

Manuscript. Revised Aug 18, 2013. Published in Rayward Festschrift, *Library Trends* vol 62, no. 2 (2013): 302-310. Published version may differ slightly. Rev Aug 18, 2013.

Boyd Rayward, Documentation, and Information Science.

Michael K. Buckland and Niels W. Lund

ABSTRACT

W. Boyd Rayward is best known as the biographer of Paul Otlet and as an historian of documentation, but he has also always been concerned with contemporary services and with the nature of information science. Less well known and certainly less well documented is his exceptional *indirect* influence through correspondence, encouragement, conferences, and the building of informal networks. We provide an informal account of some of Rayward's influence during the past 25 years in building a more complete and historically-informed understanding of information science.

INTRODUCTION

W. Boyd Rayward is recognized for his biography (1975) of Paul Otlet (1868-1944) and his extensive studies of past schemes to organize recorded knowledge are well-known and often cited. He is rightly regarded as a historian, but his work has not been limited to historical studies. He has been also been consistently engaged in issues relating to contemporary library and, latterly, museum services and with the nature of library and information science, notably his lead chapter defining "Librarianship and Information Science" in the encyclopedic survey of the many versions of "Information Science" edited by Fritz Machlup and Una Mansfield (Rayward, 1983). Those who know him, however, also know that he has also had made a large *indirect* contribution through his many years of assisting others by sharing his knowledge, providing encouragement, pointing out related work, organizing conferences, and building communities of scholars. In this paper, we show something of this important but largely undocumented role.

A CHANGING FIELD

By the 1970s schools of librarianship worldwide were gradually broadening their interests and redefining their scope to include librarian-like activities outside of libraries as well as inside. There were several reasons: there was a surplus of librarians and a shortage of information professionals adequately equipped for similar work in other contexts; research universities preferred graduate programs to address a type of expertise rather than a type of institution; to the extent that problems in other contexts were similar, theories and technical solutions could be extended, challenged, and made more robust; and so on. Yet it was not only a change in scope, there was also a strong desire to evolve a new and different way to view and understand the field itself.

There were difficulties. Progress was impeded by several factors: initially by the stultifying "Library Science versus Information Science" divide and latterly by a view that somehow an "i-school" would not need to explain, clarify, or justify its scope. Nevertheless, the reasons were compelling and a gradual, secular shift was occurring in which the three of us were engaged. Buckland was Dean at Berkeley from 1976 when its School of Librarianship became a School of library and Information Studies with a broader mission until 1984. At the same time, Rayward was addressing the same problems as Dean of the University of Chicago Graduate Library School from 1980 to 86. In 1988 Lund resigned from the faculty of the Royal School of Librarianship in Denmark, dissatisfied with the evolving direction towards a sole focus on information management, leaving out social and cultural dimensions of the library field. All three of us were very conscious that librarianship and library schools were facing exciting and important strategic challenges. Not only were there practical difficulties in undertaking any fundamental change but significant conceptual difficulties in explaining and rationalizing it.

My own view was that there was no lack of opportunities for schools of library and information science to develop their research interests and to diversify their educational programs, but that their field was under-theorized: the concepts and terminology seemed inadequate for an expanded vision. So I set out to provide my own explanation of the nature of this evolving field. The first stage was a framework for understanding library services, written on sabbatical leave in Austria in 1980 and published as *Library Services in Theory and Context* (Buckland, 1983). The second stage, which would have to wait for another sabbatical leave, was to generalize this framework to include archives, Management Information Systems, museums, databases generally, and other species of collection-based information services.

In 1986 Rayward returned to his native Australia as head of the School of Library, Archive and Information Studies at the University of New South Wales, where he sought to modernize the school and its curriculum. He knew my interests and invited me to participate in the planning and curriculum revision. So in 1988 I spent six months there as Visiting Professor.

SUZANNE BRIET AND ‘DOCUMENT’

A significant and basic challenge in developing a more general view of library and information science is that one could no longer refer to the material selected and made accessible as “library materials” when the context extended beyond libraries. In particular, museum objects posed a challenge to the concepts and terminology of information science. Shortly before leaving for New South Wales, I visited Berkeley’s Museum of Vertebrate Zoology where I was impressed by some cabinets with shallow trays containing rows of dead birds. It seemed irrational to be using prime central campus space for trays of dead woodpeckers. A charitable explanation was that they were considered objects with which researchers might discover and from which students might learn. If so, this was, functionally, a kind of library. The dead birds were not books, but both served the same function—they were varieties of ‘documents’. This view solved the conceptual problem of incorporating museum objects into a coherent view of information studies.

The only person able to interrupt my dead-birds-as-documents discourse was Rayward, who simply handed me a photocopied page expressing my new idea but published nearly forty years earlier by a French librarian. The page was from Suzanne Briet’s (then) very scarce and very little-known pamphlet *Qu’est-ce que la documentation?* [What is Documentation?] (Briet, 1951, 7). The opening paragraph asserts the striking position that “a document is a proof in support of a fact.” She then offers her own definition: “any concrete or symbolic indexical sign [*indice*], preserved or recorded towards the ends of representing, of reconstructing, or of proving a physical or intellectual phenomenon.” She continues “Is a star a document? Is a pebble rolled by a torrent a document? Is a living animal document? No. But the photographs and the catalogues of stars, the stones in a museum of mineralogy, and the animals that are cataloged and shown in a zoo, are documents.” As an example, she describes how an antelope “of a new kind” is captured, taken to a zoo in Paris, and, is placed within a taxonomy (and within a cage) and “clothed” with other descriptions. (Quotations from Briet, 2006, 9-10). Briet’s view of a document as something (potentially anything) *made into* a document was very close to my own emerging view that the word “document” could and should be used in a technical sense within information science to denote any thing *regarded as* signifying something. Rayward’s action in showing Briet’s text to me had multiple consequences.

The immediate effect was to encourage me to work through this line of thought in my book *Information and Information Systems* which was my manifesto concerning the nature of our field (Buckland, 1991a). Since defining an extended range of “information” had been a challenge for me and might be of interest to others, I wrote a separate paper on that point entitled “Information as thing” (Buckland, 1991b) using the antelope example rather than the dead birds. That paper attracted attention, was widely cited, and became required reading for students in schools of library and information studies, where antelope-themed t-shirts won at least three t-shirt competitions. The paper was later supplemented by a fuller account of the historical development of this view of *document*: “What is a document?” (Buckland, 1997). Discussion of these ideas with Ron Day helped to generate his critical history, *The*

Modern Invention of Information: Discourse, history, and power (Day, 2001) and an English translation of Briet's manifesto with an excellent commentary and extensive bio-bibliographical material (Briet, 2006).

A second effect was to encourage me, after my return to Berkeley to look at the work of Briet, Paul Otlet, and their contemporaries. This required some immersion in their world since, as of the early 1990s, little had been written *about* them other than Rayward's biography of Otlet. I felt like an archaeologist rediscovering a forgotten world. Some biographical pieces on Briet and years of detective work on information retrieval pioneer Emanuel Goldberg resulted (Buckland, 1995, 2006).

A third effect was that it contributed directly to the revitalization of the American Society for Information Science's Special Interest Group in Foundations of Information Science and its expansion into the *History and Foundations of Information* (SIG HFIS) under the leadership of Rayward's former student Irene Farkas-Conn, Robert V. Williams, and others, including Rayward. Over the following years ASIS&T SIG HFIS leaders not only organized programs at the association's Annual Meetings, but also three international conferences, published special issues of two periodicals, assembled a database of information science pioneers, wrote literature reviews, and established two ASIS&T awards for historical work (Conference, 1999; Historical, 1998; History, 2004; International, 2012).

A fourth effect was to revive interest in France in Briet and her milieu, notably in the work of Sylvie Fayet-Scribe (2000; 2007; 2009).

THE LIBERAL ARTS OF INFORMATION

A fifth effect of Rayward's intervention was the development of a neo-documentalist view in attempts to revitalize the research and educational agendas of library and information studies, a task made the more urgent by barbarians attacking the programs at Chicago, Berkeley, UCLA, and elsewhere. "Information schools," then and now, needed to articulate a better rationale for their existence in a research university, where appeals to tradition and potential usefulness are not enough. What if – radical thought! – information studies were undertaken because they were just plain interesting? I presented this idea at the 1996 Conceptions of Library and Information Science (CoLIS2) conference in Copenhagen. My paper (Buckland, 1996), entitled "The 'liberal arts' of Library and Information Science and the research university environment," resonated with two people in the audience: Boyd Rayward and Niels W. Lund, the newly-appointed founding director of a noteworthy new program in "Documentation Studies" at the University of Tromsø, Norway, the world's northernmost university.

PART II: DOKVIT, by Niels Windfeld Lund

The proposal for a new library education program at Tromsø to be called Documentation Studies was not related to the traditions of Otlet and Briet. It resulted from a very practical need. Norway's new legal deposit law of 1989 required the deposit of all printed publications new National Library but also, from then on, the deposit of all publications in all media. This radical extension of the rule of legal deposit presented a big challenge in preserving and providing sustainable access to publications in all kinds of media (print, film, radio recordings, audio tape, online documents, etc.). In order to deal with this challenge facing not only the National Library but all libraries, archives, and museums, the Norwegian committee in Tromsø proposed to use the notion of *document* as the basic concept for the program instead of *information*.

So a new academic program was established at the University of Tromsø along the same conceptual lines as Otlet and Briet, without knowing it. The notion of *document* was taken as the central concept and was understood to denote, potentially, any signifying thing. *Documentation* was seen as both the process of *documenting* and the outcome of that process. *Documentation studies* (in Norwegian *dokumentasjonsvitenskap* or "Dokvit," for short) included the systematic examination of all aspects of *document* and *documentation*, with a recognition that three complementary dimensions needed attention: the cognitive (meaning, for the individual), the technological (the physical document), and the social (the cultural, economic, and political roles of documents). Accordingly, the faculty of the new program

consisted of humanities scholars as well as social scientists and computer scientists. More, Dokvit was not seen as merely historical inquiry, but as the most promising conceptual paradigm for advancing Information Science itself (Lund, 2007; 2009; 2010).

Unfortunately, this formulation—as *documentation studies*—was perceived by the directors of other Nordic LIS programs as very old fashioned and retrograde, so I was very pleased to be told by Rayward and Buckland at the CoLIS2 conference, "You have history with you and we are all together the neo-documentalist movement." A whole series of collaborations between the three of us (and others) followed.

In the fall of 1999, Rayward was Visiting Professor at our program in Tromsø and we held a number of seminars and lively discussions on the fundamental questions concerning what we mean when we talk about "documentation" and how is it rooted in different historical traditions. This is very typical of Rayward's approach contemporary issues. In a similar way, five years later, in 2004, Rayward and I conducted an international online course for doctoral students at the University of Tromsø, the University of Illinois, Urbana-Champaign, and the Royal School of Library and Information Science in Denmark, on the comparative history of Public Libraries in USA and Scandinavia. The course included an onsite workshop in Urbana-Champaign and excursions to public libraries in Chicago and Central Illinois.

THE DOCUMENT ACADEMY

Just as Buckland went to visit Rayward as visiting professor in New South Wales, Rayward came to be a Visiting Professor in Tromsø, and I went to work with Buckland in Berkeley as Visiting Professor several times, starting in 2001 when I taught a course in document theory. In order to grow the neo-documentalist movement and to encourage other scholars interested in studying documents in LIS and other fields, we founded the Document Academy as an international forum for examining what a document is and how documents can be created, managed, and used. The first DOCAM (DOCument Academy Meeting) was held in Berkeley in 2003. In 2005 Rayward gave the keynote address with the title: *The legacy of the new documentation movement*. (For more on the Document Academy and DOCAM see (Document Academy, 2013)).

PART III CONCLUSION

Rayward has played a central role in developing the connection between modernism and information science, especially in the late nineteenth and early twentieth century schemes for bibliography and documentation. He began through his own research (Rayward, 1967; 1975), and while his scholarship has continued unabated, his role in encouraging an international community of scholars has become increasingly influential. This has been partly through personal contact and partly through writing and presenting papers, but especially important has been his role in organizing, encouraging, keynoting, and/or editing the proceedings of a long series of conferences, including the ASIS&T, CoLIS and DOCAM conferences already noted.

A particularly pleasant memory was our participation with Rayward and Vesa Souminen in the Nordic-International Colloquium on Social and Cultural Awareness and Responsibility in Library, Information and Documentation Studies (SCARLID) in December 2001 in Oulu, Finland, for which Rayward edited the proceedings (Nordic, 2004). The invitational conference he organized in 2005 at the University of Illinois, European Modernism and the Information Society (European, 2007), was particularly successful in generating new collaborations and at least two translations (Buckland, 2010; Krajewski, 2011). For several years Rayward has spent part of each year in Belgium where he has played a significant role in a series of conferences, including: *Architecture of Knowledge: The Mundaneum and European Antecedents of the World Wide Web*, Mundaneum, Mons, 2002; *Analogous Spaces: Architecture and the Space of Information, Intellect, Action*, Ghent, 2008; and *Permeating Boundaries in Europe in the Period of the Belle Epoque: Organizing Knowledge, Mobilizing Networks, and Effecting Social Change*, Mons, 2010.

Boyd Rayward understood that current efforts to cope with information are part of a very long tradition, as was nicely presented in his paper, “Restructuring and mobilizing in documents: a historic perspective” (Rayward 1992), which was an eye-opener for many. His detailed studies on Otlet as well as his work on others, including H.G. Wells, have helped to form a solid foundation for a document-oriented paradigm as well as a broader cultural understanding of the library as a cultural agent. Within LIS in general there has been a tendency toward a major divide between the technologically-oriented and the socially and culturally oriented. By going back to Drury, Leibniz, Otlet, Briet, and others, and by emphasizing purpose and technique as much as technology, one can bridge the technical and the social dimensions and avoid the fruitless divide between the practical and the cultural.

Boyd Rayward chose the life of a professor for which there are large expectations:

- A professor is expected to be a learned scholar with expertise that is recognized by others;
- An effective scholar influences how a field is understood, formulates better theoretical frameworks, sets out a research agenda, and encourages other scholars to contribute; and
- An academic leader builds programs, administers schools, and organizes conferences

On these criteria, Boyd Rayward is an exemplary professor.

When you declare yourself to be a part of a movement, in this case the neo-documentalist movement, you allow much of your credit to the group as a whole, but it is fair to say that Rayward has played a unique role in the development of a more holistic and more historically-informed LIS field, and, not least, has been a very good colleague.

REFERENCES

- Briet, S. (1951). *Qu'est ce que la documentation?* Paris: EDIT.
<http://martinetl.free.fr/suzannebriet/questcequeladocumentation/>
- Briet, S. (2006). *What is documentation?* Transl. and ed. by R. Day and L. Martinet. Lanham, MD: Scarecrow. <http://www.slis.indiana.edu/faculty/roday/book.html>
- Buckland, M. K. (1983). *Library Services in Theory and Context*. New York: Pergamon.
- Buckland, M. K. (1991a). *Information and Information Systems*. New York: Praeger.
- Buckland, M. K. (1991b). Information as thing. *Journal of the American Society of Information Science* 42(5), 351-360. <http://people.ischool.berkeley.edu/~buckland/thing.html>
- Buckland, M. K. (1995). The centenary of ‘Madame Documentation’: Suzanne Briet, 1894-1989. *Journal of the American Society for Information Science* 46(3), 235-237. French version: Le centenaire de ‘Madame Documentation’: Suzanne Briet, 1894-1989. *Documentaliste: Sciences de l'information* 32(3), 179-181.
- Buckland, M. K. (1996). The ‘liberal arts’ of Library and Information Science and the research university environment. In *CoLIS2: Second International Conference on Conceptions of Library and Information Science: Integration in Perspective, 1996. Proceedings*. Ed: P. Ingwersen, N. O. Pors. (pp. 75-84). Copenhagen: Royal School of Librarianship.
<http://www.sims.berkeley.edu/~buckland/libarts.html>
- Buckland, M. K. (1997). What is a ‘document’? *Journal of the American Society for Information Science* 48(9), 804-809. <http://people.ischool.berkeley.edu/~buckland/whatdoc.html>
- Buckland, M. K. (2006). *Emanuel Goldberg and his Knowledge Machine*. Westport, CT: Libraries Unlimited.
- Buckland, M. K. (2010). *Von Mikrofilm zur Wissensmaschine: Goldberg zwischen Medientechnik und Politik*. Berlin: Avinus.
- Conference on the History and Heritage of Science Information Systems (1998 : Pittsburgh). *Proceedings*. Bowden, M., T. B. Hahn & R. W. Williams, eds. Medford, NJ: Information Today, 1999.
- Day, R. (2001). *The Modern Invention of Information: Discourse, history, and power*. Carbondale: Southern Illinois University Pr.
- The Document Academy*. [Website]. <http://site.uit.no/documentacademy/> Visited Feb 19, 2013.

- A document (re)turn: Contributions from a research field in transition*. R. Skare, N. W. Lund, A. Vårheim, eds. Frankfurt: Lang, 2007.
- European Modernism and the Information Society: informing the present, understanding the past*, ed. W. Boyd Rayward. Aldershot, UK: Ashgate, 2007.
- Fayet-Scribe, S. (2000). *Histoire de la documentation en France: Cultures, sciences, technologies de l'information*. Paris: Editions du CNRS.
- Fayet-Scribe, S. (2007). *La table des matières*. Paris: Panama.
- Fayet-Scribe, S. (2009). Women professionals in France during the 1930s. *Libraries and the Cultural Record* 44(2), 201-219.
- Historical Studies in Information Science*. Hahn, T. B. & M. Buckland, eds. Medford, NJ: Information Today, 1998.
- The History and Heritage of Scientific and Technical Information Systems. Proceedings of the 2002 Conference* [Philadelphia, Nov. 15-17, 2002]. W. B. Rayward, M. E. Bowden, eds. Medford, NJ: Information Today, 2004.
- International Perspectives on the History of Information Science and Technology Worldwide, Baltimore, 2012*. Ed. by Toni Carbo and Trudi Bellardo Hahn. Medford, NJ: Information Today, 2012.
- Krajewski, M. (2011). *Paper machines: About Cards and Catalogs, 1548-1929*. Cambridge, MA: MIT Press.
- Lund, N. W. (2007). Building a discipline, creating a profession: An essay on the childhood of 'Dokvit'. In *A document (re)turn, Contributions from a Research Field in Transition*. R. Skare, N. W. Lund, A. Vårheim, eds. (pp.11-26). Frankfurt: Peter Lang Publishing Group.
- Lund, Niels W. (2009) Document Theory. *Annual Review of Information Science and Technology* 43, 399 - 432.
- Lund, Niels W. (2010). Document, text and medium: concepts, theories and disciplines. *Journal of Documentation* 66(5), 734-749.
- Nordic-International Colloquium on Social and Cultural Awareness and Responsibility in Library, Information, and Documentation Studies (2001). *Aware and responsible : papers of the Nordic-International Colloquium on Social and Cultural Awareness and Responsibility in Library, Information, and Documentation Studies (SCARLID) / edited by W. Boyd Rayward*. Lanham, Md. : Scarecrow Press, 2004.
- Rayward, W. B. (1967). *Systematic Bibliography in England, 1850-1895*. Occasional Paper, no. 84; Urbana, Illinois: Graduate School of Library Science, University of Illinois. Online: <http://hdl.handle.net/2142/3926>
- Rayward, W. B. (1975). *The Universe of Information: The Work of Paul Otlet for Documentation and International Organisation*. Moscow: VINITI. (FID 520). <http://hdl.handle.net/2142/651>
- Rayward, W. B. (1983). Library and Information Sciences. In *The Study of Information: Interdisciplinary Voices*. Ed. by F. Machlup and U. Mansfield. (pp. 343-363, 399-405). NY: Wiley.
- Rayward, W. B. (1992). Restructuring and Mobilising Information in Documents: a Historical Perspective. In *Conceptions of Library and Information Science: Historical, Empirical and Theoretical Perspectives: Proceedings of an International Conference*, ed. by Pertti Vakkari. London: Taylor Graham, 1992, pp.50-68.

Michael Buckland is emeritus professor and former dean in the School of Information and co-director of the Electronic Cultural Atlas Initiative at the University of California, Berkeley. After studying history at Oxford University and librarianship at Sheffield University, he worked as a librarian in England and then in the United States. He has specialized in the planning of library services, the organization of knowledge, digital libraries, and the history of documentation. His books include *Information and Information Systems* (1991), *Redesigning Library Services* (1992), and *Emanuel Goldberg and his Knowledge Machine* (2006). He has served as coordinator for library plans and policies for the multi-campus University of California and President of the American Society for Information Science and Technology.

Niels Windfeld Lund, born 1949 in Copenhagen, Denmark, became the first employee and full professor in Documentation Studies at the Department of Documentation Studies, University of Tromsø, Norway, in 1996 and was responsible for the initial development of the study program of Documentation studies at undergraduate as well as graduate levels. From 1975 to 1988 he was Associate Professor at the Royal School of Library and Information Science in Denmark. Professor Lund has twice been Visiting Professor at the University of California, Berkeley, (2001 & 2005-06) and Visiting Scholar at the Center for Computer Research in Music and Acoustics at Stanford University (2011). In 2001 he founded The Document Academy, an international network for documentation studies and organizing annual DOCAM conferences in the USA and Norway. His research is mainly on libraries, document theory, and has recently focused on documents in health care (Electronic Patient Records) and the Arts (opera).