

General introduction

Knowledge organisation and a new world polity: the rise and fall and rise of the ideas of Paul Otlet

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2. See W. Boyd Rayward, *The Universe of Information: the Work of Paul Otlet for Documentation and International Organisation*. Moscow: Published for the International Federation for Documentation by the All-Union Institute for Scientific and Technical Information (VINITI) of the USSR Academy of Sciences, 1975, Ch III Foundation of the IIB, Ch V the Universal Decimal Classification, Ch VI the Universal Bibliographic Repertory.

3. Rayward, *Universe...* Ch VII the Development of the International Office and Institute of Bibliography

4. Rayward, *Universe...* Ch VIII The Union of International Associations

5. Rayward, *Universe...* Ch X the Palais Mondial, and pp. 226, 239 and 254 for the Université Internationale and pp 226,

6. Rayward, *Universe...* Ch XI L'Affaire du Palais Mondial

7. Rayward, *Universe...* Ch XIII Change, New Directions, and Ch XLV Last Decades

8. See the bibliography in *Paul Otlet: International Organisation and Dissemination of Knowledge: Selected Essays of Paul Otlet*. Edited and translated by W. Boyd Rayward. Amsterdam: Elsevier, 1990, pp. 221-248. Also available at <http://alexia.lis.uiuc.edu/~wrayward/otlet/otbib.htm>

Transnational Associations
1-2/2003, 4-15

"Dreams are true while they last, and do we not live in dreams?"
Tennyson, *the Higher Pantheism*

About organisations

The story of Otlet (1868-1944) and Henri La Fontaine (1854-1943) and their organisations is a fascinating one, much told and retold. The first of the organisations was the International Institute and Office of Bibliography (1895), its tools, repertoires, collections (bibliographical, iconographic and documentary)² and its satellite institutes: Institut international de photographie, 1905; Bibliothèque collective des sociétés savantes, 1906; and Musée de la presse, 1907.³ The Office central des associations internationales, 1907, became the secretariat of the Union of International Associations created in Brussels following an enormous conference organised by Otlet and La Fontaine and held under Royal patronage in 1910 on the occasion of the Brussels World Fair.⁴ In that same year the International Museum was formed with collections derived largely from the exhibits at the World Fair. This set of organisations was effectively completed for Otlet by the creation in 1920 of a International Summer School. Otlet and his colleagues called this somewhat misleadingly a Université internationale. It met only on three occasions – in September 1920, August-September 1921, and August 1922. Beginning in 1910, a transformation not completed until 1919 after the hiatus of the War, these organisations were brought together physically in a huge installation to which Otlet gave the name Palais Mondial, later Mundaneum, in the left wing of Palais du Cinquantenaire in Brussels.⁵ In Otlet's thinking this new institution of internationalism would eventually form the nucleus of a World City, itself symbolical of a new world order.

Perhaps at one level, Otlet, is best regarded as a fin de siècle figure whose work enjoyed a considerable measure of acceptance and support at home and abroad before World War I. But after the War, it rapidly lost favour. Once influential nationally and internationally, at least in a relatively specialised circle, Otlet came to be regarded as

difficult and obstructive as he grew old. His ideas and the extraordinary institutional arrangements in which they had finally come to be expressed, the Palais Mondial or Mundaneum, seemed grandiose, unfocused and passé.⁶ In the early 1930s there was a quietly dramatic struggle to remove the International Institute of Bibliography, transformed eventually into the International Federation for Documentation, from this institutional complex and from under what was considered to be the dead hand of the past – effectively the hand of the still very much alive but ageing Otlet. From about 1924 with the first relatively brief part-expulsion of the Palais Mondial from the Palais du Cinquantenaire the other major component, the Union of International Associations, was to become moribund. It was revived after the Second World War when both its founders, Otlet and his lifelong colleague and friend Henri La Fontaine, were dead.⁷ The quarters occupied by the Palais Mondial in the Palais du Cinquantenaire were closed completely by the Government in 1934 but, just as war broke out in 1939, the City authorities of Brussels offered Otlet new quarters in the Parc Léopold. He called this the Mundaneum and what remained of the collections and records of the Palais Mondial were to remain there until the early 1970s.

Otlet died in 1944, at the age of 76, just as Brussels was being liberated. He left behind a corps of disciples, Les Amis du Palais Mondial, to perpetuate his memory while they lived, a huge body of rather repetitive publications,⁸ and the archival remains of the two principal organisations that he and La Fontaine, who at age 89 predeceased him by a year, had created and nurtured for over the period of half a century – the Union of International Associations and what was now called the International Federation for Documentation.

Perhaps it is best to see Otlet as a transitional figure caught in the changes that transformed the English world of high Victorian and

9. Rayward, *Universe*, ...Ch IX The War and its Aftermath

10. see for example, Rayward, *Universe of Information* ...1975 (note 2 above) pp.245 and 266-7

11. Robert Goldschmidt and Paul Otlet, "Sur une nouvelle forme du livre: le livre microphotographique," *Institut International de Bibliographie Bulletin* 12 (1907): 61-69, translated as "the Microphotographic Book," in Otlet, *International Organisation and Dissemination*...2000, pp.87-95 Editor's note 1 gives a publishing history of this essay (see note 2 above).

12. See the discussion in Françoise Levie, "Paul Otlet et la multimedia" below in this issue of *Transnational Associations/Associations Transnational*

13. W. Boyd Rayward, Visions of Xanadu: Paul Otlet (1868-1944) and Hypertext," *Journal of the American Society of Information Science* 45 (1994): 235-250; and "The Origins of Information Science and the Work of the International Institute of Bibliography/ International Federation for Documentation and Information(FID)," *Journal of the American Society for Information Science* 48(April 1997): 289-300.

14. Paul Otlet, *Monde*, Editions Mundaneum; Brussels: Van Keerberghen & Fils, 1935 *Monde*, p. 124.

15. See for example for a recent discussion of them: *The Internet in everyday life*, edited by Barry Wellman and Caroline Haythornthwaite Oxford: Blackwell, 2002.

16. See Otlet's "Conception du

Edwardian cultural certitude, the brilliant world of the Belgian "Belle époque," into the new much more troubled world that emerged from the First World War. This new world is recognisably our modern world. In the late 1930s, we may see Otlet peering myopically at it through his tiny round spectacles. He is a surprisingly tall, slightly stooped elderly man with sparse white hair and a thick, well-trimmed, snow-white beard. As the forces of even greater economic, social and political change than he and his contemporaries had so far endured swept past him towards the vast upheaval of the Second World War, it is easy to think of these changes leaving him silent, socially and intellectually displaced, as erasing his relevance.

About ideas

But this is too simple. What Otlet left behind him was in fact much more than the chaotic remnants of his various organizations. Buried in all of the mass of his writing and all of the mass of the documentation that has survived him are important ideas and intellectual relationships. The passage of time is now allowing us to excavate and to disentangle these ideas and relationships from the institutional expression they were given during his lifetime. The irony of those last rather depressed and depressing years of Otlet's life is that he had foreseen many of the changes bearing down on society and had some sense of the nature of the new world that was in the making. He was deeply concerned about how, with new technologies and new forms of organisation, knowledge might be mobilised to manage social change more effectively than in the past.

La Fontaine was a senator in the Belgian parliament for nearly 40 years. A leading figure in the international peace movement, he won the Nobel Peace Prize in 1913. Ironically, the outbreak of war prevented him giving the traditional acceptance speech of Nobel Laureates. He collaborated with Otlet from the early 1890s until his death in 1943. Otlet, however, unlike La Fontaine, worked very little at the level of politics or direct social action. This was especially true after the War, though he too, like La Fontaine, had been tirelessly active in the move-

ment to create at the end of the First World War a League of Nations, that phantasm of hope, that was to secure universal and lasting peace.⁹ With all the self-possession of a scion of the upper classes but perhaps of a more retiring and introverted disposition than La Fontaine, Otlet tried to imagine and give institutional expression to new ways of organising and disseminating knowledge. In this way, with a wave as it now seems of some kind of magic organisational wand, both he and La Fontaine hoped that eventually a new, stable and just international social order might be erected.

Thus, Otlet's story is not simply the life-cycle story of the founding of organisations that, for half a century, grew, flourished, declined and struggled for existence in the changing political and economic circumstances of the tiny European kingdom of Belgium, though it is all of that too. Indeed the struggle and its inevitable outcome eventually attained a kind of epic quality that was even recognized in the mocking reportage of the times as the struggle neared its end.¹⁰ Otlet's story is ultimately a story of ideas, of passionately held and unwavering belief in the importance of intellectual life, in the possibility of its transformation by means of new kinds of tools and machines for managing and communicating knowledge, and in the need to achieve at last a new, peaceful, world society.

The document. At the heart, the centre of these ideas and beliefs, lay Otlet's concept of the document. For him, knowledge was embedded in documents which objectified it and gave it a kind of public status. But documents not only consisted of the written or printed word. Objects, pictures and illustrations, music - whatever had evidentiary value, that "documented" something, were documents. The burning question was how could documents in their many manifestations and formats be made to yield up the knowledge that they "contained" or represented?

In Otlet's view it was necessary to assemble and interrelate all documents in their various formats. The objective was universality. The library, the museum and the archive were all to be seen as aspects of a single documentary organisation. In the case of textual documents, Otlet suggested that it was necessary to identify

Mundaneum” and “Les Types du Mundaneum” in *Monde...* (note 14 above), pp. 448-458.

1.7 See for example section 7 of *Monde*, “L’Inconnu. Le mystère. Le secret (X+Y),” pp. 393-400.

18. *FID Publications: an 80-year Bibliography, 1895-1975*. FID 532; The Hague: FID, 1975 and Georges Speeckaert, *Bibliographie sélective sur l’organisation internationale, 1885-1965*. FID Publication 361; UIA publication 191; Bruxelles: UIA, 1965.

19. G.P. Speeckaert, “A glance at sixty years of activity (1910-1970) of the Union of International Associations,” and J. Baugniet, “Two pioneers in the sphere of international co-operation and world peace: Henri La Fontaine and Paul Otlet,” in *Union of International Associations, 1910-1970: past, present, future; sixtieth anniversary*. Union of International Associations. Brussels: UIA, 1970.

20. Paul Otlet, “les Sciences bibliographiques et la Documentation,” *Institut International de Bibliographie Bulletin* 8(1903):254-271(trans as the “Science of Bibliography and Documentation,” in *Paul Otlet: International Organisation...* 1990 (note 8 above), pp. 71-86)

21. The Consortium’s website is at: <http://www.udcc.org/about.htm>

22. S.C. Bradford, *Documentation*. London: Crosby Lockwood & Sons, 1948. Bradford, Director of the Science Museum Library in London, was a passionate advocate of the UDC and helped found the English “daughter society” of the IIB, The British Society for International

what was important and new in particular documents. All that was simply rhetorical or duplicative or in error had to be stripped away. The aim was, in effect, to acquire, inventory and shell all documents as they appeared of their valuable information - their facts - as one shells peas from a pod. If each “fact” were separately recorded in a standardised way, then these records could be systematically linked, arranged and re-arranged according to the conceptual ordering of fields of knowledge represented by the minutely detailed tables and other devices of the UDC. For Otlet this process is an essential desideratum of what were effectively the “manual” hypertextual/multimedia systems he envisaged. Such a process for us today, inhabitants of a post-modern age and its relativist, revisionist *mentalité*, is fraught with all kinds of conceptual and “epistemological” difficulties.

Otlet stressed the importance of creating new kinds of documents as part of this process - charts, tables and diagrams correlating, summarising, illustrating and simplifying information that was otherwise voluminous and complex. The idea was to bring together, correlate, integrate, and create multiple representations of knowledge that had been produced and disseminated haphazardly, that was as a result fragmented, scattered, repetitive, error-prone, and incomplete. This process of representing and reconstituting knowledge Otlet called codification. He believed it to be the most important function of a new kind of encyclopedia he was proposing. It required new modes of communication such as by microfilm (he reported widely on his experiments with this as early as 1906¹¹) and radio, television and what was called the Cinescope.¹² He also foreshadowed the invention of new kinds of machines that would support and enhance intellectual work - what we would describe as workstations and networks.¹³

The Network: For all of this to be effective, information agencies such as libraries and museums had to be transformed or re-invented to become offices of documentation linked, and their contents in some way reproducible, in a universal documentary network. All the associations and societies that brought people together according to specialist interests and through which knowledge of all sorts, from the mundane

and practical to the scholarly and scientific, was represented had to be marshalled into this network as well. The interlinking that was necessary had to be centralised, in Otlet’s view, in a hierarchical arrangement that led by means of the network from the local level, up through various forms of national and international organisation, to a central world hub. Here in a great world palace, the Mundaneum, would be located the nerve center for managing knowledge acquisition and dissemination on a global scale. Around it would grow a world city representing symbolically a new polity in which international relations of all kinds could be rationally ordered for the benefit of mankind.

The Mundaneum: In the last pages of *Monde*, his last major work, it is as if Otlet distils the decades of his evolving thought into what has become by now an intricately multi-layered notion of the Mundaneum. In ten pages he presents a summation of the beliefs and ideas that lie behind his life’s work. The Mundaneum, he tells us, is an *idea* of universalism. It is an *institution* in which is brought together “the museum for seeing, the cinema for viewing, the library, encyclopedias and archives for reading, the catalogue for consulting, the lecture, radio and the disc for listening, and the conference for debating (Ad Mundum, vivendum et legendum, et audiendum et discutiendum).” The Latin, with its classical and liturgical overtones, is designed perhaps to stress the importance of this litany of functions.

But the Mundaneum is more. It is a *method* involving among other things, “research and prediction, unification and standardisation, ordering and classification, cooperation, planning and regulation, ultimately expression, presentation and reproduction.” It is a physical *edifice* to be realised architecturally. It is, finally, a *network*. Ideally the Mundaneum would exist as a central prototype with a descending scale of derivative exempla: a national level (the Mundaneum-France or the Mundaneum-Italy), and regional and local levels. It would be represented at the personal level by a Studium-Mundaneum, a technologically sophisticated personal office in which individuals would be able to make use of the new methods of documentation that foreshadow “technically unlimited

Bibliography, BSIB.

23. See the papers and bibliography in *F. Donker Duyvis: His life and work*. The Hague: Netherlands Institute for

Documentation and Filing (Nederlands Instituut voor Documentatie en Registratuur, NIDER), 1964.

24. For example, E.M.R. Ditmas, "Co-ordination of information: a survey of schemes put forward in the last fifty years," *Journal of Documentation*, 3

(1948): 209-22; Katherine O. Murra, "History of attempts to organize bibliography internationally," in *Bibliographic Organization*, edited by Jesse Shera and Margaret Egan. Chicago: University of Chicago Press, 1951, 24-33; and Edith Scott, "IFLA and FID- History and programs," *The Library Quarterly* 32 (1962): 1-18.

25. Jesse Shera and Margaret Egan, "A Review of the present state of librarianship and documentation" [an introduction to a reprinting of] *Documentation* by S.C. Bradford, London: Crosby Lockwood & Sons, 1953; Jesse Shera,

"Documentation: its scope and limitations," *Library Quarterly* 21 (1951): 13-26; Jesse Shera and Donald Cleveland, "History and Foundations of Information Science," *Annual Review of Information Science and Technology*, ch.8; New York: Wiley, for the American Documentation Institute, 1977, pp. 11-45.

26. "Eric de Grolier: selected bibliography," *International Classification* 18 no. 2 (1991): 71-2

27. "Festschrift for Paul Otlet," *Cahiers de la Documentation*; 22,4 (1968): 95-116

28. Irene Farkas-Conn, *From documentation to*

possibilities" of "analytical repertoires and synthetic tables listing and visualising facts."¹⁴

The new global imperative of the Mundaneum, *l'idée mondiale et universelle*, which will animate the technologies and documentary systems of each person's Studium -Mundaeum will have widespread effects. It would, Otlet believes, impact the individual's "own life, occupations, work and personal, family and social relations (Otlet uses the word '*aspirations*')." Such a statement might be thought to offer a resumé of the issues about the changing nature of community, work-based practices and social relationships that have attracted so much commentary and research in relation to the Internet and the World Wide Web.¹⁵ Through the Réseau universel and the web of interactions it facilitates (Otlet does not use this term), the individual is able to reach back up through its various levels to participate in the World City, the "Civitas Mundaneum." Otlet resorts again to Latin and its liturgical echoes, perhaps we may also hear yet more distant echoes of Augustine and Campanella: "The World City that the nations will build together and in which the spirit of Humanity will dwell - la Beata Pacis Civitas, la Bienheureuse Cité de la Paix."¹⁶

There is a fascinating and continuously evolving interplay throughout the course of Otlet's long life between abstraction and reality, between the utopian and the mundane, between rhetorical grandeur and the facts, between a strong positivist rationalism and an almost mystical apprehension of the spiritual.¹⁷ On the one hand lie his abstract, utopian ideas prescriptively and repetitively (often tediously) set out in a huge body of published and unpublished writing. On the other hand are these ideas imperfectly instantiated in systems that employ a primitive technology embedded in ineffectively managed organisations. Yet, for all their ultimate inadequacy, within these arrangements both then and now glints something grand and inspiring of the vision behind them.

Towards an Otletian historiography

It is easy to say that Otlet and his ideas were quickly forgotten after his death, given the current vitality of interdisciplinary interest in him

and his work. Perhaps he has been neglected in the past, but in the history of ideas and of scholarship the passage of fifty years and more does not seem an unduly long period to have elapsed before we can begin to see a figure so complex and multifaceted as Otlet in the round, as it were. He stands at the confluence of so many streams of historical experience - of ideas, of wars, of literary and print culture, the institutional structures of society and social change, of Belgium and Europe. For all that, looking back, one can see that at least a residual awareness of him in the various worlds he had inhabited has never in fact quite dissipated. What follows is not intended to be a complete study of what has been written about Otlet or the approaches that have been taken to him and his work. It is, I acknowledge and regret, almost entirely Eurocentric. It is intended merely to suggest a continuity of interest and the gathering complexity of the discussion that mark the long fifty year period that brings us to the present.

FID and UIA: The International Federation of Documentation (FID) in the Hague, which became bankrupt in 2001, and the Union of international Associations (UIA), still very much alive in Brussels, have always contained in their work some shadow of the memory of their founders. Both organisations were responsible for what have proved to be indispensable early bibliographies related to their history.¹⁸ A 60th anniversary volume of essays for the UIA deals with a wide range of subjects. Of particular interest in this context is Georges Speeckaert's survey of the history of the UIA from its founding and J. Bagniet's discussion of the specific contributions of Otlet and La Fontaine.¹⁹

Documentation: A major thread of interest in many countries throughout the world has been Otlet's ideas about documentation and the UDC and their implications for changes in librarianship and what in English was called library science. Otlet coined the term "documentation" as early as 1903.²⁰ International collaborative work on the development of the Universal Decimal Classification (UDC) began in 1896 in the heady days of optimism and experiment at the turn of the century. The UDC became part of the armarium of new technologies and techniques that Otlet and his col-

information science: the beginnings and early development of the American Documentation Institute-American Society for Information Science. New York: Greenwood Press, 1990.

29. W. Boyd Rayward, "Library and Information Science: An Historical Perspective," *Journal of Library History* 20(1985): 120-136 and "Visions of Xanadu: Paul Otlet (1868-1944) and Hypertext,"

Journal of the American Society of Information Science 45 (1994):235

30. For example, F.P. Walters refers to the "two gallant Belgians Henri LaFontaine and Paul Otlet" and gives a brief account of the UIA in the standard work, *A History of the League of Nations*. London: Oxford University Press, 1969 (reprint), p. 190

31. Amelia Defries, *Interpreter Geddes, the man and his gospel*. New York, Boni & Liveright, 1928; Philip Boardman, *Patrick Geddes, maker of the future*, with an introduction by Lewis Mumford. Chapel Hill, University of North Carolina Press, 1944; revised as *The worlds of Patrick Geddes: biologist, town planner, re-educator, peace-warrior*. London: Routledge and K. Paul, 1978; Paddy Kitchen, *A most unsettling person: the life and ideas of Patrick Geddes, founding father of city planning and environmentalism*. New York: Saturday Review Press, 1975.

32. Georges Lorphèvre, "Otlet, Paul," *Biographie nationale*. Bruxelles: Académie Royale des Sciences, des Lettres et des Beaux Arts de Belgique. t. 32 (1964): cols 545-558; Robert Abs, "Fontaine (Henri-Marie la)," *Biographie nationale* t. 38 (supplément 10).

leagues devised for documentation both as a field of study and of professional practice. Though FID has disappeared, the UDC remains in widespread use in Europe and its continued development is managed by a consortium of interested organisations.²¹ In England, where UDC was eventually adopted by the British Standards Institute as a British standard, S. C. Bradford's essays on the UDC and the history of the FID were collected and published posthumously in 1948 in his *Documentation*.²² They form an early point of reference in English for Otlet studies along with some of the papers of Frits Donker Duyvis who had worked with Otlet and La Fontaine in the 1920s and had been appointed a third Secretary General of FID in 1928. He continued as Secretary General until his death in 1961.²³

Documentation: 1950s-60s: Several early survey histories of the international organisation of bibliography and documentation also deserve still to be remembered.²⁴

In the 1950s and 60s in the United States, Jesse Shera recognised the importance of, and helped keep alive, Otlet's ideas about classification and documentation.²⁵ An important French figure writing extensively on classification and information retrieval in the 1950s and for thirty years beyond has been Eric de Grolier. His critiques of UDC and accounts of its development formed a platform for later theoretical work relevant to developments in information science. A bibliography of his writing is given in *International classification*.²⁶ In 1968 an issue of the journal of the Association Belge de Documentation was offered as a "festschrift" for Otlet on the 100th anniversary of his birth.²⁷

For many years, the letterhead of the American Documentation Institute (created in 1937), now the American Society for Information Science,²⁸ carried (unacknowledged) a definition of documentation by Otlet which also appeared on the masthead of its journal, *American Documentation* (now *Journal of the American Society for Information Science*). In the late 1960s and 1970s in the field of study and professional practice that had been generally described by Otlet's term "documentation" was increasingly designated "information science." But to me and to others examining the

changes represented by this terminological evolution, Otlet's ideas about technology, information and communication were even more relevant and thought provoking than before. I have argued that Otlet's *Traité de Documentation* was in fact one of the first great treatises in information science.²⁹

Other work in the 1950s and 1960s: In the decades after the Second World War, histories of the peace movement, the League of Nations and of international organisation more generally make reference to the work of Otlet and La Fontaine and the UIA.³⁰ Fleeting glimpses can be had of him too in other work such as the early studies devoted to Otlet's long-time friend, the Scottish sociologist and town planner, Patrick Geddes.³¹ In Belgium extensive scholarly entries on both Otlet and La Fontaine were prepared for the national biographical dictionary published by the Belgian National Academy, a measure of some kind of recognition at last for prophets in their own country.³² My own doctoral studies, based on research in 1967-8 in the Mundaneum when it was in the Parc Léopold in Brussels, attempted perhaps the first comprehensive account of Otlet's life and work, though explicitly seeing the life as incidental to the work.³³ This research and its continuation have underpinned a number of papers over the last twenty years or so, several focusing on aspects of documentation.³⁴

Documentation 1980s and 1990s: Interest in Otlet's contributions to Documentation and the history of information science continued in the 1980s and 1990s. At the University of Amsterdam Paul Schneiders prepared a doctoral thesis bearing centrally on Otlet.³⁵ A major event for Otlet watchers occurred in Belgium in the 1980s when André Canonne began to champion the idea of reviving the Mundaneum as a museum and archive with a view to establishing it in Liège.³⁶ He arranged to have Otlet's *Traite de Documentation* reprinted in 1989 in recognition of its importance and scarcity.³⁷ In 1990, I published an English translation of a selection of Otlet's papers on both documentation and international organisation that covered the period from his first speculative paper on bibliography of 1893 through to his moving tribute to Henri La Fontaine in 1934. The

Bruxelles: Académie Royale des Sciences, des Lettres et des Beaux Arts de Belgique, 1973-4, cols 215-221

33. W. Boyd Rayward, *The Universe of Information: the Work of Paul Otlet for Documentation and International Organisation* 1975 (see note 2 above). (This was translated into Russian as *Universum informatsii Zhizni' i deiat' nost' Polia Otle*. Trans. R.S.

Giliarevsky, Moscow: VINITI, 1976, 402pp and later into Spanish, see note 45 below).

34. Among other studies have been: "UDC and FID: a Historical Perspective," *Library Quarterly* 37(1967): 259-78; "Paul Otlet, a Centennial Tribute," *International Associations* 20(1968): 55-58; "the International Institute for Bibliography and Pierre Nenkoff, a Bulgarian Librarian: an Attempt at International Co-Operation," *libri* 24(1974): 209-28; "IFLA-FID - Is It Time For Federation?" *IFLA Journal* 3(1977): 278-280; "Paul Otlet," *World Encyclopedia of Library and Information Services*. 1st ed; Chicago: American Library Association, 1980, pp.418-20 (and subsequent editions); "The International Exposition and the World Documentation Congress, Paris, 1937," *Library Quarterly* 53(July 1983): 254-268; "The Case of Paul Otlet, Pioneer of Information Science, Internationalist, Visionary; Reflection On Biography," *Journal of Librarianship and Information Science* 23 (September 1991): 135-145. "Visions of Xanadu: Paul Otlet (1868-1944) and Hypertext," (see note 13 above); and "The

introduction to this work sought to highlight the pioneering nature of his ideas about the organisation of knowledge and the use of new kinds of then speculative machinery for this purpose. The bibliography provided in this work is still perhaps the most comprehensive (though still incomplete) listing of Otlet's writing to date.³⁸ To appear in 2003 is a Russian translation by Ruggero Giliarevskii of some of Otlet's papers on bibliography libraries and documentation.³⁹ Giliarevskii has long been interested in Otlet. He translated my early book on Otlet into Russian and has also been interested in the terminological changes that have marked new approaches to the field designated "documentation" by Otlet and now often called "informatics" in Europe.⁴⁰

Spain: There has been a strong history of interest in Otlet and Documentation in Spain during these decades. Among the main figures associated with this are José López Yepes, Felix Sagredo and José-María Izquierdo Arroyo.⁴¹ Izquierdo Arroyo's linguistic-based interests culminated in 1995 in a physically curious double volume of excerpts of Otletian texts and a formal hermeneutical analysis of them by.⁴² Otlet's *Traité de Documentation* was translated into Spanish by María Dolores Ayuso García who, with José Antonio Moreiro González, also published a terminological study derived from it.⁴³ An online Spanish text on information retrieval has an introductory section on Otlet and some commentary on changing terminology.⁴⁴ More recently Pilar Arnau Rived's doctoral dissertation has been published along with a Spanish translation by Arnau Rived of my early study of Otlet and a selection of my later papers.⁴⁵

The US: In the US Michael Buckland published important theoretical papers on the nature of the document and of information systems and projected into our own day the image of Madame Documentation, the early French documentalist, Suzanne Briet and her antelope.⁴⁶ The work of Ron Day⁴⁷ and Isabelle Rieusset-Lemarie⁴⁸ has brought aspects of critical theory to bear on Otletian text and work. Day argues that Otlet was engaged in a "proto deconstructionist understanding of textuality."⁴⁹ These articles along with one by me⁵⁰ appear in a subsection labelled: "Paul Otlet and his

Successors" of an issue of *the Journal of the American Society for Information Science* devoted to the history of the subject. A compilation of these articles and a range of other articles formed the basis for *Historical Studies in Information Science* in which Buckland and Liu's review of the literature of the history of Information science contains a section on Otlet.⁵¹

France: Over the years a number of interesting articles on the history of documentation in France that touch on Otlet have appeared in the professional journal *Documentaliste*.⁵² the Institut International de Bibliographie and its collections and techniques are given their place in Sylvie Fayet-Scribe's extraordinarily comprehensive "Chronologie des supports, des dispositifs spatiaux, des outils de repérage de l'information" published in the online journal *SOLARIS* in 1997. In the course of another work, she has also examined the development of documentation in France touching on the pioneering work of General Hyppolyte Sebert, another long-time friend and colleague of Otlet's, who was instrumental in setting up the French "daughter society" of the Belgian Institute, the Bureau Bibliographique de Paris in 1896.⁵³

Henri La Fontaine. While the focus of contributions mentioned above has been essentially on Otlet, it should be noted that Henri La Fontaine was a figure of major importance both in Belgium politics and in the international peace movement. There seems not to be a large literature on La Fontaine but there are, not surprisingly, several useful articles about him in *Journal of the Union of international Associations, Transnational Associations*, such as Irwin Adams's personal memoir and a note by Nadine Lubelski-Bernard.⁵⁴ Lubelski-Bernard has published a series of important papers directly related to La Fontaine and the Peace movement in Belgium.⁵⁵ A number of her other papers on the Belgian peace movement from the point of view, for example, of feminist participation or in relation to Free Masonry touch on other aspects of La Fontaine's interests and commitments.

Let me also mention here, out of chronological place, the publication in 2002 by the Mundaneum of a collection of essays entitled *Henri La Fontaine: tracés d'une vie*. Several of the

Origins of Information Science(see note 13 above). This last article was reprinted in the FID Journal, *International Forum for Information and Documentation* 22 (1997): 3-15, in the Russian edition of this journal, in *Historical Studies in Information Science*, edited by Trudi Bellardo Hahn and Michael Buckland. Medford, N.J.: Information Today, for ASIS, 1998, and in *Otle Pol'. Biblioteka – Bibliografiya – Dokumentatsiya...* 2003 (see note 39 below)

35. P. Schneiders, "De bibliotheek en documentatie beweging 1880-1914: bibliografische onderzoe-ningen rond 1900," unpublished doctoral thesis, University of Amsterdam, 1982.

36. Cannone, André, "Regards sur 'Mundaneum,'" *Classification Décimale et C.L.P.C.F.* [Centre de la Lecture Publique de la Communauté Française]. *Lectures*, 5, May - June 1985, pp. 2-20.

37. Paul Otlet, *Traité de Documentation. Le Livre sur le Livre: Théorie et Pratique* (reprint of the 1934 ed.) Liège : Centre de Lecture Publique de la Communauté Française, 1989.

38. Paul Otlet: *International Organisation and Dissemination of Knowledge...* 1990 (see note 8 above). The bibliography is available online at <http://alexia.lis.uiuc.edu/~wrayward/otlet/orbib.htm>

39. Otle Pol'. *Biblioteka – Bibliografiya – Dokumentatsiya: Izbrannye trudy pionera informatiki*, trans Ruggero Giliarevski. Moskva: Pashkov Dom, 2003

40. For his translation see note 33 above; also R. S. Gilyarevskii, "Chto takoe informatika? [What is

chapters are by the excellent curatorial and archival staff of the Mundaneum; others by prominent Belgian scholars, including a major contribution from Lubelski-Bernard.⁵⁶ Though it is physically slight, this work reveals the range of La Fontaine's interests and achievements in his own right. It suggests the complexity that must have characterised the long association and collaboration between him and Otlet (and leaves us astonished at how extraordinarily well La Fontaine must have managed his time!).⁵⁷

Other connections: As well as these increasingly more sophisticated studies of aspects of documentation and information science, new kinds of studies began to appear that examined other aspects of Otlet's work, relating it to different scholarly and disciplinary contexts. Takashi Satoh discussed the work of Wilhelm Ostwald, the Nobel Prize winning chemist, in the briefly lived Bridge Movement in Germany with which Otlet was associated before the First World War.⁵⁸ This Otlet connection is also explored more recently in Thomas Hapke's several papers on Ostwald⁵⁹ and in Rolf Sachsse's very substantial online study of Die Brücke.⁶⁰ Stimulated by Brigitte Schroeder-Gudehus's work on the international organisation of science, Anne Rasmussen has opened up yet another perspective on the UIA and Otlet and La Fontaine in her study of the history of international congresses and of the international representation of intellectual work.⁶¹ David Forester has examined Otlet's contributions to accounting both of a theoretical kind and more practically when Otlet was President of the Association Internationale de Comptabilité.⁶² In their turn, Jean-François Füeg and Vincent Algraint have begun to study Otlet's interests and relationship concerning photography.⁶³

Town planning and architecture, Geddes and Le Corbusier: nearly twenty years ago, Pieter Uyttenhove opened up a new area of Otlet studies by examining Otlet's ideas about post war Brussels and Belgium from the perspective of urban planning.⁶⁴ Since then a number of historians of architecture and town planning have touched on Otlet in studies focussed on matters of central interest to them. In Italy in 1982 Giuliano Gresleri and Dario Matteoni completed a lengthy study of the idea of a world city

from its initial formulation by Hendrik Anderson and its design by Ernest Hébrard before the First World War to its development by Otlet and his enlistment of the great modernist architect, Le Corbusier, as designer in the late 1920s.⁶⁵ Catherine Cortiau has prepared several different accounts of the saga of this venture.⁶⁶ More recent writing on Patrick Geddes also notes the Otlet connection if only tangentially. Otlet is referred to briefly, for example, by Sofia Leonard in exploring Geddes' European legacy⁶⁷ and also by Volker Welter in his recent and splendidly realised "architectural history" study of Geddes' ideas about the city.⁶⁸ Helen Meller presents Otlet's relationship with Geddes more substantively in a study of Geddes's town planning and biological ideas, a study that is much more sophisticated and rigorous than the more hagiographic accounts that preceded her work.⁶⁹

Hypertext and Internet: As the information revolution got underway, Otlet's work could be seen in new kind of context. What had seemed utopian, even rather science fiction-like in his speculations about what we now call information technology, began to seem prescient of this new world. In 1991, I wrote of these ideas of Otlet as anticipating hypertext and computer-based networks⁷⁰ and explored formally and at some length the hypertext implications in a 1994 paper entitled, "Visions of Xanadu..."⁷¹ Otlet's place in the history of hypertext has proved to be particularly intriguing. Anthony Judge has assembled on the UIA website relevant excerpts, to which separate reference is not made here, from a number of papers about Otlet and hypertext. He has given his commentary the title: "Union of International Association - Virtual Organization: Paul Otlet's 100-year hypertext conundrum."⁷² This forms the basis for his paper in the present issue of *Transnational Associations /Associations Transnationales* which contains the appropriate references.

Renewed interest: the Mundaneum, Mons

Some of the vigour and direction taken by the renewed interest in Otlet in the 1990s can be attributed in part to the creation in 1995-6 of

informatics?], "Nauchno-Tekhnicheskaya Informatsiya; Series 1, 11 (1989): 18-21.

4.1 Felix Sagredo Fernandez and Antonia García Moreno, "History of information science in Spain: a selected bibliography," *Journal of the American Society for Information Science* 48 (April 1997): 369-372.

42. Jose-Maria Izquierdo Arroyo, *La organizaci3n de la informaci3n documental*. Madrid: Tecnidoc, 1996, 502 pp. Bound with *La organizaci3n de la informaci3n documental*. Madrid: Tecnidoc, 1996, 502 pp.

43. *El tratado de documentaci3n (corpus Otletiano)*, 188pp. 502 pp. Bound with *Ati3n de la informaci3n documental* in traducci3n de documentaci3n (corpus Otletiano), 188pp. 502 pp. Bound with *Ati3n de la informaci3n documental* in Spain: a selected bibliography," -

Tekhnicheskaya Informatsiya; SerConceptos fundamentales de la teor3a de la documentaci3n y estudio terminol3gico de la teor3a de la documentaci3n pp. Bound w. Murcia: DM, 1998. iv, 315

44. Jes3s Tramullas, *Introducci3n a la teor3a de la documentaci3n*. Bound with *Ati3n de la informaci3n documental*. <http://www.tramullas.com/nautical/documental/indice.html>

45. Pilar Arnau Rived, *Documentaci3n Rived*. <http://www.tramullas.com/nautical/documental/indice.html>

46. *El Universo de la Documentaci3n*. Madrid: Tecnidoc, 1996, 502 pp. Bound with *Ati3n de la informaci3n documental* in Spain: a selected bibliography," -

the new Mundaneum, for which Andr3 Canonne had undertaken the preliminary initiatives ten years before in Li3ge. Now we see the Mundaneum realised and installed in the town centre of Mons in substantial locations dramatically designed by Beno3t Peeters and Fran3ois Schuiten.⁷³ It is an archive and museum devoted to the work of Otlet and La Fontaine and a number of individuals and organisations associated with them and the period in which they flourished. The collections of the Mundaneum comprise, with related material, what remains of the original records and collections of the organisations from which the original Palais Mondial or Mundaneum was formed. Despite all that has been lost or destroyed after more than 60 years of removals to and from various locations under appalling physical conditions of storage, the collections are still of great richness and depth. An account of their range, an introduction to Otlet and la Fontaine, and a history of the Mundaneum and its various removals from one kind of inadequate warehouse storage to another along with the documentary losses associated with these moves, is given on the Mundaneum's very extensive, extremely informative website.⁷⁴

As the archival collections have been organised and inventoried in the Mundaneum, they have enabled new research of various kinds to be undertaken. This research potential was in a sense given a first expression in *Cent Ans de l'Office International de Bibliographie*, sponsored by the Mundaneum in 1995. This work contains a considerable set of papers that review aspects of the life and times of both Otlet and Henri La Fontaine and discuss some of the collections related, for example, to feminism, anarchism and the international peace movement now housed in the Mundaneum.⁷⁵ As mentioned above, in 2002 the Mundaneum also sponsored the publication of a collection of essays, *La Fontaine, traces d'une vie*.⁷⁶

Documentary films and theatre: In part because of the publicity surrounding the creation of the Mundaneum and its availability to the public as a museum, Otlet has recently begun to attract a wider, more populist public notice beyond the specialists and scholars who have been concerned with him in the past. The tragedy and comedy of his life and work, the

apparent hubris of his utopian visions and the motley physical reality of what was actually achieved, captured so strikingly in the *mise en sc3ne* of the Mundaneum, are of great human interest. In 1998 the Dutch documentary film maker, Ijsbrand van Veelen, having read about the new Mundaneum and Otlet, created a short film *Alle Kennis Van de Wereld: het Papieren Internet* for the Dutch science program Noorderlicht.⁷⁷ TheatreAdhoc, a Dutch experimental performance group, also became intrigued by Otlet. Preparing a dramatic production on Stefan Themerson and the "ultimate intelligence machine," they began to do extensive research on Otlet in order to include an account of his ideas. Their research in the Mundaneum was augmented by an interview with Otlet's grandson, Jean, still living in Brussels, and another with Melisa Coops in the Hague who, as a young girl, had been Otlet's "editorial assistant" in the preparation of the *Traité de Documentation* of 1934.⁷⁸

Of particular note, however, in its orientation towards the general public is the deeply researched, imaginatively realised, prize-winning 2002 film about Otlet by Fran3oise Levie. Entitled, "The Man Who Wanted to Classify the World," it was shown on Belgian television and is available in both English and French video versions.⁷⁹

Architecture of knowledge Colloquium: This film was shown to much acclaim to a particularly well-informed audience at the Mundaneum in Mons in May 2002 as part of a colloquium, "Architecture of Knowledge: the Mundaneum and European Antecedents of the World Wide Web." Organized by Charles Van den Heuvel, an historian of architecture, at that time from the McLuhan Institute at the University of Maastricht in co-operation with Pieter Uyttenhove, an historian of town planning from Ghent University and myself, an historian of information science from the University of Illinois, this colloquium drew together scholars from a range of disciplines and nations to examine the ideas of, and collaborations between, Otlet and a number of his contemporaries. Our hope is to ensure that this symposium will be one of several that will help us formulate a program for and stimulate interest in an interna-

Boyd Rayward, *Hasta la documentació. Madrid: edicinalindice.html*
p. Bound with ation science in Spain: a s traducida por Pilar Arnau Rived.
 Madrid: Mundarnau, 2002

46. Michael Buckland, "Information as thing," *Journal of the American Society for Information Science* 42 (1991): 351-360; "Information retrieval of more than text," *Journal of the American Society for Information Science* 42 (1991): 586-588; Information and information systems. New York: Praeger, 1991; "The centenary of 'Madame Documentation': Suzanne Briet, 1894-1989," *Journal of the American Society for Information Science*, 46 (April 1995): 235-237, trans as "Le centenaire de 'Madame Documentation': Suzanne Briet, 1894-1989," *Documentaliste: Sciences de l'information*, 32, no. 3, 179-181, 1995.

47. Ron Day, "Paul Otlet's Book and the writing of social space," *Journal of the American Society for Information Science*, 48 (April 1997): 310-317; "Totality and representation: a history of knowledge management through European documentation, critical modernity, and post-Fordism," *Journal of the American Society for Information Science*, 52 (2001): 724-735, *The modern invention of information: discourse, history, and power.* Carbondale, Ill.: Southern Illinois University Press, 2001

48. Isabelle Rieussset-Lemarie, "P.Otlet's Mundaneum and the international perspective in the history of documentation and information science," *Journal of the American Society for Information Science*, 48 (April 1997): 301-309

tional conference centered not on Otlet directly but on the themes and the period embraced by Otlet's life and work. A report on the first colloquium is given below.

Transnational Associations *Associations Transnationales*

This issue of *Transitional Association Associations Transnationales* continues the trend in Otlet studies represented in part by the Architecture of Knowledge colloquium mentioned above. This trend has become more generally evident in the last few years. It involves an increasing focus on Otlet by scholars and others from a wide range of disciplines and interests, not just documentalists and information scientists. There are two sometimes distinct, sometimes blurred orientations associated with it. The first orientation is that of those who have a direct interest in Otlet, his organisations, his ideas and the scholarly and other contexts to which they can be related. Otlet is the primary focus. The second orientation is taken by those whose primary interests lie elsewhere but who seek to examine Otlet's relationships with their subjects for the light that he can shed on them - Ostwald, Le Corbusier, Neurath, and issues of international organisation and knowledge visualisation for example, are cases in point. There are, of course, those whose orientation falls somewhere in between these two extremes!

Primary Otlet-orientation: Jean-François Fuëg's "*ordo ab chaos: classer est la plus haute opération de l'esprit*," Stéphanie Manfroid's "Utopies et réalités d'une documentation," and Françoise Levie's "Paul Otlet et le Multimédia" deal with issues directly related to Otlet, the documentary elements of the Mundaneum and Otlet's interest in audio visual media and how they were exploited in his Mundaneum. Levie's discussion of the radio and the Cinescope in this context presents new material. Paul Ghils's "Fonder le monde, fonder le savoir du monde" undertakes a difficult and important task of examining how the utopian in Otlet's ideas about knowledge and politics can be understood in relation both to contemporary currents of thought and to older philosophical traditions as well. The Leibnizian echoes he uncovers are compelling.

Secondary or Other-orientation: Perhaps beginning to move conceptually away from direct interest in Otlet, Anthony Judge raises issues of how we are to conceptualise the Union of International Associations in the digital world and presents a gathering of work on Otlet and hypertext that informs his speculative essay. While Guérin and Marchand are concerned to make sure that Otlet as a pioneer of information technology is admitted to the pantheon of already well-known heroes like Vannevar Bush, Douglas Englebart and Ted Nelson, their primary focus is on a new approach to developing the hypertextual expert system, NESTOR.

Otlet had important contacts with Le Corbusier and Otto Neurath. Le Corbusier was one of the leading architects of his time. That Otlet was able to inspire him to design a plan for the Mundaneum that Otlet, in despair at his treatment in Belgium, proposed to try to create first in Geneva and then elsewhere, is of great interest to historians of architecture. Otto Neurath was a member of the Vienna Circle of logical positivist philosophers. Among his many interests was the problem of knowledge representation, the invention of a new kind of visual language, and the development of what he and his colleagues called a unified encyclopedia of science. All were matters of the liveliest concern to Otlet. It is not surprising to see the over-burdened older man and the younger revolutionary figure strike up an acquaintance and begin to correspond with each other. Nader Vossoughian's paper on the interactions between them on the nature of the Mundaneum as a museum, drawing in part on correspondence he has found in the Mundaneum, is a major original contribution. The connection between Otlet and Neurath forms a background to Giuliano Gresleri's, "Convergences et divergences: de Le Corbusier à Otto Neurath" in which he examines the links between Le Corbusier and Neurath at CIAM'S Athens conference (Congrès Internationaux d'Architecture Moderne). He believes that this connection will throw new light on the drawing up of the statement of functionalist principles for the modern city known as the Athens Charter. Catherine Cortiau in her "La création d'une ville internationale autonome, selon Paul Otlet," traces the

49. Michael Buckland and Ziming Liu, "History of Information Science [a review of the literature]," *Historical Studies in Information Science* edited by Trudi Bellard Hahn and Michael Buckland. Medford, N.J.: Information Today for American Society for Information Science, 1998, p.283.

50. Rayward, "The Origins of Information Science and the Work of the International Institute of Bibliography... 1997 (see note 13 above).

51. Buckland and Liu, "History of Information Science...", pp. 272-295 (note 47 above).

52. For example, M-F Balnquet, "La fonction documentaire, étude dans une perspective historique," *Documentaliste* 30,4/5 (Jul/Oct 1993):199-204; A. Serres, "Hypertexte: une histoire à revisiter," *Documentaliste*; 32, 2 (Mar/Apr 1995):71-83; Sylvie Fayet-Scribe, "Etude de trois associations professionnelles Françaises dans l'entre-deux-guerres,"

Documentaliste 35,4/5 (Jul/Oct 1998):216-28

53. Sylvie Fayet-Scribe, "Chronologie des supports, des dispositifs spatiaux, des outils de repérage de l'information," *Solaris*, Septembre 1997
http://www.info.unicaen.fr/bnum/jelec/Solaris/d04/4fayet_0intro.html

Fayet-Scribe Sylvie, *Histoire de la documentation en France: culture, science et technologie de l'information, 1895-1937*. Paris: CNRS, 2000

54. Irwin Abrams, "Henri Lafontaine: a true international man," *Transnational Associations*, 6(1999): 293 - 296. Previously published in *Inter-Parliamentary Bulletin*, 1996, pp. 63-68 and available at

history of Otlet's ideas about the embodiment of a world city architecturally, noting his interest in the early work of Anderson and Hébrard, through to his collaboration with Le Corbusier in deciding what the new center should look like and where and how it might be placed in Geneva.⁸⁰

Conclusion: Assessing Otlet's importance

This issue of *Transnational Associations* along with the Architecture of Knowledge symposium details about which are given below represent a maturing of research related to Otlet and of our understanding of the various worlds he inhabited during his long and curious life. As central as Otlet's life and work are to historians of documentation and information science, other scholars have begun to take an interest in him from their increasingly diverse perspectives. We are now able to see him and his work as a part of, and reflecting broader themes and movements in European intellectual life and culture.

It seems to me that he can provide a special path into, a productive perspective on, a range of aspect of life and letters in the last quarter of the nineteenth century and the first half of the twentieth century that have yet to be fully investigated. His participation, for example, once we understand it, might give us new insights into the pre-War literary and artistic culture of Belgium, for example. Given all that has been written from an Anglo-American perspective on the First World War and the Peace Movement that culminated in the founding of the League of Nations, what can the activities and writing of Otlet and his associates tell us about the dynamics of this movement in Europe in those critical War years? What light might his relationship shed on the work of other important figures in the social, intellectual and political life of Europe beyond Ostwald, Geddes, Le Corbusier and Neurath on whom discussion has tended to focus hitherto?

Technological and Information society visionary: Otlet's continuing importance may lie in part in our perception that he was a visionary figure whose thinking about globalisation on the one hand and the representation and organisation of knowledge on the other, prefigures the digitised, networked world of today. It is no small claim to fame that Otlet may now be considered one of the "grandfathers" of the internet and digitization and the changing social order that is suggested by such terms as globalisation, the information revolution and the information society. What more do we need to understand about his ideas, their derivation, what they reflect about his times and what more can further examination of them reveal about our own times?

European modernist: In terms of another register of analysis, however, Otlet's importance may also be thought to lie in how he and the circle of those working with and around him are integral to the development of European modernism in the late nineteenth century and early twentieth centuries in ways that we are only just beginning to realise and to explore. Here the research plough has hardly been introduced into the field.

Incompletely known biographically: But at the most human of levels, that of the man and his biography, there remains the fascination of the apparent complexity of and contradictions in Otlet's personality, his wide network of acquaintances, colleagues and friends that bring him into contact with so many of the intellectual, social and political currents of his time, and the extraordinary vicissitudes of his life and career. About all of these matters much yet remains to be discovered and understood.

Only recently, for example, Françoise Levie, during her research in the Mundaneum for "The Man Who Wanted to Classify the World"⁸¹ found a collection of Otlet's love letters to the Dutch woman, Cato Van Nederhasselt, who became his second wife in 1912. From them we begin to see that much more than ink ran in Otlet's veins.

Appendix

W. Boyd Rayward's Otlet Links

Films and Documentaries

- Het papieren Internet; Alle Kennis van de Wereld Description, in Dutch, of a documentary film by Ijsbrand van Veelen for Dutch TV on Otlet.
- Sofidoc, Documentary, Animation, Film Production Company Homepage for Sofidoc and filmmaker Francoise Levie who created *The Man Who Wanted to Classify the World*, broadcast on Belgian TV October 2002. Contains contact addresses.
- Ministère de la Communauté française de Belgique, Site du Service Général de l'Audiovisuel et des Multimédias Brief French description of the film *The Man Who Wanted to Classify the World*.

Mundaneum

- Homepage of the Mundaneum Homepage of the Mundaneum, Rue de Nimy 76, 7000 Mons, Belgium. Archive and Museum. Preeminent site for information about Otlet and related figures and movements and various collections of archives. Many interesting images. Text is in French.

Organizations

- American Society for Information Science and Technology
 - ASIST's Historical Studies in Information Science book contains several articles about Paul Otlet. This page contains ordering information, including price and ISBN number.
 - TheatreAdHoc TheatreAdHoc is an experimental Dutch theatre group which, after considerable research, creates dramatizations for contemporary issues. Site is in Dutch; some weblogs contain English summaries.
 - TheatreAdHoc weblogs: see entries for March 2-16 for visit to the Mundaneum, Mons
 - Theatre AdHoc's weblogs: see entries for June 7 for images of Colloquium, Mons, held May 24-25, 2002
 - TheatreAdHoc's weblogs: see entries for July 12 for images of Jean Otlet, Paul Otlet's grandson.
- Universal Decimal Classification Consortium Discussion of the origins and the history of the Universal Decimal System from the Consortium's home page.
- Union of International Associations The Union of International Associations home page.

<http://www.uia.org/uiata/afontaine.htm>. Also, Nadine Lubelski-Bernard, "Henri Lafontaine et la société internationale de la paix," *Transnational Associations/Associations transnationales*, 45(1993), n°4, pp. 186-189, 206.

55. Nadine Lubelski-Bernard, "Les débuts de l'Union Interparlementaire et la Belgique (1888-1914)," in *Mouvements et initiatives de paix dans la politique internationale (1867-1928)*, edited by Jacques Bariéty and Antoine Fleury, Bern: Peter Lang, 1987 pp. 81-110; "The Institute of International Law, Auguste Beernaert and Henri La Fontaine," In *The Nobel Peace Prize and the laureates: an illustrated biographical history, 1901-1987*, edited by Irwin Abrams. Boston: G.K. Hall, 1994; "Henri La Fontaine (1854-1943) ou la paix par le droit," *Revue belge de droit international*, 28 (1995): 343-356.

56. Nadine Lubelski-Bernard, "Le Partisan de la paix," in *Henri La Fontaine: tracés d'une vie*, edited by Henry Goffin. Mons: Mundaneum, 2002, pp. 71-87

57. *Henri La Fontaine: tracés d'une vie*..(see note 56 above).

58. Satoh, Takashi, "The Bridge Movement in Munich and Ostwald's Treatise on the Organisation of Knowledge," *Libri* 37(1987): 1-24

— Union of International Associations — Virtual Organization: Paul Otlet's 100-year Hypertext Conundrum?

Item from UIA on its work in relation to the founder's ideas. This document also assembles summaries of a number of other documents, available on the web concerning the "secret history" of hypertext.

Otlet Pages

- W. Boyd Rayward's Otlet page W. Boyd Rayward is a research professor at the University of Illinois at Urbana-Champaign's Graduate School of Library and Information Science. On this site, are references to his publications about Paul Otlet.
- Michael Buckland's Otlet page **Michael Buckland** is a Professor in the School of Information Management & Systems at Berkeley. On this site he provides a range of useful links to information about Paul Otlet.
- Michael Buckland's History of Information Management and Information Science **Michael Buckland's** history of information science web page contains important and relevant material on Otlet, plus much related information.
- Ron Day's website **Ron Day** is an Assistant Professor at the Library and Information Science program at Wayne State University in Detroit, Michigan. Some of his work considers Otlet from the perspective of critical theory.
- Scientific Information and Communication: A collection of Internet-Links **Thomas Hapke**, German Chemistry Librarian, provides this page on the history of information and communication. Has references on his writing on Wilhelm Ostwald and Otlet along with references to recent events of interest to historians of scientific information and communication.
- University of Maastricht, Architecture of Knowledge: the Mundaneum and European Antecedents of the World Wide Web Preliminary web page with wonderful image of Otlet for project centered on McLuhan Institute at University of Maastricht called Architecture of Knowledge: the Mundaneum and European Antecedents of the World Wide Web.
- Report of first meeting of colloquium in Mons at the Mundaneum about the Otlet "Architecture of Knowledge" project, May 24-25, 2002.

59. Thomas Hapke, "Wilhelm Ostwald, the 'Brücke' (Bridge), and connections to other bibliographic activities at the beginning of the twentieth century," in *Proceedings of the 1998 Conference on the History and Heritage of Science Information Systems*, edited by Mary Ellen Bowden, Trudi Bellardo Hahn, Robert V. Williams. Medford, NJ: Information Today, 1999, pp. 139-147; "Wilhelm Ostwald und seine Initiativen zur Organisation und Standardisierung naturwissenschaftlicher Publizistik : Enzyklopädismus, Internationalismus und Taylorismus am Beginn des 20. Jahrhunderts," in *Fachschritftum, Bibliothek und Naturwissenschaft im 19. und 20. Jahrhundert*, hrsg. von Christoph Meinel. Wiesbaden: Harrassowitz, 1997 (Wolfenbütteler Schriften zur Geschichte des Buchwesens ; 27) S. 157-174 ; also: Wilhelm Ostwald's activities to improve scholarly information ...Paul Otlet and the Institut International de Bibliographie (IIB) at <http://www.tu-harburg.de/b/hapke/ostwald/lpz3-1.htm>
60. Rolf Sachsse, *Das Gehirn der Welt: 1912: Die Organisation der Organisatoren durch die Brücke*, 19.11.1998. Teleopolis container; Heize online <http://www.heise.de/tp/deutsch/inhalt/co/2481/1.html>
61. For example, Anne Rasmussen, "Jalons pour une histoire des congrès internationaux au XIXe siècle: regulation scientifique et propagande intellectuelle," *Relations Internationales* no 62 (1990): 115-133
62. David A. R. Forrester, "European Congresses of Accounting: a preliminary review of their history," *An Invitation to Accounting History*. Glasgow: Strathclyde Convergences, 1998. Available online: <http://accfinweb.account.strath.ac.uk/df/c6.html>
63. Jean-Françoise Füeg and Vincent Algraint, "Albert Kahn et Paul Otlet: deux pioniers de l'iconographie," *Archives et Bibliothèques de Belgique* 69 (1998):99-110
64. Pieter Uyttenhove, "Les efforts internationaux pour une Belgique moderne," in *Resurgam :La reconstruction en Belgique après 1914*, edited by Marcel Smets. Bruxelles: Crédit Communal de Belgique, 1985, pp. 35-68
65. Giuliano Gresleri and Dario Matteoni , *La città mondiale: Andersen, Hébrnard, Otlet, Le Corbusier*. Venice: Marsilio, 1982.
66. Catherine Cortiau, "La Cité internationale, 1927-1931," in *Le Corbusier à Genève 1922-1932*. Lausanne: Payot, 1987, 53-69; "LEpopée de la Cité Mondiale de Paul Otlet," *Lectures* no 41 (1988) 13-17.
67. Sofia G. Leonard, "The context and legacy of Patrick Geddes in Europe," in *The City after Geddes*, edited by Volker Welter and James Lawson. Oxford: Peter Lang, 2000, pp. 73-4
68. Volker Welter, *Biopolis : Patrick Geddes and the city of life*. Cambridge, Mass.: MIT Press, 2002.
69. Helen Meller, *Patrick Geddes : social evolutionist and city planner*. London: Routledge, 1990.
70. W. Boyd Rayward, "Restructuring and mobilising information in documents; a historical perspective," in *Conceptions of Library and Information science: historical, empirical and theoretical perspectives* (proceedings of COLIS I, Tampere Finland, 1991) edited by Pertti Vakkari and Blaise Cronin. London: Taylor Graham, 1992, pp.50-68. A revised version of this was published as "Some Schemes for restructuring and mobilising information in documents; a historical perspective," *Information Processing and Management*, 30 (1994): 163-175.
71. Rayward, "Visions of Xanadu ... (see above note 13).
72. "Union of International Associations — Virtual Organization: Paul Otlet's 100-year Hypertext Conundrum ?" <http://laetusinpraesens.org/docs/otlethyp.php#history>
73. Schuiten, Peeters (sic), *Le Mundaneum: projet d'exposition permanente* (24 leaves; and annexe: "L'Homme qui voulait classer le monde, projet de documentaire 52' "; no date or place of publication. Available at the Mundaneum, Mons).
74. http://www.mundaneum.be/content/archives/archives_frame.html and <http://www.mundaneum.be/content/mundaneum/qqsmsots.html>
75. *Cent Ans de L'Office International de Bibliographie: les premisses du Mundaemum*. Mons: Editions Mundaneum, 1995.
76. *La Fontiane, tracés d'une vie...* see note 56 above.
77. *Alle Kennis Van de Werld: Het papieren internet*, a documentary film created and directed by IJsbrand van Veelen for Noordlicht, was shown on Dutch TV Sunday, November 1, 1998.
78. TheatreAdhoc have extensive weblogs of their work in the Mundaneum and their interviews. See: <http://www.theateradhoc.nl/index.php>
79. Françoise Levie, "The Man who wanted to classify the world: from the index card to the World City, the visionary life of a Belgian Utopian, Paul Otlet (1868-1944)[film]." Original script written by Benoit Peeters and Françoise Levie, Brussels, Sofidoc, 2002.
80. This whole subject including both Andersen and Le Corbusier is an important feature of Levie's film about Otlet (note 79 above). The film takes us to the Villa Hélène in Rome where Andersen worked, to the League of Nations building in Geneva and to the Fondation Le Corbusier in Paris.
81. See note 79 above.