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# What counts as a science and discipline in library and information science?

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Received 2 August 2013  
Revised 11 September 2013  
30 September 2013  
Accepted 30 September 2013

## Abstract

**Purpose** – The convergence of librarianship and information science to form library and information science (LIS) is seen as a recent phenomenon, with the term “information science” originally focused on the application of computers to library operations and services. LIS as a science and multidisciplinary field applies the practice and perspective of information with the aim of answering important questions related to the activities of a target group. As a science, LIS is more than a collection of facts to be memorised or techniques to be mastered but is instead an inquiry carried out by people who raise questions for which answers are unknown and who have gained confidence in their ability to reach conclusions, albeit tentative ones, through research, experiment and careful thought sharpened by the open criticism of others. What is described here is a dynamic and changing field of study called LIS which differs from Cronin’s (2004) conclusion that library science or LIS is neither a science nor a discipline. Like any other science, LIS continues to emerge, evolve, transform and dissipate in the ongoing conversation of disciplines.

**Design/methodology/approach** – To understand LIS, this paper thoroughly reviewed the literature by paying attention to the genesis of the terms “information”, “documentation”, “science” and “librarianship”, and then the interdisciplinary nature of library science and information science.

**Findings** – The differences between librarianship and information science are an indication that there are two different fields in a strong interdisciplinary relation, rather than one being a special case of the other. LIS has grown to be a scientific discipline, knowledge and a process that allows abandoning or modifying previously accepted conclusions when confronted with more complete or reliable experimental or observational evidence. Therefore, like any other science, LIS is a science and discipline in its own right that continues to emerge, evolve, transform and dissipate in the ongoing conversation of disciplines.

**Originality/value** – What is described here is a dynamic and changing field of study and a science called LIS that differs from Cronin’s (2004) assessment that library science or LIS is neither a science nor a discipline. The originality of the paper is rooted in a growing discussion to understand the relevance and appreciate the continued existence of LIS as a science and a field of study.

**Keywords** Documentation, Science, Librarianship, Information science, Disciplines

**Paper type** Viewpoint



## Introduction

The concept of library and information science (LIS) became predominant in the mid-twentieth century as a move to rename library schools into schools of LIS and to reflect curriculum changes, the needs of the profession, continuous technological changes, the needs of the instructors and instructional methods and materials. For example, the Graduate Library School at Illinois changed its name to the Graduate

LIS has grown to be a scientific discipline, knowledge and a process that allows abandoning or modifying previously accepted conclusions when confronted with more complete or reliable experimental or observational evidence. Therefore, like any other science, LIS is a science and a discipline in its own right that continues to emerge, evolve, transform and dissipate in the ongoing conversation of disciplines. As suggested by Hjørland (in Bawden and Robinson, 2012, p. xxii), there is a need to develop a general perspective that keeps the field together to help information professionals get a clear identity in relation to other fields in the multidisciplinary field, as well as to develop a body of specific information science knowledge related to all major branches of knowledge.

### References

- Abbott, A. (1988), *The System of the Professions: An Essay on the Division of Expert Labor*, Chicago University Press, Chicago, IL.
- Arms, W.Y. (2005), "Information science as a liberal art", *Interlending and Document Supply*, Vol. 33 No. 2, pp. 81-84. doi:10.1108/02641610510700188
- Aspray, W. (1999), "Command and control, documentation and library science: The origins of information science at the University of Pittsburgh", *Annals of the History of Computing, IEEE*, Vol. 21 No. 4, pp. 4-20. doi: 10.1109/85.801528
- Auld, L.W.S. (1992), "The fourth quarter century: a personal reminiscence", in Allen, W.C. and Delzell, R.F., (Eds), *Ideals and Standards: The History of the University of Illinois Graduate School of Library and Information Science, 1893-1993*, Board of Trustees of the University of Illinois, pp. 36-56, available at: [www.archive.org/details/idealsstandardsh00alle](http://www.archive.org/details/idealsstandardsh00alle)
- Bates, M.J. (1999), "The invisible substrate of information science", *Journal of the American Society for Information Science*, Vol. 50 No. 12, pp. 1043-1050.
- Bawden, D. (2007), "Organised complexity, meaning and understanding: an approach to a unified view of information for information science", *Aslib Proceedings*, Vol. 59 Nos. 4/5, pp. 307-327. doi: 10.1108/00012530710817546
- Bawden, D. (2008), "Smoother pebbles and the shoulders of giants: the developing foundations of information science", *Journal of Information Science*, Vol. 34 No. 4, pp. 415-426. doi: 10.1177/0165551508089717
- Bawden, D. and Robinson, L. (2012), *Introduction to Information Science (Foundations of the Information Sciences)*, Neal-Schuman, New York, NY.
- Belkin, N. (1977), *A Concept of Information for Information Science*, Doctoral dissertation, University of London, London, UK.
- Belkin, N. (1978), "Information concepts for information science", *Journal of Documentation*, Vol. 34 No. 1, pp. 55-85. doi: 10.1108/eb026653
- Borko, H. (1968), "Information science: what is it?", *Journal of the American Society for Information Science*, Vol. 19 No. 1, pp. 3-5.
- Briet, S. (1951), *What is Documentation? [Qu'est-ce que la Documentation?]*, Éditions Documentaires, Industrielles et Techniques, Paris, France.
- Buckland, M. (2012), "What kind of science can information science be?", *Journal of the American Society for Information Science and Technology*, Vol. 63 No. 1, pp. 1-7. doi: 10.1002/asi.21656
- Buckland, M.K. (1991), *Information and Information Systems*, Greenwood Press, New York, NY.
- Buckland, M.K. (1996), "Documentation, information science and library science in the USA", *Information Processing and Management*, Vol. 32 No. 1, pp. 63-76.

- 
- Capurro, R. and Hjørland, B. (2003), "The concept of information", in Cronin, B. (Ed), *Annual Review of Information Science and Technology*, ASIST, Vol. 37, pp. 343-411.
- Corkett, C. (2009), "Karl Popper's definition of science" [Letter to the editor], *Fisheries Research*, Vol. 96 No. 2-3, p. 323, available at: <http://dx.doi.org/10.1016/j.fishres.2008.02.016> (accessed 17 January 2014).
- Craig, R.T. (2008), "Communication in the conversation of disciplines", *Russian Journal of Communication*, Vol. 1 No. 1, pp. 7-23, available at: <http://comm.colorado.edu/~craig/Craig-2008-DisciplinesRJC.pdf> (accessed 17 January 2014).
- Cronin, B. (2004), "Pierce Butler's an introduction to library science: a tract for our times? A review article", *Journal of Librarianship and Information Science*, Vol. 36 No. 4, pp. 183-188, available at: <http://lis.sagepub.com/content/36/4/183.full.pdf> (accessed 21 January 2014).
- Cronin, B. (2008), "The sociological turn in information science", *Journal of Information Science*, Vol. 34 No. 4, pp. 465-475. doi: 10.1177/0165551508088944
- Darity, W.A. (Ed.) (2008), *The International Encyclopedia of the Social Sciences*, 2nd ed, Macmillan Reference USA, Detroit, MI.
- Davis, C.H. and Shaw, D. (Eds) (2011), *Introduction to Information Science and Technology*, ASIS&T Monograph Series, Information Today Inc., Medford, NJ.
- Davis, D.G. (1994), "Education for librarianship", in Weigand, W.A. and Davis, D.G. (Eds.), *Encyclopedia of Library History (Garland Reference Library of Social Science)*, Vol. 503, Taylor & Francis, New York, NY, pp. 184-186.
- Dervin, B. (1999), "On studying information seeking methodologically: the implications of connecting metatheory to method", *Information Processing and Management*, Vol. 35 No. 6, pp. 727-750, available at: [http://dx.doi.org/10.1016/S0306-4573\(99\)00023-0](http://dx.doi.org/10.1016/S0306-4573(99)00023-0) (accessed 21 January 2014).
- Farkas-Conn, I.S. (1990), "From documentation to information science: the beginnings and early development of the American Documentation Institute - American Society for Information Science", available at: <http://adi-asist.accessinn.com/> (accessed 17 January 2014).
- Floridi, L. (2002), "On defining library and information science as applied philosophy of information", *Social Epistemology*, Vol. 16 No. 1, pp. 37-49. doi:10.1080/02691720210132789
- Frazier, K. (1972), "Comment: what is science?", *Science News*, Vol. 102 No. 9, p. 131, available at: [www.jstor.org/stable/3957342](http://www.jstor.org/stable/3957342)
- Hayes, R.M. (1985), "The history of library and information science: a commentary", *The Journal of Library History*, Vol. 20 No. 2, pp. 173-178, available at: [www.jstor.org/stable/25541596](http://www.jstor.org/stable/25541596)
- Hayes, R.M. (1994), "Information science and librarianship", in Weigand, W.A. and Davis, D.G. (Eds.), *Encyclopedia of Library History (Garland Reference Library of Social Science)*, Vol. 503, Taylor & Francis, New York, NY, pp. 275-280.
- Hirst, P. (1974), *Knowledge and the Curriculum*, Routledge & Kegan Paul, London.
- Hjørland, B. (2000), "Library and information science: practice, theory, and philosophical basis", *Information Processing and Management*, Vol. 36 No. 3, pp. 501-531. doi:10.1016/S0306-4573(99)00038-2
- Hjørland, B. (2002), "Epistemology and the socio-cognitive perspective in information science", *Journal of the American Society for Information Science and Technology*, Vol. 53 No. 4, pp. 257-270. doi: 10.1002/asi.10042
- Hjørland, B. (2008), "Lifeboat for knowledge organization", available at: [www.iva.dk/bh/lifeboat\\_ko/](http://www.iva.dk/bh/lifeboat_ko/) (accessed November 2012).

- Hjørland, B. and Albrechtsen, H. (1995), "Toward a new horizon in information science: domain-analysis", *Journal of the American Society for Information Science*, Vol. 46 No. 6, pp. 400-425. doi: [10.1002/\(SICI\)1097-4571\(199507\)46:6<400::AID-AS12>3.0.CO;2-Y](https://doi.org/10.1002/(SICI)1097-4571(199507)46:6<400::AID-AS12>3.0.CO;2-Y)
- Holland, G.A. (2006), "Information society: European considerations in economic and cultural contexts", *Library Philosophy and Practice*, Vol. 8 No. 2, available at: [libr.unl.edu:2000/LPP/lppv8n2.htm](http://libr.unl.edu:2000/LPP/lppv8n2.htm) (accessed 21 January 2014).
- Holland, G.A. (2008), "Information science: an interdisciplinary effort?", *Journal of Documentation*, Vol. 64 No. 1, pp. 7-23. doi:[10.1108/00220410810844132](https://doi.org/10.1108/00220410810844132)
- Horwich, P. (Ed) (1993), *World Changes: Thomas Kuhn and the Nature of Science*, The MIT Press, Cambridge, MA.
- Ingwersen, P. (1992), *Information Retrieval Interaction*, Taylor Graham, London.
- Jackson, C.M. (1930), "What is science?", *Sigma Xi Quarterly*, Vol. 18 No. 3, pp. 77-86, available at: [www.jstor.org/stable/27824433](http://www.jstor.org/stable/27824433) (accessed 17 January 2014).
- Kuhn, T.S. (1962), *The Structure of Scientific Revolutions*, 1st ed, University of Chicago Press, Chicago, IL.
- Kuhn, T.S. (1970), *The Structure of Scientific Revolutions (Foundations of the Unity of Science)*, Vols. I & II, 2nd ed, enlarged, The University of Chicago Press, Chicago, IL.
- Meadow, C.T. and Yuan, W. (1997), "Measuring the impact of information: defining the concepts", *Information Processing and Management*, Vol. 33 No. 6, pp. 697-714. doi:10.1016/S0306-4573(97)00042-3
- Rayward, W.B. (1994), "Visions of Xanadu: Paul Otlet (1868-1944) and hypertext", *Journal of the American Society for Information Science*, Vol. 45 No. 4, pp. 235-250. doi: [10.1002/\(SICI\)1097-4571\(199405\)45:4<235::AID-ASI2>3.0.CO;2-Y](https://doi.org/10.1002/(SICI)1097-4571(199405)45:4<235::AID-ASI2>3.0.CO;2-Y)
- Rayward, W.B. (1996), "The history and historiography of information science: some reflections", *Information Processing and Management*, Vol. 32 No. 1, pp. 3-17. doi: [10.1016/0306-4573\(95\)00046-J](https://doi.org/10.1016/0306-4573(95)00046-J)
- Richardson, J.V. (2010), "Library science in the United States: early history", in *Encyclopedia of Library and Information Sciences*, 3rd ed, Taylor & Francis, London. doi: [10.1081/E-ELIS3](https://doi.org/10.1081/E-ELIS3)
- Roberts, N. (1976), "Social considerations towards a definition of information science", *Journal of Documentation*, Vol. 32 No. 4, pp. 249-257. doi: [10.1108/eb026627](https://doi.org/10.1108/eb026627)
- Robinson, L. (2009), "Information science: communication chain and domain analysis", *Journal of Documentation*, Vol. 65 No. 4, pp. 578-591. doi: [10.1108/00220410910970267](https://doi.org/10.1108/00220410910970267)
- Saracevic, T. (1992), "Information science: origin, evolution and relations", in Vakkari, P. and Cronin, B. (Eds), *Conceptions of Library and Information Science: Historical, Empirical and Theoretical Perspectives*, Taylor Graham, London, pp. 5-27.
- Saracevic, T. (2010), "Information science", in *Encyclopedia of Library and Information Sciences*, 3rd ed, Taylor & Francis, London. doi: [10.1081/E-ELIS3](https://doi.org/10.1081/E-ELIS3)
- Shapiro, F.R. (1995), "Coinage of the term information science", *Journal of the American Society for Information Science*, Vol. 46 No. 5, pp. 384-385. doi: [10.1002/\(SICI\)1097-4571\(199506\)<46:5384::AID-ASI8>3.0.CO;2-3](https://doi.org/10.1002/(SICI)1097-4571(199506)<46:5384::AID-ASI8>3.0.CO;2-3)
- Smith, L.C. (1992), "From mechanization in libraries to information transfer: information science education at Illinois", in Allen, W.C. and Delzell, R.F. (Eds), *Ideals and Standards: The History of the University of Illinois Graduate School of Library and Information Science, 1893-1993*, Board of Trustees of the University of Illinois, pp. 134-156, available at: [www.archive.org/details/idealsstandardsh00alle](http://www.archive.org/details/idealsstandardsh00alle)

- 
- Waples, D. (1931), "The Graduate Library School at Chicago", *Library Quarterly*, Vol. 1 No. 1, pp. 26-36, available at: [www.jstor.org/stable/40039627](http://www.jstor.org/stable/40039627) (accessed 17 January 2014).
- Wedgeworth, R. (Ed.) (1993), "International library and bibliographic organizations", in *World Encyclopedia of Library and Information Services*, American Library Association, Chicago, IL, pp. 382-387.
- Yuexiao, Z. (1988), "Definitions and sciences of information", *Information Processing and Management*, Vol. 24 No. 4, pp. 479-491. doi: [10.1016/0306-4573\(88\)90050-7](https://doi.org/10.1016/0306-4573(88)90050-7)

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