# Tomato Tomahto: European Perspectives on Information Science

Warner, J., Ibekwe-SanJuan, F., Peters, I., Windfeld Lund, N., & Buckland, M. (2017). Tomato Tomahto: European Perspectives on Information Science.

**Published in:**
Bulletin of the Association for Information Science and Technology

**Document Version:**
Peer reviewed version

**Queen's University Belfast - Research Portal:**
Link to publication record in Queen's University Belfast Research Portal

**Tomato tomahto: European perspectives on information science**

Julian Warner, Fidelia Ibekwe-SanJuan, Isabella Peters, Niels Windfeld Lund, Michael Buckland

*'And oh, if we ever part, then that might break my heart' (Gershwin and Gershwin, 1937).*

**Introduction**

In the lyric, 'tomato tomahto' from *Shall We Dance* (Sandrich, 1937), the marked, or explicitly differentiated term, is tomahto, corresponding more to the English rather than the United States pronunciation. The marked term of a contrast characteristically designates the exception or minor term and the distinctions contained in the unmarked term may be implicitly, and incompletely, understood. Analogously, information science has often been implicitly based in the United States and influenced by American modes of thought, while European, including English, developments have been the occasionally marked and often minor term. Our concern here could be partly understood as focusing on the marked term, European influences and perspectives on information science, in order to unmask the unmarked, the implicit dominance of United States influences.

The article is derived from papers presented at a panel, and from the discussion at the panel session, at the recent ASIS&T Annual Meeting, held in Copenhagen. The panel explored European perspectives on information science, explicitly and implicitly contrasting them with United States perspectives, from a base in a number of languages and in Europe and beyond.

The combination of European and beyond and United States perspectives on information science was especially appropriate for the first ASIS&T Annual Meeting outside North America. This article continues the celebration of real international expansion.

**European perspectives and influences**

Niels Lund explored the complex development of information science in the Nordic sphere. Despite a considerable number of differences, it was still possible to talk with good reason about a joint effort to develop a Nordic Library and Information Science (LIS) since the early 1970s. This development has in a very complex way been intertwined with parallel developments in the professional library world and the educational programs for librarians.

One huge challenge, especially in Denmark and Norway, has been to justify or explain the relevance of a scientification of a professional educational program for a diverse world of libraries, including public libraries, school libraries as well as academic libraries. It led to a very tense conceptual fight trying to find an overarching concept, embracing the whole library world, choosing either Culture, Information or Institution. This professional fight on a conceptual core, was accompanied with an attempt for the many to-be LIS scholars to find their place in the general scientific world, to discussions about where LIS belong in the Academic world – in the natural sciences (cognitivists), the humanities (culturalists), in the social sciences with the institutionalists, or perhaps in all three scientific worlds.

All these paradigmatic changes in Nordic LIS education had a decisive impact on the Educational programs, not least in Denmark in the 1980s, moving from two distinct educations for

respectively Public librarians (Culture) and Academic Librarians (information) to a unified education with information as the hegemonic concept covering the whole library world, and changes in the 1990s with Documentation studies in Norway opting for a complementary approach, and a media turn in the 2000s.

Today, many of the academic fights have been replaced by collaboration and dialogue between the different paradigms within the Nordic region as well as on the international level with cross-disciplinary journals and conferences.

Julian Warner began with a reference to, 'the whole earth … girded by telegraph cables', and traced the quotation to the European thinker, Karl Marx, who, in the late 19th century, observed.

> 'the last fifty years have brought a revolution that is comparable only with the industrial revolution of the second half of the last century … the whole earth has been girded by telegraph cables.' (Marx, 1981, p.164)

The technology of the telegraph, fully realized in working form in the mid-19th century as the transcontinental (North America) and then the transatlantic telegraph, was later theoretically described by the model of communication given in Claude Shannon's 'A mathematical theory of communication' (Shannon, 1948/1993).

Some diverse European influences on and contrasts with United States theory and practice in areas central to information science, were traced.  First, the working telegraph is understood as a product of the westward expansion of the United States and the increasing links with Europe and the corresponding need for message transmission technologies.  The historical priority of the working telegraph to both Shannon's (1948/1993) rigorous account of communication and Warren Weaver's (1949) more expansive interpretation of that account, which subsequently strongly influenced the development of information science, was emphasized.  Norbert Wiener's indebtedness to European thinkers such as Marx for his understanding of technology as a cumulative human construction - 'In all engineering, there is a certain family history, a certain genealogy.  The smith's hammers were forged by the hammers of an earlier smith' (Wiener, 1993, pp.46-47) – and for his conception of developments in information and communication technologies as a second industrial revolution was also recognized.  Thirdly, the contrast between the United States and the European Union in their treatment of intellectual property in databases, with the United States retaining the integrity and scope of copyright (Feist, 1991) and the European Union developing *sui generis* provision for databases was also considered.  In this instance, the United States, a more recent formation than many European countries, although not than the European Union, may have had a greater and more extensive historical sense.

The presentation concluded by pointing to the value of a fully theoretical informed, ecumenical but controlled, framework for understanding information developments.

Fidelia Ibekwe-SanJuan reviewed the development of information science (IS) in continental Europe.  Information Science has failed to coalesce in Europe into a solid body of well-identified academic discipline with its core theories, paradigms and methods. The situation is very disparate across Europe and it is difficult to get a global view.  France's situation is peculiar since

the discipline of IS does not exist separately but is part of a composite interdiscipline called Information and Communication Sciences (ICS).

The role terminology played in efforts to forge a distinctive identity for this composite interdiscipline was reviewed.  Terms such as 'communicational approach' or 'infor-communicational approach' had been coined. However, the substantive distinctiveness of these terms may not bear close scrutiny.  A 'communicational approach' is another way of affirming the complex and non-linear nature of communication phenomena that requires input from the complexity paradigm and from systemics (Mucchielli, 1996).  However, if this 'communicational approach' can be easily applied to the study of communication phenomena, its translation into IS's research problematics and traditions is less straightforward.  Another seemingly distinctive term 'infor-communicational approach' can also be replaced by another existing term, a 'holistic approach'.

The coinage of these terms have resulted in a communication breakdown for the diverse communities gathered under the ICS umbrella comprising scholars in media studies, IS, documentation, library studies, organizational communication and cultural studies, because their epistemological and methodological implications were not demonstrated nor clearly articulated.

This period of distinctive terminology coinage which came in the wake of the official creation of the field in 1975 has been followed by a period of acceptance that the quest for theoretical and methodological unity, sought by the first generation of ICS scholars is unattainable.  While these distinctive concepts are not abandoned and are still employed by many in the field, they have lost some of the force they had before in sorting out 'who is in' and 'who is out' of the discipline. There is now a wider acknowledgement that the ICS is intrinsically, and welcomely, plural and that it is characterized by a triple plurality: epistemological, methodological and ontological (thematic).

Michael Buckland traced historical influences on information science, particularly those understood as documentation and neo-documentalism.  One mainly European influence on Information Science started in the late 19th century when Paul Otlet and others sought ambitiously to expand bibliographical access through using the newest technology: cards, the Universal Decimal Classification, photography, and potentially much more.  To differentiate their form of bibliography they adopted the term Documentation. This inspired some interest in the USA.  The U.S. zoologist Herbert H. Field developed a service essentially similar to Otlet's at the Concilium Bibliographicum in Switzerland.

Techniques referred to in Europe as 'documentation' were already well-developed in the USA as special library work.  Watson Davis, Mortimer Taube, Jesse Shera, and others defined documentation as including special library work but broader, including document creation and publication.  The American Documentation Institute, founded in 1937 and now ASIST, had a strong interest in document technology (microfilm, punch cards, computers) and retrieval systems.  Shera arranged re-publication of  the book *Documentation* by British librarian Samuel Bradford, but failed to understand Suzanne Briet's refinement of documentation theory for mid-20th century conditions.

Independently (at first) in Europe and in the USA there was a revival in the 1990s of interest in a 'document-centric' perspective within Information Science.  This neo-documentalism includes an emphasis 'document-as-thing,' an inclusive view of what might be considered a document, and insistence on the co-existing presence of physical, social, and mental aspects in any adequate discussion of Information Science.  These issues were further discussed in a review article by Niels Lund, ' Document theory', in 2009.

Isabella Peters concentrated on definitions and perceptions of information science from the perspective of members of the ASIS&T European Chapter.  Members of ASIS&T's European Chapter had been invited to indicate how they defined the concept 'information science' and how they perceived it, from their particular point of view and specific background.  Currently, the more than 115 members of the European Chapter come from more than 20 different countries and are affiliated with universities, research institutions, other information service providers, and other institutions and enterprise.  Also, members reflect the entire range of levels of professionality, from PhD students to more senior researchers.  In August 2016 a poll was sent out to all members of the Chapter asking to complete two sentences: 1) Information Science is…, 2) Information Science for me is… .  Twelve members answered and most of them came from Germany (4 answers), the United Kingdom (3 answers), France (2 answers) and one answer from Croatia, Austria, and Sweden each.

The answers were analyzed via term clouds with merged word forms and showed only those terms which had two and more occurrences.  Information Science was described with the terms 'knowledge', 'management', 'processes', 'retrieval' and 'storages', whereas the more personal relationship with information science was explained by 'research', 'services', 'applied', and 'communication'.  When comparing the answers from the United Kingdom members with those coming from Germany it became apparent, that Information Science in the UK is about 'management', 'services', 'theory', 'records', 'governance', and 'formats', whereas the Germans relate Information Science with 'knowledge', 'computer', 'processes', 'practical', 'usage', and 'retrieval'.  Further outstanding viewpoints and quotes were presented to provide a map of concepts related to 'information science'. The presentation was used as a 'visual' starting point for discussion with the conference attendees.

**Conclusion**

The panel presenters employed diverse and complementary viewpoints and this was followed by a lively and engaged discussion.  It was concluded, in sympathy with Gershwin - 'if we ever part, then that might break my heart' (Gershwin and Gershwin, 1937) - that cooperation and integration, or a reciprocal dance, corresponding to increasing globalization, was the way forward.

We look forward to the increasing globalization of ASIS&T and welcome the continuing value and stimulus of diversity

## References

Feist. (1991). Feist Publications, Inc. v. Rural Tel. Service Co., Inc. 499 U.S. 340.

Gershwin, G. and Gershwin, I. (1937).  Let's Call The Whole Thing Off. In Shall We Dance. Film. 1937.

Lund, N.W. (2009). Document theory. Annual Review of Information Science and Technology. 43, 399-432.

Marx, K. (1981). Capital: A critique of political economy. Volume Three.  Introduced by Ernest Mandel. Translated by David Fernbach. Harmondsworth etc.: Penguin Books in association with New Left Review.

Mucchielli, A. (1996). Dictionnaire des méthodes qualitatives en sciences humaines et sociales. Paris: Armand Colin.

Sandrich, M. (1937). Shall We Dance. Film. RKO Radio Pictures.

Shannon, C.E. (1948/1993). A mathematical theory of communication. In N.J.A. Sloane & A.D. Wyner (Eds.), C.E. Shannon: Collected papers (pp. 5–83). Piscataway, NJ: IEEE Press.

Weaver, W. (1949). Recent contributions to the mathematical theory of communication. In C.E. Shannon & W. Weaver (Eds.), The mathematical theory of communication (pp. 1–28). Urbana: University of Illinois Press.

Wiener, N. (1993). Invention: the care and feeding of ideas. Cambridge, Massachusetts and London, England: MIT Press. Introduction by S.J. Heims.