related technologies were widely used in library automation and related tasks in the 1950s and 1960s. Indeed, systems concepts were soon adopted in librarianship, as can be seen in the literature of library management and in librarianship and information services more generally (e.g. Vickery 1973; Buckland 1988), where the word 'system' and implicit thinking in terms of systems became and remain ubiquitous. An example of the use of systems concepts in librarianship is found in the venerable library management text, *Lyle's administration of the college library* (Coughlin, Gertzog, and Lyle 1997), where the following generalizations are made about systems:

> 1. Systems are composed of interrelated parts and elements;
> 2. They are not merely the sum of parts, but a totality and should be viewed holistically;
> 3. Systems are relatively open or closed based on the extent to which they exchange information, energy or material with their environments;
> 4. They are more or less bounded and separated from their environments;
> 5. Systems are characterized by inputs and throughputs, as well as by outputs, which in turn provide feedback and appear as future inputs;
> 6. They are composed of subsystems and are part of suprasystems;
> 7. Systems generally achieve something. In other words they are organized for a particular purpose.[33]

In comparative librarianship, Foskett (1977; 1979) adopted an explicit systems approach. Typical examples in our field are the concept of Universal Availability of Publications (Line 1979), UNESCO's NATIS and UNISIST models (Parker 1985, 219–322), models for surveying national information infrastructure (Parker 1983), and more recently the development of the Functional Requirements of Bibliographic Records (FRBR) and related models (Bianchini and Guerrini 2009).

In FIGURE 3.8 a library is depicted as a system, using the vocabulary of library systems analysis of the 1970s and 1980s.

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[32] "Systems analysis", PRINCIPIA CYBERNETICA WEB; http://pespmc1.vub.ac.be/asc/system_analy.html, accessed 2016-04-23.

[33] This summary was based on Kast and Rosenzweig (1985, 132)

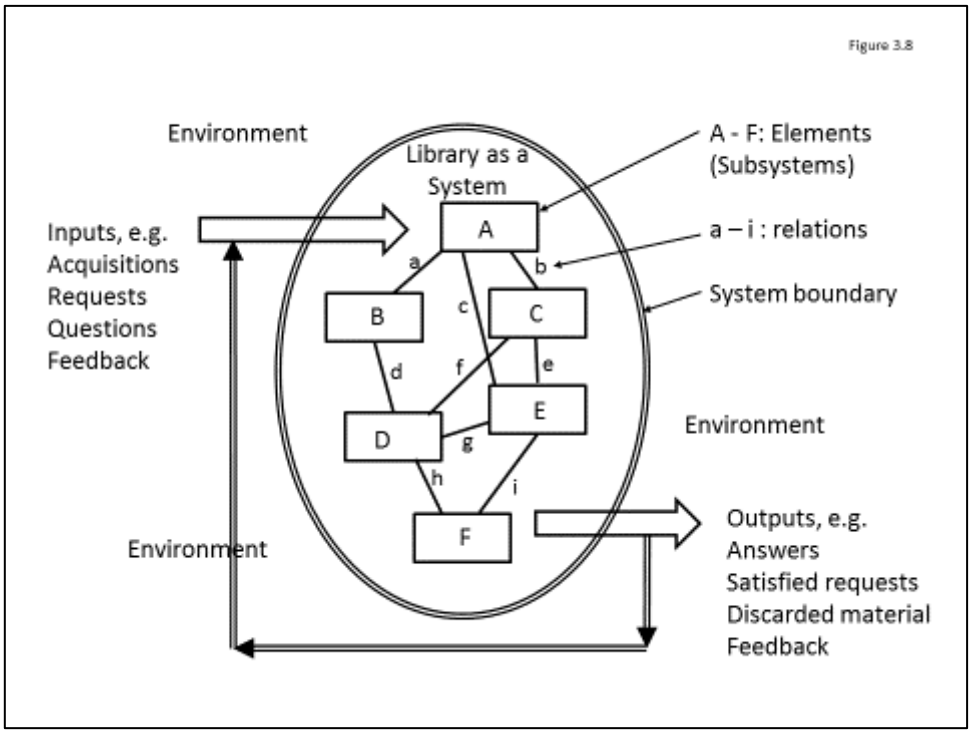

FIGURE 3.8: A library as a system

Systemism

Over time, the notion of a system evolved, but philosophically, General Systems Theory went into decline after the 1960s. In the social sciences it was (perhaps unfairly) tarred with the brush of positivism, being associated with the discredited notion that both the natural and the social world can be studied with the same methods and techniques (cf. Mouton 1996, 47). Systems philosophy was also affected by the backlash against behaviourism and modernism that accompanied the cultural revolution of the late 1960s. Politically systems theory had been associated with top-down social engineering, while the rise of neoliberalism gave rise to new systems doctrines which marginalised systems philosophy. This is not to say that systems concepts were abandoned. Systems concepts remain in many areas of the social sciences, even where the term 'system' may be avoided. Various manifestations of systems theory, such as game theory and decision theory, remained, and new theories such as complexity theory, chaos theory and autopoiesis have emerged, in which a number of new principles and have been introduced. Towards the end of the 20th Century a new philosophy of *systemism* emerged which has important ontological, epistemological and methodological implications (Pickel 2011, 242–45). As conceptualized by its foremost exponent, Mario Bunge (2000; 2004; 2014), systemism positions itself as a more fruitful middle way between holism and methodological individualism (also sometimes referred to as atomism) in the social sciences.[34] Holism emphasizes the role of structures and tends to overlook the actions of individuals. Holistic notions such as "collective memory" and "national spirit" are today suspect. In contrast, individualism emphasizes the role of individual actors as effective agents

[34] The implications of these three positions for political science theory and political thought are discussed by Choi (2011).

whose agency cannot be explained in terms of social structures alone. However, Bunge asserts that consequently

> ... individualists miss one of the most important and intriguing of all kinds of events in society and nature: the emergence of novelty or, more precisely, the emergence of things with systemic properties, that is, properties that their components or their precursors lack. By the same token, they fail to realize the existence of systemic social problems, such as those of poverty and underdevelopment, that cannot be solved by doing one thing at a time, because they affect several systems at once—the biological, economic, cultural, and political ones (Bunge 2000, 148).

Systemism goes beyond holism in analysing wholes into their constituents. It is

> …a systemic approach" rather than a theory. It is not intended to replace other theories: "The systemic approach … is not a theory to replace other theories. It is, instead, a viewpoint or strategy for designing research projects whose aim is to discover some of the features of systems of a particular kind (Bunge 2004, 191).

A corollary of this position is that systemism is not a continuation of General Systems Theory, and in fact, Bunge (2014, 11) claimed that "there is no such thing", He sees systemism as an ontological, epistemological and methodological approach that recognizes "the study of reality … must be a system of different but inter-related disciplines" (p.10), and which encourages their convergence or fusion.

According to Bunge (2000, 149), systems are ubiquitous. This calls for a "systemic worldview", for which he formulated the following postulates:

1. Everything, whether concrete or abstract, is a system or an actual or potential component of a system;
2. systems have systemic (emergent) features that their components lack, whence
3. all problems should be approached in a systemic rather than in a sectoral fashion;
4. all ideas should be put together into systems (theories); and
5. the testing of anything, whether idea or artifact, assumes the validity of other items, which are taken as benchmarks, at least for the time being.

These postulates imply that every entity, of whatever kind, must be seen, not in isolation, but as a component of a larger system. Bunge (2004, 188) defined a system as follows:

> …a system is a complex object whose parts or components are held together by bonds of some kind. These bonds are logical in the case of a conceptual system, such as a theory; and they are material in the case of a concrete system, such as an atom, cell, immune system, family, or hospital. The collection of all such relations among a system's constituents is its structure (or organization, or architecture).

According to Bunge (2004, 188–89) a concrete system can be described in terms of four characteristics: its *composition* (its set of parts or components), *environment* (the collection of environmental items that act on it), *structure* (the set of bonds that hold the components together), and *mechanism* (a set of characteristic processes). Conceptual systems lack mechanisms (p.191). A process is a sequence of states (or a string of events). Some of the processes alter the overall state of the system, while others maintain it. This is a significant point for comparative studies. It implies that systems can be studied over time – we are not limited to synchronic descriptions.

Complexity

Living systems are open and more complex than inorganic systems. This is especially true of human societies. Groups of humans have characteristics that are not found in individual humans and they behave in ways that cannot be inferred from the behaviour of individuals. Complex systems are studied in the field of Complexity Theory, an offshoot of systems thinking (Chan 2001). Complex systems have many components at different levels, and at different scales, from simple and numerous, to highly complex and sparse. They are organized hierarchically, as is illustrated by the sequence of, for example, individuals, families, neighbourhoods, cities, and countries. At the higher levels the systems are more complex and they have emergent properties and characteristics. The term 'emergence' is used to refer to the characteristic that complex systems have properties that are not found in their constituent components, and behave in ways in which these components individually do not (Ferreira 2001). This is the well-known truism that the whole is greater than the sum of its parts. However, Morin (2014, 15) has pointed out that a system is also less than the sum of its parts because the system imposes constraints on the behaviour of its parts, as can be seen in social systems: "as individuals we have many qualities and potentials that present us with many possibilities for behavior which we cannot exhibit because of constraints, due to socially determined laws or inhibitions due to group norms".

Social systems do not obey the Second Law of Thermodynamics (which implies that passage of time inevitably leads to disorder and disintegration). Of course, organizations of all kinds are known to decline and fall, but at the same time processes of self-repair and self-organization are at work which produce systems of greater complexity: "The central feature of a living system is the self-organizational capacity to produce and reproduce itself" (Morin 2014, 16). This ability is known as 'autopoiesis'. Like all living systems, social systems are dependent on inputs from their environment, but they also enjoy a degree of autonomy that is the result of recursive processes, which are processes in which the product produced by a process is necessary for sustaining it. Morin (p.17) applied this to social systems:

> A society is the product of interactions between individuals, but the society has emergent properties that are retroactive on the individuals, and hence shape what we become as human beings, so we are both the product and producer of the society. This notion of recursivity is important for all processes of self-production, and significant for understanding complexity at the human level.

Library systems

Highly complex systems, such as a school or the scientific community, have several concurrent mechanisms. To illustrate this point I adapt the examples Bunge (2004, 192–93) gives of social systems. Applying these to a library, we can think of the range of mechanisms in action simultaneously in a library: the building and maintenance of a collection, its use, resource discovery, information retrieval, security, staff evaluation, quality control, financial control, management, etc.). Some mechanisms are common to many kinds of systems, whereas others are essential to the system, "the specific function of a system—that is, the process that only it and its kind can undergo" (p.193). Bunge warns against confusing functions with mechanisms. A function can be carried out by various mechanisms. (A library

example: the promotion of recreational reading is a function carried out by various mechanisms in society, such as book clubs, bookshops, schools, and social media.) Furthermore, unlike mechanisms, functions are ambivalent, and mechanisms can serve dysfunctions as well as functions (p.194). (In a library, the mechanism used to ensure the security of the collection may be dysfunctional to the extent that it inhibits access and use.) Mechanisms can be grouped into categories, but Bunge insists that "all mechanisms are stuff-dependent and system-specific" (p.195). Mechanism should not be confused with scientific laws (p.196). In LIS, "Bradford's Law" essentially states that the distribution of journal literature in a given field is skewed: a relatively small number of journals account for a large proportion of the articles in that field, and other articles are scattered through a much larger number of journals (Rubin 2016, 371–72) This does not by itself describe the mechanisms at work, which might include citation practices, the use of literature from outside the field, peer review, etc., but only their outcome.

In International and Comparative Librarianship the idea that systems are composed of subsystems and themselves form part of super-systems, can be applied to libraries and related information agencies. Thus, an individual library can be part of a larger library system, such as that of a city, university, state or country. These are not necessarily systems in a legal or administrative sense. A national library system, might consist of components such as libraries and information agencies of various types, establishments for the education and training of library staff, research units, professional organizations, resource-sharing networks and consortia, a national library and information commission or board, a government agency or department supervising libraries, legislation, professional communication media, specialist library suppliers, and so forth. As discussed in Chapter 2, social scientists have some reservations about using nations or countries as the default 'containers' for studying social phenomena. However, given that most libraries are funded by governments or government-funded agencies, and are often regulated by them, libraries within the same political jurisdiction mostly depend on the same infrastructure and have common characteristics. This is true of jurisdictions at the various levels. Here, for purposes of discussion, national library systems are taken as the point of departure. Some components of a hypothetical national system are depicted in FIGURE 3.9. The dotted and dashed lines within the system boundary suggest the structure of the system (the set of bonds that hold the components together, for example by means of legal and contractual relationships), and mechanisms, such as training of staff, professional communication, and coordination through which the components interact.

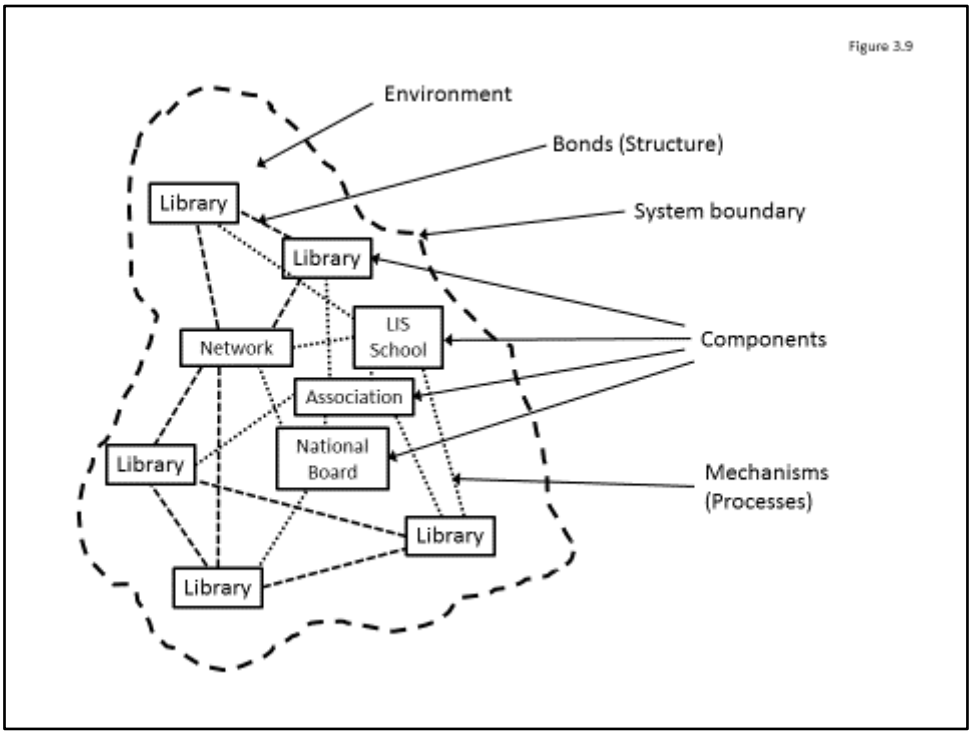

FIGURE 3.9: The library system of a country

It may be objected that in the library situation of many countries the orderliness and efficiency suggested by the word 'system' is not attained in reality. The LIS school may not be producing graduates at the levels and with the skills required by the various types of libraries. The school may be at loggerheads with the library association, or there may be several library associations, which communicate poorly and try to pull the system in different directions. The national network may be dominated by a small clique of major libraries, leaving other libraries poorly served. As a result of such dysfunction, the library systems of most countries function less than optimally. Often this is due to history. The use of the word 'system' does not necessarily imply deliberately created structures. A system takes shape and gets structured as a result of historical evolution, often more a question of drift, random events, contextual factors, struggle and competition between entities and individuals with differing ideas, than a design. As we have seen, complex social systems are characterized by self-repair and self-organization. This implies that the components of a national library system can develop and adapt in response to changes in the environment. However, not all components can adapt at the same rate. At any point in time, considered in a synchronic perspective, parts of the system will be dysfunctional. This can only be understood if the development of the system is considered over time – a diachronic perspective. In International and Comparative Librarianship both perspectives are needed.

In open systems, a given component or subsystem may be part of more than one larger system. For example, the LIS School is part of the country's library system, but also of its higher education system, which in turn is part of the country's education system. Individual

libraries may be part of city, provincial, state, school, government, university or corporate systems. Research and corporate libraries are part of the national system of research, development and innovation, and so forth. Similarly, the library system of a country, or subsets of it, forms part of, and interacts with, other national systems, such as those already mentioned (education and research, development and innovation), the book industries, heritage, government, information and media. This is depicted in FIGURE 3.10.

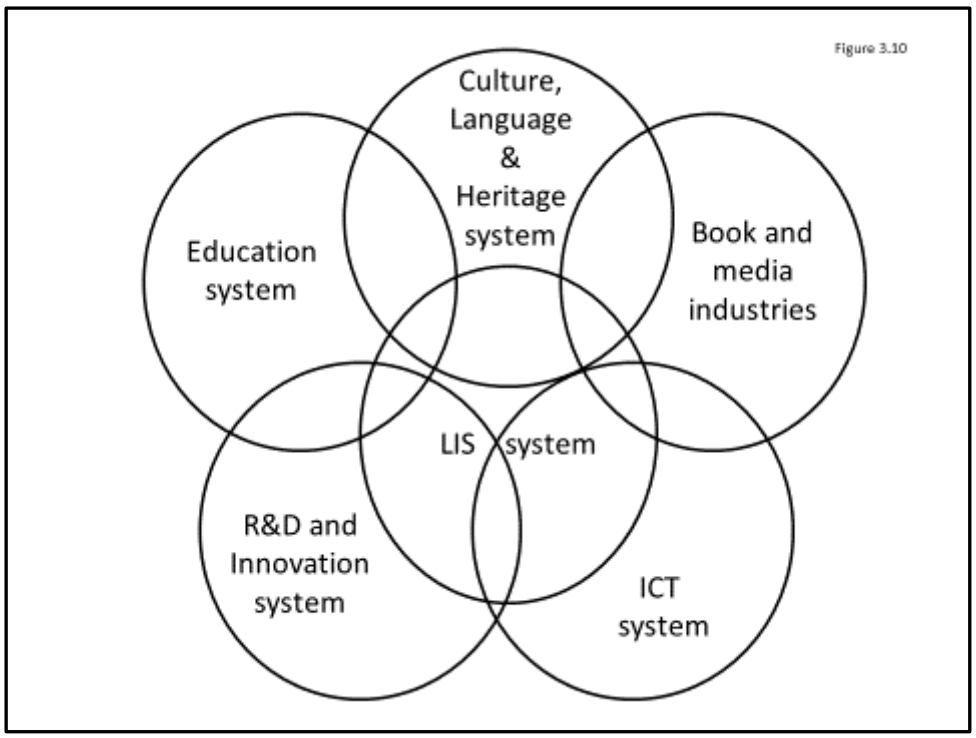

FIGURE 3.10: Interaction and overlap of LIS system with other national systems

The implication is that the libraries and library system of a country should not be studied in isolation from the major systems in which it is imbricated. This also applies to international library activities. For example, donations of books to poorly-stocked libraries in developing countries could have negative effects on the recipient country's book industry (by reducing demand for locally produced publications), its language and culture (through dominance of European languages and Western ideas), and its education system (through the introduction of materials that are not aligned to local curricula). These issues will be dealt with at length in Part III. Here it remains to point out the implications of the systems approach for comparative studies and studies of international relations in LIS.

The international dimension

International LIS relations may be conducted at the national level, country-to-country, at the institutional level or at the level of individual librarians and information workers. Some happen more or less spontaneously; others are part of formal programs. Some are reciprocal in nature, others are mainly one-way. FIGURE 3.11, which builds on Figure 3.9, illustrates a variety of international LIS relations, such as the themes mentioned in Section 2.6. Many more international relations are dealt with in later chapters.

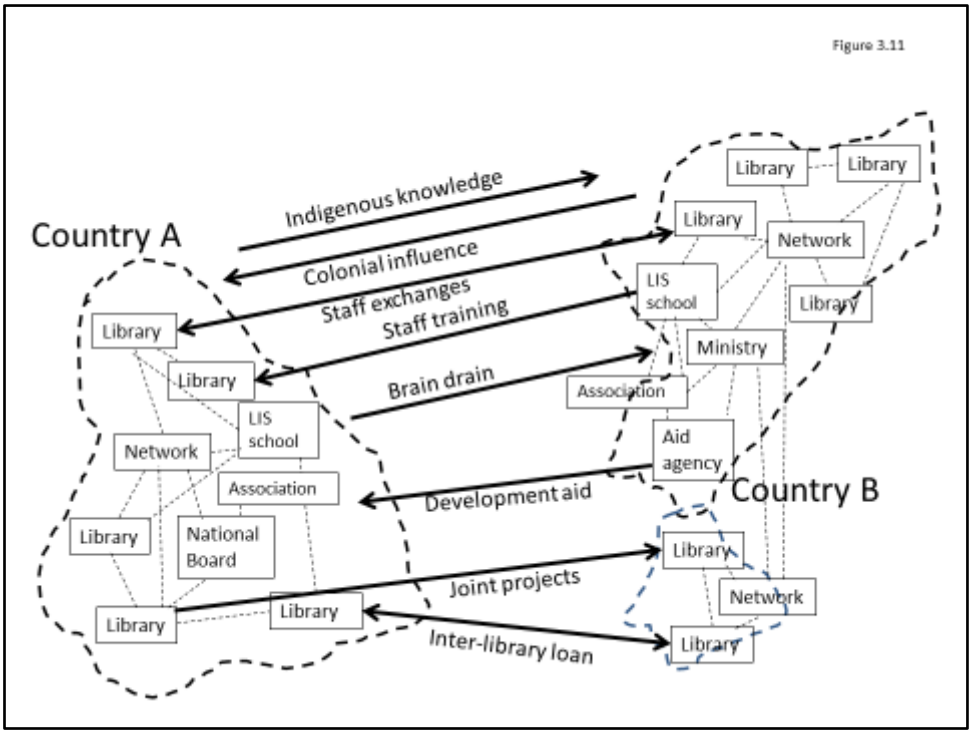

FIGURE 3.11: Relations between systems in two countries

Figure 3.11 is intended to emphasize that relations between LIS institutions, activities and other phenomena in different countries have to take into account the respective national systems. These may be configured quite differently and in different countries the interaction and overlap of the LIS system with other national systems (as depicted in Figure 3.10) may be significantly different. For example, in one country all libraries may fall under the oversight of a single ministry, while in another there may be multiple library authorities. The same applies to comparisons of LIS institutions, activities and other phenomena in different countries. These are dealt with in more detail in later chapters.

Infrastructure

The concept of 'infrastructure', originally from engineering and economics and not a central concept in systemism, deserves to be mentioned here. As the prefix 'infra' suggests, in economics the term refers to the underlying foundations, often physical, that are essential to the functioning of an economy. The term is also used for military installations and as a collective noun for physical structures such as roads, railways and harbours.[35] As 'information infrastructure' the term occurs frequently in the literature of international librarianship. Used by Rayward (2012) to refer to systems of bibliographic control originating several centuries ago, the term 'information infrastructure' (sometimes

[35] "Infrastructure", Merriam-Webster dictionary, http://www.merriam-webster.com/dictionary/infrastructure, accessed 2016-11-19.

'infostructure'[36]) is mostly used in the context of national and global information policies, with emphasis on the use of information and communications technologies, constructing "information superhighways", and (often with political economic overtones) 'bridging the digital divide' (e.g. Borgman 1996; Holmner and Britz 2012; Kahin and Wilson 1996; Subramanian and Katz 2011). The term came into prominence following a report by a US federal Information Infrastructure Task Force, which described the US national information infrastructure as "… a seamless web of communications networks, computers, databases, and consumer electronics that will put vast amounts of information at users' fingertips" (cited in Greer, Grover, and Fowler 2007, 97). Greer, Grover and Fowler pointed out that the information infrastructure is not limited to the Internet and technological components, and defined it as follows:

> The information infrastructure is a global network of people, organizations, agencies, policies, processes, and technologies organized in a loosely coordinated system to enhance the creation, production, dissemination, organization, storage, retrieval, and preservation of information and knowledge for people. The primary objective of this network is the diffusion of knowledge for a society (Greer, Grover, and Fowler 2007, 98).

Here the systems concept appears in the configuration of a network, which departs from the more linear concept of a conduit and implies multidirectional, more flexible relationships. In international studies, it is useful to consider the infrastructure supporting libraries, as well as the role of libraries as part of the infrastructure for education, scholarship, etc. Rubin's (2004; 2016) use of the term 'infrastructure' was referred to earlier in Section 3.5.

3.7 Ecosystems and the LIS environment

The idea that every entity is a system that can be analysed into component systems and that itself form part of larger systems is one that is familiar to biologists, who refer to large, complex natural systems as 'ecosystems', a word first coined in 1935.

Ecosystems

The *Oxford English dictionary* defines an ecosystem as "a biological system composed of all the organisms found in a particular physical environment, interacting with it and with each other". The word is also used in extended sense as a "complex system" resembling an ecosystem.[37] In Biology the term refers to a system of interacting living and non-living components that are linked through various processes such as the flows or cycles of energy, nutrients, carbon, etc.[38] The idea of applying this to systems created by humans is appealing, especially if information is included among the resources that are exchanged in an ecosystem. Mars, Bronstein and Lusch (2012) have thoughtfully discussed the metaphorical use of the ecosystems concept, defining both biological and organizational ecosystems, identifying significant differences between them and pointing out a number of "false parallels" which

[36] "Infostructure" is defined in the *Oxford English dictionary* as usually referring to "the information technology infrastructure, comprised of hardware, networks, applications, etc., used by a society, business, or other group…" http://www.oxforddictionaries.com/definition/english/infostructure, accessed 2016-06-11

[37] Oxford English Dictionary, "ecosystem", http://www.oed.com.ezproxy.lib.uwm.edu/view/Entry/59402?redirectedFrom=ecosystem#eid, accessed 2016-05-03.

[38] Wikipedia, "Ecosystem", https://en.wikipedia.org/wiki/Ecosystem, accessed 2016-05-03.

must be taken into account when the organizational ecosystem metaphor is used. In LIS and related fields the concepts of biological cycles and chains appear frequently, mostly implicitly rather than explicitly. An example of implicit use of this metaphor is the "book chain", as utilized by Rosi (2005) in UNESCO guidelines for book donations, illustrated in FIGURE 3.12.

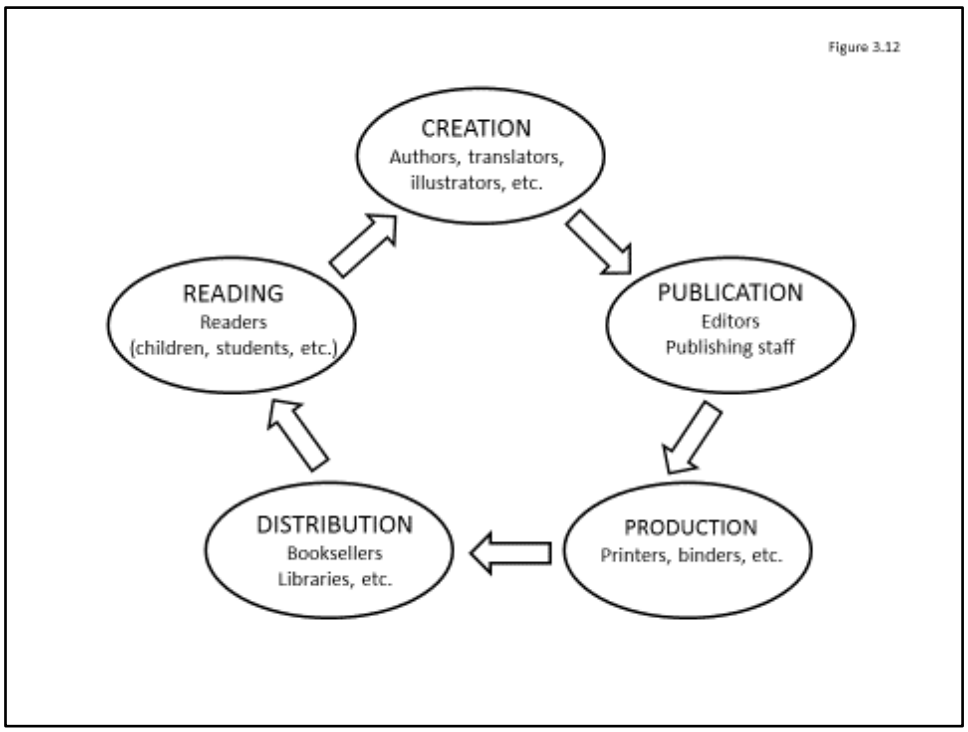

FIGURE 3.12: The "book chain" (adapted from Rosi 2005, 12)

The book chain concept emphasizes the interactions among systems and the cyclical nature of the relationships. Many cyclical models are found in discussion of scholarly research and publication.[39] An interesting example of the use of the ecosystem concept is found in the South African *LIS transformation charter* (South Africa 2014), where an ecosystem is defined as follows:

> A concept from biology, it comprises, in this context, all the LIS institutions operating in South Africa at this point in time, all the relationships between them, all the features of politics, economics, and culture that affect them and the history of the country as well (South Africa 2014, 20).

This document was the outcome of a lengthy consultative process which aimed at the transformation of LIS in South Africa in order to bring about a more equitable and efficient system aligned with the post-apartheid dispensation. The authors drew on the soft systems approach, referred to earlier, and used the ecosystem concept for normative purposes, i.e. to

[39] See for example the "research lifecycle" of Ideas – Partners – Proposal writing – Research Process – Publication as set out, for example, in the United Kingdom by JISC (formerly the Joint Information Systems Committee), at http://www.webarchive.org.uk/wayback/archive/20140615113149/http://www.jisc.ac.uk/whatwedo/campaigns/res3/jischelp.aspx, accessed 2016-05-05.

describe the system as it should be (Hart and Nassimbeni, in press). The language used in the document to motivate this is instructive:

> ['Ecosystem is] a term that captures diversity and complexity, and the idea of interaction between the system (or organism in ecological terms) and its environment. An ecosystem is one in which the sub-systems are inter-linked and interdependent, where there is continuous co-evolution, where change is systemic and where complementarity encourages niches for different roles and functions… The ecosystem perspective enables us to view the structure, functions, and operations of library and information institutions as an ecosystem that evolves within an environment defined by physical, cultural, social, economic, and political conditions to produce certain outcomes (South Africa 2014, 36).

In these passages a number of biological concepts are used: 'organism', 'ecology', 'environment', 'niche', and 'evolution'; elsewhere in the text 'health' and 'growth' occur too. The reference to growth is reminiscent of Ranganathan's (1931) Fifth Law, "The library is a growing organism". Growth (demographic, economic, technological, informational, etc.) is a pervasive concept. In their immediate environment, librarians see "explosive" growth in the World-Wide Web and social media. In spite of calls for "zero-growth" and "steady-state libraries' (e.g. Steele 2001; Savage 1987) , library collections grow relentlessly. Evolutionary concepts are also widely used in the literature of LIS: it is said that libraries have to *evolve* and *compete* in the rapidly changing information *environment* if they are to survive. These are powerful concepts, rarely questioned, but they are not without neoliberal and deterministic baggage. As was mentioned in Chapter 2, there remains a widespread assumption that libraries worldwide will follow the same evolutionary trajectory and come to resemble one another more and more. This will be touched on again in Part III of this book. We should bear in mind the caveat offered by Mars, Bronstein and Lusch (2012, 278):

> The ecosystem metaphor is a useful tool for understanding and predicting the conditions that shape and influence organizational systems. However, its appeal to business leaders has in large part been based on one central misguided assumption: that biological ecosystems are both communal (supported by individual commitments to the greater good) and stable.

Environmental factors

Systems function within environments, with which they interact through system boundaries, drawing resources from the environment and returning materials and energy – in the case of social systems, products, information and services. Environmental scanning for the identification and evaluation of macro-environmental factors constitutes an important element in strategic planning, marketing and other business processes. Such scanning is often undertaken in conjunction with SWOT (strengths, weaknesses, opportunities and threats) analyses, which are more concerned with the internal situation and immediate business environment of the organization. Various sets of environmental factors have been identified, giving rise to mnemonics such as PEST, which stands for political, economic, social and technological factors. The PEST concept dates from the 1950s and it has been applied alongside SWOT to change management in libraries and information systems (e.g. Atkinson 2003; Andoh-Baidoo, Babb, and Agyepong 2012), being mentioned in LIS management texts such as Moran, Stueart and Morner (2013). It has been applied in international LIS, for example in studies of information ethics issues in Africa (Ocholla et al. 2013) and information resource sharing (Goldner and Birch 2012). As the use of this technique spread, additional factors such as legal and environmental factors, were added, giving rise to a veritable alphabet soup of mnemonics, such as STEPE, SLEPT, PESTLE (Chartered Institute

of Personnel and Development 2015) and SPELIT (Schmieder-Ramirez and Mallette 2015).[40] To create STEPE, ecological factors were added. Richardson has applied STEPE in studies of library education in the Russian Federation (Richardson 2003) and the information economy of Turkmenistan (Richardson 2013).

Clearly, a sound understanding of the complex environments in which libraries operate, is a prerequisite for insightful studies of LIS in other countries and for comparative studies. Early contributions to the methodology of comparative librarianship provided lists of such environmental factors. An early list of "background knowledge of the country" was included in an "outline for the study of a foreign library system" compiled by Collings in 1956 for her course at Columbia University (referred to in Chapter 2), and reprinted as an appendix in the *Handbook of comparative librarianship* by Simsova and McKee (1970, 400–403). This listed history and political factors, geography and climate, population, the economy, cultural factors, government structure, educational factors and communication (including production of newspapers, books and magazines. It also formed the basis for a checklist by Danton (1973, 161–62).

One of the variants of the PEST approach is SPELIT, which stands for social, political, economic, legal, intercultural and technological environments. It has been applied in market analysis, benchmarking and change management and has been introduced into higher education curricula as a methodology for understanding the environments of educational institutions (Schmieder-Ramirez and Mallette 2015). The inclusion of intercultural and legal factors suggests that it would be more appropriate for International and Comparative Librarianship than the unexpanded PEST factors. As part of this methodology, additional environments that are of particular relevance to the systems being analysed, e.g. educational, ethical, historical, and religious, can be added to supplement or replace those listed here (Schmieder-Ramirez and Mallette 2015, 293).

The following list summarizes the environmental factors that are listed in the above works and occur elsewhere in the literature:[41]

- Geography: location (region, location in relation to trading partners), size, terrain/topography, climate, natural resources, population density and distribution, distances between centers of population
- Demography: population size, growth, age profile
- Languages: number and status of languages (Is there a dominant language, is it internationally used, what scripts are used, are minor languages written? Are there policies to protect and promote minority languages?)
- Culture: (Multicultural? Dominant cultures, policies to promote multiculturalism? Policies on tangible and intangible cultural heritage)
- Economics (Resource-based, dependent on fluctuations in world commodity markets, mixed economy, service economy, large or small economy? Respective roles of public and private sectors, state regulation and control, distribution of wealth, corporate and private philanthropy)
- Political system (Unitary or federal state? Democratic, autocratic, single party, multi-party, pluralism? Policies on minorities? Freedom of expression?)

[40] More are mentioned in Wikipedia, "PEST analysis", Wikipedia, https://en.wikipedia.org/wiki/PEST_analysis, accessed 2016-05-05.
[41] E.g. Greer, Grover and Fowler (2007, chap. 4)

- Legal system (Constitutional responsibilities in respect of LIS; LIS legislation)
- Information policy (Especially copyright, freedom of access to information and freedom of expression, censorship, privacy; policies on public and private ownership)
- Public administration (Centralized or decentralized? Efficiency? Corruption? Capacity of local government?)
- Fiscal policies and regulations: tax system, exchange control, tariffs on imports; decision-making authority and accountability in publicly funded institutions (e.g. in some countries librarians are held personally liable for any losses from the collections they manage)
- Transport and communications infrastructure (roads, railroads, harbours, airports, postal services)
- Information and communications infrastructure: capacity, innovation, ownership & control, cost, reach (teledensity, access to Internet)
- Education system and educational philosophy (universal education? Up to which level? Educational philosophy and practice: rote learning, resource-based, outcomes-based? How centralized is the system? Degree of university autonomy?)
- Research and development, innovation, research bodies and infrastructure
- Literacy (Literacy level, in which languages, literacy promotion programs?)
- Book industries: authorship, writing in local languages, publishing, bookselling and other forms of distribution, readership, reading culture
- Media: newspapers, magazines, radio, television; pluralism in media ownership and control

These are listed roughly in an order of increasing immediacy to LIS. However, it might also make sense to place the factors roughly in the inverse order, placing the physical factors such as geography and demographics at the bottom as being the most fundamental potential determinants of a national LIS system, forming the basis on which the other factors rest, with educational system, research and development, book industries, and media at the top as the superstructure.

Variation within countries

Within a country there may be significant regional difference in respect of one or more of the factors mentioned above. A region may be closer to or more distant from the capital or from the country's economic hub, sparsely or densely populated, be richer or poorer in natural resources, be inhabited by minorities speaking different languages, and, in a federal state, there may be significant differences in education and LIS policies and funding. Furthermore, each individual library functions within a given community and institutional context. Few libraries are autonomous institutions. Most form part of larger entities such as municipalities, educational institutions, research bodies, government departments or corporations. Each therefore has to function within the legislation applying to its controlling entity, its fiscal and administrative policies, and its organization culture. Within this framework each library has a particular community or communities to serve, which will have particular demographic, socio-economic, cultural, language, educational, and other attributes. The match between the library's institutional framework and the communities it serves may be good, not so good, or poor.

The international and global environment

At the time Collins drew up her checklists of environmental factors (Simsova and MacKee 1970, 400–403), the international and global environment may not have been as influential as it is today. They mentioned foreign study and international assistance and cooperation, but no mention was made of international or global environmental factors other than foreign study. Danton (1973, 165–66) added a more substantial section for "international library co-operation and support" but this did not extend to foreign or global factors more generally. Here I use the word 'international' to refer to factors operating among nations, for example, the Bologna process in the European Union (discussed in Chapter 8), library relations between the USA and its immediate neighbours, those between Australia and new Zealand, and those within the Southern African Development Community (SADC). Trade relations, former colonial relations, and historical bonds of language and culture play a part here.

I use the term 'global; to refer to pervasive, worldwide, boundary-crossing, factors, as referred to in Section 1.9 and Section 2.9. These factors interact in complex ways, as suggested by FIGURE 3.13.

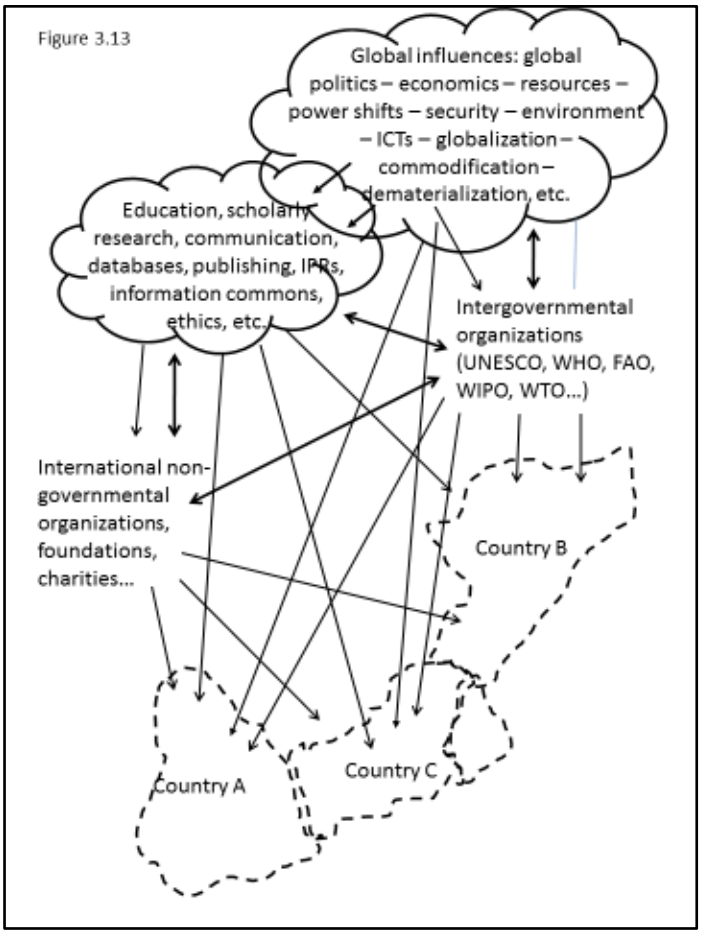

FIGURE 3.13: A network of global factors

Figure 3.13 suggests that, at the global level, there is a chain of interwoven factors that influence the library systems of individual countries. At the highest level (the cloud at top right in Figure 3.13) there are issues of global politics and economics: the regional and global

deployment and exercise of political influence and military and economic power, shifts in power relationships over time, migration, competition for resources such as petroleum and fresh water, food security, and the combating of terrorism, nuclear proliferation and global warming. Technological innovations can shift the economic and political balance: for example genetically modified crops, solar energy, and the extraction of oil from very deep off-shore wells or from shale. In our context attention is focused very much on the impact of the very rapid development of information and communication technologies (ICTs). Modern ICTs make it possible for banks in the USA or Western Europe to contract out call centres to companies in developing countries, such as India, with concomitant shifts in employment opportunities and demands on the national education systems. The ICT infrastructure allows scientists in several countries across the globe to cooperate in complex research projects.

Global trends give rise at the highest level to what we might call second order global effects of more direct consequence for librarianship and information work. These are suggested by the cloud on the left of Figure 3.13, and include trends in education, scholarly research and communication, including databases and scholarly publication in general. Here information property rights are a significant factor, along with issues of fairness and ethics and resistance to barriers affecting access to knowledge and what is seen as the "enclosure of the information commons'. The A2K (access to knowledge) and open access movements are examples of such resistance.

On the global stage there is a large and diverse cast of players. At the national level they include national governments, some of which have influential aid and cultural diplomacy agencies, as referred to in Section 1.8, as well as associations, charities, foundations, and corporations. Internationally there are regional groupings of various kinds, multinational corporations, commodity cartels, and two types of organizations that are of particular interest in our context: intergovernmental organizations and international non-governmental organizations, both of which play roles in transmitting and mediating the above global influences.

Intergovernmental organizations, depicted below the right-hand cloud in Figure 3.13, include the United Nations and its "family" of organizations linked to it in various ways, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO) and the Food and Agricultural Organizations (FAO). There are also many such bodies which are not part of the UN family. They include bodies based on geography (such as the African Union), shared religious beliefs (such as the Organization of the Islamic Conference), a common colonial heritage (such as the British Commonwealth), or other shared characteristics or mutual concerns. Each has a particular sphere of operation within which it attempts to foster international cooperation, promote and coordinate development, and resolve (or paper over) conflicts. Some of these are more directly relevant to librarianship and information work than others. Examples are the World Intellectual Property Organization (WIPO) and the World Trade Organization. Both exercise a significant influence on the laws and treaties which govern intellectual property; incorporated into national laws and regulations these have a direct impact on the work of librarians and information workers world-wide.

International non-governmental organizations form part of what is known as "civil society', depicted below the left-hand cloud in Figure 3.13. In recent years civil society organizations have greatly increased their influence in international relations, particularly in the context of international summit conferences organized by the United Nations and its related

organizations, such as the World Summit on the Information Society (WSIS) and the many international meetings concerned with the Millennium Development Goals and their successor goals (the Sustainable Development Goals). Intergovernmental organizations and international nongovernmental organizations are dealt with in part III.

3.8 Culture

In the preceding sections culture has been mentioned repeatedly. Libraries have been referred to as agencies or institutions that are involved in transmitting the cultural record, and although culture does not feature in PEST and the associated formulae other than SPELIT (which is limited to intercultural factors), culture' was included among the many environmental factors listed in Section 3.7. In this section, which serves as background to several later chapters, I look more closely at the cultural framework of LIS.

Dimensions of culture

The word 'culture' has many meanings. In popular parlance the word is associated with what may be called 'high culture', referring to art, literature, music, theatre and associated events and institutions that are pitched at an elite audience (cf. Benge 1970). In South Africa, which prides itself on being a 'multicultural' society, the word is used to refer to the traditions, customs, patterns of behaviour, beliefs and values of particular ethnic groups, often with political overtones of resistance to Eurocentric practices perpetuated by the white minority. One may hear, "*You* may do it this way, but in *my* culture we..." In management we encounter the term 'corporate culture' or 'organizational culture'.

Culture is "probably the single most central concept in twentieth-century anthropology" (Barnard and Spencer 1996, 136). That does not mean that anthropologists are agreed on what it is or whether it should hold this central position (Kuper 1999, 5–20). In 1878 one of the founding fathers of anthropology, Edward B.Tylor, proposed the following definition of culture:

> "Culture, or civilization, taken in its broad, ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" (Tylor 1871, 1).

Whereas Tylor's definition encompassed the full spectrum of human activity, other anthropologists have emphasized particular aspects. Ecological anthropologists – at least initially – saw culture as a tool by which human populations maintain themselves within an ecosystem (Kottak 1999). Cognitive anthropologists on the other hand, adopt a cognitive definition of culture which emphasizes the relation between human society and human thought (D'Andrade 1995, 1). In an attempt to find common ground in the 162 definitions of culture then current in the anthropological literature, Kroeber and Kluckhohn (1952, 181) constructed the following widely accepted definition of culture:

> Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other, as conditioning elements of future action.

It should be noted too that the study of culture is not the sole prerogative of anthropologists. Since culture and society are interwoven, sociologists also study culture, as do historians, philosophers and management theorists. In management, the term 'corporate culture' or 'organizational culture' refers to the beliefs, values, dress code, manners, ways of communicating, decision making etc. held in common by the members of an organization. In their well-known text on LIS management, Stueart and Moran (2007, 148) followed Schein (Schein 1990, 111) in defining organizational culture more theoretically as "the assumptions that a group discovers as it learns to cope with problems of external adaptation and internal integration". This definition reflects a cognitive approach to culture which emphasizes communication and meaning. A cognitive approach is also reflected in the work of management theorists who are interested in how the cultures of other societies affect ways of doing business, running operations or managing subsidiaries in other countries (Adler 1997). In this context the work of Geert Hofstede, a Dutch social psychologist and organizational anthropologist, has been influential in developing the study of basic dimensions of 'national cultures'. He has popularized the notion of culture as "software of the mind" (Hofstede 1991) or "mental programming" (Hofstede, Hofstede, and Minkov 2010, 4) , defining culture as "patterns of thinking, feeling and acting" (p.5) and as "the collective programming of the mind that distinguishes the members of one group or category of people from others" (p.6).

Adler (1997, 15) discussed the "cultural orientation of a society... [as reflecting] ...the complex interaction of values, attitudes and behaviors displayed by its members". Values reflect general beliefs, whether consciously or unconsciously held, about what is desirable. Attitudes express values and predispose people to act in particular ways (behaviour). Hofstede, Hofstede and Minkov (2010, 7–9) identified four manifestations of culture: values, rituals, heroes, and symbols, using the image of an onion to convey the notion that these occur in different layers. Of these, 'values' are at the deepest, most fundamental level and not readily observable. 'Rituals' (e.g. greetings and meeting procedures) are one layer above values. Then follow 'heroes' (persons possessing highly prized characteristics), and 'symbols' (e.g. language, jargon, dress and status symbols), at the successively more superficial and observable levels. Rituals, heroes and symbols are subsumed under 'practices'. Practices are outwardly visible but their cultural meaning may not be accessible to outsiders.

While useful in a practical sense, these uses of the word 'culture' hold a troubling potential for the concept of culture to be used in an instrumental manner, and even as a means of exercising control of subjugated societies. There is a fine line between, on the one hand, a search for understanding other cultures, and on the other, the pigeon-holing and stereotyping of groups and individuals. During the apartheid period, South African whites were fed accounts of African cultures which tended to reinforce racial prejudice, while cultural anthropologists aligned to the ruling party conducted research on kinship structures, land tenure and chieftainships, the results of which were used to bolster the 'Bantu homelands' policy (cf. Kuper 1999, xii–xiv). Such an approach to culture, which "sees cultures as distinct, bounded, and incommensurable entities with controlling power over individuals and groups", emphasizes boundaries between groups and denies their potential for change and transformation, has been labelled 'culturalism' (Hoffmann 1999, 465). It is thus not surprising that culture is the subject of much controversy. Starting in the 1980s, the concept of culture has come in for much criticism, especially from postmodernist social scientists and members of indigenous groups. It is also a highly politicized and contested concept in the context of civil rights and the status of minorities (Patterson 2000) and development (Haynes

2008, 168–71). "Cultural" explanations of social and development problems have given the concept a bad name (Patterson 2000, 204). Some anthropologists have proposed to do away with the term (Borofsky et al. 2001), which in the mean time had become popular in other fields, for example in comparative education (Hoffmann 1999).

Culture as a factor in such fields as economic development, modernization, political development, and international relations appears to be a contested and ideologically coloured area. Interest in culture in these fields revived in the 1990s following a period during which economic and political theory had dominated the discussion. This turn toward culture was not without controversy. Huntington[42] (2000, xiv) referred to a "battle" that had been joined between scholars

> ...who see culture as a major, but not the only, influence on social, political and economic behavior and those who adhere to universal explanations, such as devotees of material self-interest among economists, of "rational choice" among political scientists, and of neorealism among scholars of international relations. (p. xiv)

Both sides of the debate seem to take very strong positions, as is demonstrated in one of the areas under discussion, that of cultural relativism.

Cultural relativism

Much as the meanings of cultural practices may be found quaint and be misunderstood by people who do not share that culture, so the underlying values held by one culture may appear incomprehensible or even objectionable to outsiders. Each culture tends to consider its values and practices to be 'normal' and, more or less subtly, as superior to other cultures. Until the rise of cultural anthropology westerners (and for that matter, members of other literate cultures such as Chinese and Japanese) had no inhibitions in labelling members of other cultures as primitive or barbaric. Christian missionaries set out not only to convert the 'heathen' but also to root out slavery, polygamy, 'witchcraft' and 'superstition', and to induce the 'natives' to clothe themselves 'decently'. Anthropologists have a strong tradition of rejecting the evaluation of the practices and values of other societies. This stance is known as 'cultural relativism'. We need to distinguish two meanings of cultural relativism:

> Methodologically, cultural relativism means that while the anthropologist is in the field, he or she temporarily suspends ("brackets") their own esthetic and moral judgements. The aim is to obtain a certain degree of "understanding" or "empathy" with the foreign norms and tastes. Morally and politically, cultural relativism means that we respect other cultures and treat them as "as good as" one's own ('Online Dictionary of Anthropology' 2016)

Another dimension is epistemological relativism, which, in its extreme form, holds that people in different cultures "live in different, equally 'true' cognitive worlds" (Whitaker 1996, 480–81). This would make it impossible to compare cultures. However, it is the ethical dimension of cultural relativism which is most hotly contested, the notion that it is unfair to make cross-cultural ethical judgements because "moral values are the product of each

[42] Samuel P. Huntington, a political scientist, is the author of the book *The clash of civilizations and the remaking of world order* (1996) in which he stated his belief that in the new post-Cold War world order the primary source of conflict would no longer be ideological but cultural. This is a controversial hypothesis which has been widely criticized. Huntington is considered to be a 'hard-liner' in respect of relationships between the West and Islam.

culture's unique developmental history, and can, thus, only be judged in relation to that history" (Whitaker 1996, 479).

While it behoves westerners to demonstrate respect for other cultures, this can be taken to extremes of political correctness. I have heard it seriously argued in a scholarly conference that the practice of Namibian tribesmen of raiding rural school dormitories for the purpose of abducting girls as brides is justified as a traditional cultural practice. Analogous arguments may be advanced in favour of female genital mutilation and other practices that appear abhorrent to outsiders. The general trend of such arguments, according to Harrison (Harrison 2000, xxv), who is a critic of cultural relativism, is that traditional societies are essentially harmonious and that such practices would not occur if they did not have adaptive value, that is, if they did not help to maintain the harmony of the society. Similarly, in the political sphere it may be argued that heavy-handed censorship and extreme repression are justified as being aligned with the authoritarian or patriarchal culture of the relevant society, or they may be attributed to the contamination of the original culture by westerners.

While conceding that cultural relativism has been a valuable corrective to Eurocentric assumptions of superiority, with non-Europeans in former times being referred to as the "lower races", Bradshaw (2002, 146) labelled cultural relativism as a "half-truth":

> The truthful half is the recognition that all cultures have worth, and no single culture can be esteemed as the standard against which other cultures are compared or valued. The false half is the implication that, since no single culture is absolute, there are no absolutes.

Objections to cultural relativism have not only come from a religious and ethical perspective (Bradshaw was employed by WorldVision, a Christian charity), but also from political scientists. An example is the book edited by Harrison and Huntington (2000). It includes a scathing critique by Edgerton (2000), who wrote:

> Humans in various societies, whether urban or folk, are capable of empathy, kindness, even love, and they can sometimes achieve outstanding mastery of the challenges posed by their environments. But they are also capable of maintaining beliefs, values and social institutions that result in senseless cruelty, needless suffering, and monumental folly in their relations among themselves as well as with other societies and the physical environment in which they live (p.131).

On both sides there is a tendency to base criticism on caricatures of the other's position. In a spirited response in the same volume, Shweder (2000), while avoiding the term 'cultural relativism', related the debate to notions of development. He criticized the stance of those who take the position that "culture matters", calling it 'cultural developmentalism', which he described with heavy irony as holding that

> ...some cultures are impoverished or backward, whereas others are enriched or advanced. It means that there are good things in life (e.g. health, domestic tranquillity, justice, material prosperity, hedonistic self-stimulation and small families) that all human beings ought to want and have but that their culture keeps them from wanting and/or having. (p.160)

Shweder tried to sketch out a middle way between what he called the 'radical relativists' who take cultural relativism to extremes and the 'uniformitarian universalists' who see only one right way to progress for all societies. His preference is for 'cultural pluralism' (p.164), which accepts that there are universally binding values, but that these values are so numerous

and diverse that they cannot be reduced to common denominators. Because it is not possible to maximise all of them at the same time, societies have to seek trade-offs, and different societies arrive at different sets of cultural values.

In this brief account it is not possible to do justice to this important and ongoing debate, which is also relevant to the developmental issues that will be discussed in later chapters. It is important to avoid dogmatic assumptions concerning the superiority of one's own culture, or that there is only one route to development and prosperity. An open-minded approach recognizes and appreciates the diversity of cultures and attempts to understand the values that underpin them, without necessarily accepting them. It is also important to remember that culture is not static. Culture should not be seen as a deterministic straight-jacket that imprisons people in their current situations. Brief attention will be paid to cultural change in Chapter 7.

Libraries and culture

How is all this relevant to libraries? Libraries are organizations and what happens in them reflects their organization cultures, those of their parent bodies, and, less obviously, the community and national cultures of the places where they are located. Rubin (2016, 750) argued that "[l]ibraries over the centuries have had many missions […] In each case, the library was deeply embedded in the culture that created it. It began, grew, changed, and declined in consort with the culture that produced it...the mission of libraries is shaped by the societies in which they exist". The values and attitudes of societies (which we have seen are manifestations of culture) give shape to their institutions. Whether we consider the library to be an agency or an institution, it is clearly embedded in its national culture. Libraries are products of their cultures.

At the same time libraries are agencies responsible for the certain tasks in respect of culture. Benge (1970) dealt with this at some length, emphasizing the importance of understanding contemporary culture, both 'high' and 'low'. In a somewhat inconclusive discussion of the specifically cultural role of the library, he touched on 'cultural recreation' and the place of both 'low' and 'serious' reading matter in public libraries. This evokes a still unresolved issue: does the library reflect its community's culture or form it? Augst (2001, 6) commented that "[h]istorically the library has borne the particular weight of defining culture and devising means for its practical administration." Through their policies and collections, especially major libraries such as national libraries, institutionalize "changing ideals of culture" (Augst 2001, 17). In some countries libraries are classified as 'cultural institutions' since they are seen as having the task of preserving and transmitting "culture" in the form of documentary (and increasingly, oral) heritage.

The notion of "heritage" represents a perspective on culture which differs somewhat from that of the anthropologists, with more emphasis on the origin, value, protection, long-term preservation, and exploitation of objects and entities: "Heritage is our legacy from the past, what we live with today, and what we pass on to future generations" (UNESCO. World Heritage Centre 2008, 5). Heritage can be divided into natural and cultural heritage, with cultural heritage being subdivided into tangible heritage (immovable and movable) and intangible heritage. This is diagrammed in FIGURE 3-14, which is based on definitions from the Convention for the Protection of Cultural Property In the Event of Armed Conflict (1954), the Convention Concerning the Protection of the World Cultural and Natural Heritage (1972), and the Convention for the Safeguarding of the Intangible Cultural Heritage (2003).

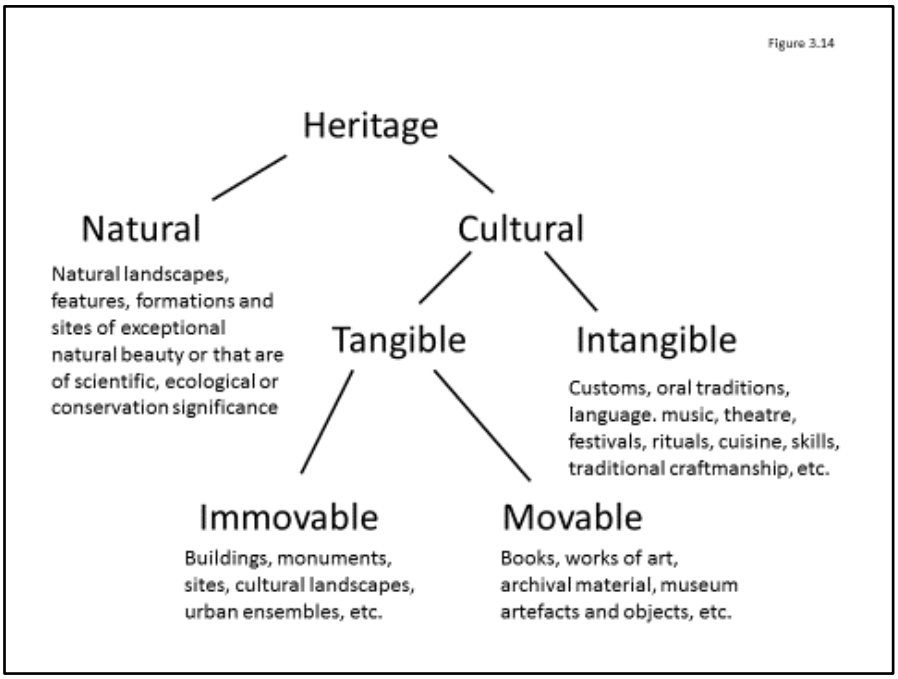

FIGURE 3-14: Categories of heritage

Tangible heritage is often referred to as 'cultural property', which is defined in Article 1 of the Convention for the Protection of Cultural Property in the Event of Armed Conflict as:

> …movable or immovable property of great importance to the cultural heritage of every people, such as monuments of architecture, art or history, whether religious or secular; archaeological sites; groups of buildings which, as a whole, are of historical or artistic interest; works of art; manuscripts, books and other objects of artistic, historical or archaeological interest; as well as scientific collections and important collections of books or archives or of reproductions of the property defined above;

Immovable heritage comprises assets such as buildings, monuments, sites, cultural landscapes and urban ensembles. Movable heritage comprises natural objects and artefacts (human-made objects) of all kinds, which can readily be moved (transported, sold, donated, looted or stolen). Artefacts include books, manuscripts, archival records, audiovisual material and other records, which fall within the definition of 'documentary heritage', a term applied to 'consciously created information carrying artefacts' (Feather 2006, 6). This would include digital as well as analogue material. The Hague convention places buildings (e.g. libraries, museums and archives) housing culturally significant movable property under protection regardless of the cultural value of the buildings themselves. This is an example of the blurring of boundaries between the categories, which also occurs between natural heritage and immovable cultural heritage and between tangible and intangible heritage. Article 2 of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage defines intangible heritage as:

> …the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity (Art 2(1)).

Article 2(2) includes oral traditions and expressions, including language, performing arts, social practices, rituals and festive events, knowledge and practices concerning nature and the universe and traditional craftsmanship.

A library may constitute a cultural institution to the extent that (a) its premises (its building, its position in an urban ensemble) may be counted as significant *immovable* heritage; (b) it holds collections of objects and/or individual objects that are significant as *movable* heritage; and (c) it may contribute to the recording or transmission of *intangible* heritage such as traditional knowledge. Thus libraries are both products of culture and bearers of culture, with the word 'culture' here being used in two overlapping senses, culture in the broad, anthropological sense, and culture in the more limited sense implied by 'heritage'.

Since libraries are thus invested in the preservation and transmission of cultural heritage and themselves embedded in their national cultures, these cultures have to be taken into account in the discussion of topics such as international influences, the international spread of innovations in LIS, colonialism and development, which are dealt with in Part III of this book. In Section 3.7 culture was listed among the environmental factors to be taken into account in an ecosystems approach to the study of LIS. Traditions are important influences in library development, affecting receptivity to innovation and change, and decision making styles. M.M. Jackson (1981, xxxi) stated that "[familiarity with library tradition and history is essential to an understanding to contemporary library events, as well as landmarks in a nation's library developments."

It is necessary to point out here that words such as 'heritage', 'legacy' and 'memory' carry a significant emotional load and imply value judgments. Heritage, legacies and memories are associated with predecessors, ancestors, and parents, with traditions and with the past of nations and communities. They have symbolic value and may be seen as representing the cultural identity and aspirations of communities and nations. Libraries themselves may be seen as 'cultural icons' (W. B. Rayward and Jenkins 2007, 361–63). Such associations, and not only the material value of what is handed down, influence what is judged worthy of preserving and 'passing on to future generations'. Since libraries are often involved as 'custodians' of heritage, librarians need to be aware of the ideological questions: who decides, and on what grounds, what is preserved, displayed, digitized and made available to library users? Who decides what constitutes the 'national memory'? To the extent that national libraries and archives play a role in "developing and embedding as national cultural identity" in a "process of constructing and reconstituting national identity", their role is highly political (Kahn and Tanner 2014, 111) Those who control memory can wield power in the present and shape the future. Baker (2013, 1–39) has provided a useful overview of the issues relating to cultural heritage and 'contested history' in museums, archives and libraries.

3.9 Conclusion

This chapter is by no means an exhaustive exploration of the library concept and its various dimensions, or of the various theoretical frameworks in which libraries and information agencies can be considered for purposes of international and comparative research. Other theoretical frameworks such as political economics, postcolonial and feminist theories, and institutionalism, come to mind. They are touched on in later chapters and will be encountered in the literature. The single most important thing to retain here is that libraries are multidimensional, and being embedded in their multiple contexts, can take on many different shapes. This makes international and comparative studies of libraries and related agencies both challenging and fascinating.

This chapter concludes Part I, which, it is hoped, has provided a basis for the material that follows.

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