

‘The times are wrong’<sup>1</sup>: Paul Otlet, modernist  
anachronism or prophetic knowledge architect of  
the postmodern?

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<sup>1</sup> Otlet, P. (1903), p. 79.

## Summary

This study sets out to critically re-evaluate the legacy of Paul Otlet (1868-1944), pioneering and boundlessly ambitious architect of knowledge organization systems, and the manner in which it has been reclaimed in the last twenty years. Specifically, it explores a fundamental tension in the literature between portrayals of Otlet as an arch positivist, and as a presciently postmodern author anticipating hypertext and the attendant dissolution of the integrity and objective significance of the text.

Proceeding through a systematic review of the literature, and a wider text analysis, the presentation of Otlet as prescient sage has its validity and motivations interrogated. This reveals a latent championing of the positivist tradition, identified and lamented in contemporary library research by many critics, dressed in the superficial trappings of the postmodern but out meaningfully investigating its concomitant epistemology. By extension, this reveals library and information science's problematic relationship both with its own history and, arguably, its disjunction with the wider cultural and intellectual context of the social sciences and humanities, at least powerfully influenced by postmodern ideas.

Attempting to set the underlying positivist tradition to one side, along with the figure of Otlet himself, a more radical synthesis of the subject is attempted via the insights of postmodernism, ironically introduced into the discourse by champions of Otlet's continued relevance. Influenced particularly by the works of Roland Barthes, this approach releases Otlet's text into a borderless, contingent environment where the certainties which he laboured to record recede. However, in the process, Otlet's bibliographic repertoires become empowered to participate in a plethora of new knowledge creation possibilities. Similarly, a future for the library is suggested where its ends become the immersion of the reader in a self-led exploration of a world of text unmarked by the library's subjective judgment.

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## **1. Introduction**

### 1.1 Historical background: Paul Otlet

Paul Otlet (1868-1944) has been reclaimed as an important figure in the history of library philosophy and practice in the last twenty years. The activities of the International Office of Bibliography, which he founded, have been described as of ‘fundamental importance in the development of what we now call information science’ (Rayward, 1997, p. 289). This study will seek to examine some of the ways in which Otlet’s legacy has been re-examined, not only to better understand Otlet but also to explore tensions and contradictions in the contemporary understanding of exactly what it is that ‘we now call information science’.

Otlet undeniably had a striking and enormously influential career. Outside of his work on bibliographic projects, he had ‘some impact [...] in the movement to create the League of Nations’ (Rayward, 1975, p. 3), and attracted many great figures of the twentieth century to his grandiose schemes, such as the architect Le Corbusier, who drew plans for an envisaged world city of information (see Rayward, 1975, p. 304). However, it is in the management of information, which to Otlet was inextricable from all other projects, that he had the most lasting impact. Despite ‘the indifference of governments to problems of co-operation in the dissemination and bibliographical control of information’ (Rayward, 1975, p. 3), Otlet developed systems that were revolutionary in their organisation and, crucially, in the ambition of their scope. Throughout his career, he challenged himself and his colleagues to develop through ‘the organisation of documentation on an increasingly comprehensive basis in an increasingly practical way [...] the ideal of a “machine for exploring space and time”’ (Otlet, 1903, p. 86). Moreover, he wished to bring into

being a whole profession of documentation to support and extend his efforts, and is thus credited with having written ‘the first systematic, modern discussion of general problems of organizing information’ (Rayward, 1994, p. 237). He generated vast and navigable corpuses of bibliographic information, perhaps most notably his Repertoire Bibliographique Universelle (RBU) or Universal Bibliographic Repertory. While estimates vary, not least because of damage done to this monumental card index during the upheavals of the twentieth century, the RBU ran to some ‘16 million cards’ (Rayward, 2010, p. 13). Otlet believed that his repertory could ‘truly become a world memory [...] a vast intellectual mechanism designed to capture and condense scattered and diffuse information and then to distribute it everywhere it is needed’ (Otlet, 1907, p. 110). Moreover, organising this repertory, and linking it meaningfully to the multifarious other systems his offices designed, was the Universal Decimal Classification (UDC). Still developed and operating in many libraries worldwide today, this was Otlet’s fundamental and extravagant redevelopment of the Dewey Decimal System into a multi-faceted scheme, described by the magisterial S. C. Bradford as the ‘only [...] system of classification, which is sufficiently subdivided and extensive’ (1971, p. 62).

## 1.2 Presentations of Otlet

The tremendous ambition of Otlet’s vision, and his extraordinary intellectual brio in constructing his systems demand the attention of contemporary library practitioners. However, beneath the praise there are two competing presentations of Otlet in recent literature, and this study operates within the tension between them. Initially, he is persistently and convincingly cast as representing the preoccupations and ideological

backgrounds of his time. His work has been seen as a ‘modernist frenzy’ (Frohmann, 2008, p. 76), a multilayered project immersed in the optimistic internationalism and positivist, hierarchical thought of his period. It has been claimed that his dream of a ‘unified global system for the control of documents seems symptomatic of an industrial modernity increasingly bureaucratic and technocratic in its nature’ (Muddiman, 1999, p.7). Perhaps most influentially, Rayward has described his conception of knowledge as ‘authoritarian, reductionist, positivist, simplistic – and optimistic’ (1994, p. 247).

Simultaneously, however, in the last twenty years Otlet has been cast as a quasi-prophetic seer who foresaw, and bequeathed means of addressing, the postmodern information society in its plurality and polymorphous accessibility. He becomes the ‘visionary precursor’ (Rieusset-Lemarié, 1997, p. 301) of library and information science, ‘a visionary whose ideas were at least fifty years ahead of his time’ (Rayward, 1975, p. 3). Specifically, there have been repeated attempts to prove that Otlet’s ‘ideas and the systems to which they gave rise constitute an important chapter in the history of hypertext’ (Rayward, 1994, p. 235).

### 1.3 Aims and objectives

These presentations are not only antagonistic but wholly incompatible, and there can be no hope of teasing any easy synthesis from them. It is the aim of this dissertation, therefore, to explore this conceptual paradox and to seek to posit an approach that allows us to place Otlet’s work and reputation, and the role of the library itself, in a clearer perspective, permitting the development and proper appreciation of both.

Following a review of the literature, the claimed connections between Paul Otlet and hypertext will be closely reviewed, to determine not only their validity, but also any possible alternative motive for drawing such connections. On analysis, the presentation of Otlet as foreseeing hypertext will be revealed to conceal a latent championing of the positivist tradition, and a fundamental misrepresentation of the nature of hypertext. By extension, this will reveal library and information science's problematic relationship both with its own history and, arguably, with the wider cultural and intellectual context of the social sciences and humanities.

This will then be extended via an alternative approach, to admit the insights of the postmodern into the interpretation of Otlet's work, to review whether it is amenable to a more radical synthesis which sets aside the personality and intention of Otlet the man. In this process, Otlet's text will be allowed to take its place in a borderless, contingent environment where a plethora of new knowledge creation possibilities are enabled. This in turn will suggest a future for the library that does not rely on strident claims of relevance or a search for legitimacy in its own history.

## **2. Methodology**

### 2.1 Introduction.

This dissertation sets out to explore the relevance of broad terms such as modernist and postmodernist when applied to a single figure from the early history of a modern, systematic library science, Paul Otlet. A considerable body of literature was identified that debated these issues, within which the achievements and methodological approach of Otlet were inextricable from an underlying debate about the proper role and function of the contemporary library. This discourse had a radical influence on methodological decisions for the current study, significantly broadening its focus and suggesting a new theoretical direction.

### 2.2 Methods of data collection

The study's focus on a single historical figure suggested that a systematic review of the literature relating to Otlet may be feasible, a 'scientific and transparent process' representing 'exhaustive literature searches of published and unpublished studies' (Bryman, 2008, p. 85). In the initial stages, this was an open, catholic process where all references were pursued. Otlet himself was a prodigious author, who continued to develop and often reiterate fundamental themes and approaches throughout his life in a variety of forms from brief articles to truly substantial texts such as his *Traité de Documentation*. Otlet's work is a challenging corpus, of which even Rayward, arguably his greatest champion, admits that much has 'an almost imperceptible pulse of argument,' with 'no momentum of thesis, evidence, and conclusion' (1997, p. 299). Moreover, the sheer size of this body of text dictated some informed selection of the most significant documents. Therefore, in the study which follows, certain key texts

were identified which most forcefully identified Otlet's principal themes and from which much quotation is made.

However, it became clear very rapidly that Otlet's role was frequently being explored in order to access fundamental issues and questions facing the library and information profession. In this situation, a rigorous absorption of all relevant material was clearly impractical. Therefore, a broadly narrative review approach has been adopted, where sources were gathered in an attempt to 'enrich human discourse by generating understanding rather than by accumulating knowledge' (Bryman, 2008, p. 92). Through careful close reading of the most seemingly influential sources, it is hoped that a representation of a crisis in library epistemology has been achieved, which generates a clearer perception of Paul Otlet while also suggesting new ways for the information profession to proceed.

As will be discussed below, the protean concept of the postmodern intruded forcefully into the study following a literature review and some analysis. While the very nature of this ideology resists the idea of the canonical, practical considerations meant that a surveying of texts from this tradition had to be made. In this, the most influential, or at least the most frequently cited and critically prominent texts were selected, with a simultaneous awareness of the inescapable subjectivity of any selection.

### 2.3 Methods of data analysis

The subject matter of this dissertation necessitated a qualitative study, where any new 'knowledge' generated could not make reference to objective measurement. It is enacted in a documentary method, and specifically what Sarantakos describes as 'text

analysis' which 'reaches the ultimate point of analysis' via 'methods such as semiotics, discourse analysis and hermeneutics' (2005, p. 293). The study will seek to examine Otlet's texts and those of his critics not to extract that which they can teach us about the reality of the library, but to reveal 'the socially constructed frameworks of meaning' (Sarantakos, 2005, p. 309) which govern the library and interactions with it; it will operate intentionally in a hermeneutic spiral, attempting to relate these first texts to 'the totality of life-worlds in which they originated' (op. cit., p. 313) and to then reinterpret these texts afresh.

The subjective and dense nature of much of the textual resources assembled resisted a quasi-scientific approach such as content analysis with its 'systematic and replicable' (Bryman, 2008, p. 275) processes. Instead, a qualitative content analysis method has been adopted where the emphasis has been on the drawing out of general themes. In this model, analysis is clearly subjective, dependent on the many conscious and unconscious cultural biases of the author. Rather than admitting defeat before this potential plurality of meaning, a reflective approach has been adopted. As Alvesson and Sköldbberg define it, such an approach

starts from a sceptical approach to what appear at a superficial glance as unproblematic replicas of the way reality functions, while at the same time maintaining the belief that the study of suitable (well thought out) excerpts from this reality can provide an important basis for a generation of knowledge that opens up rather than closes, and furnishes opportunities for understanding rather than establishes 'truths' (2009, p. 9).

In this quotation lies the heart of the methodological approach adopted below; a study which remains aware of its subjectivity and limitations while pursuing some new areas of knowledge and insight to better understand both Otlet and the ontology of the library.

Otlet's work was directed to cataloguing 'the way reality functions', and has been seen as unambiguously positivist, an approach which is not always easy to define but is fundamentally 'an epistemological position that advocates the application of the methods of the natural sciences', not least that research 'must (and presumably can) be conducted in a way that is value free (that is *objective*)' (Bryman, 2008, p. 13). The significance and validity of such positivism has been 'the target of strong and growing criticism' (Alvesson and Sköldberg, 2009, pp. 17-18) for at least fifty years. However, there is a persistent 'positivism [...] that governs thought and work in library and information science, whether or not it is realized or accepted' (Budd, 1995, p. 295) which this study repeatedly met in reviewing the literature. There is thus a significant and problematic disjunction between library science and the methodological and ideological context of the social sciences and society itself. Indeed, it has been suggested that 'the epistemology of library science must become explicitly recognized as a significant problem' (Radford, 1998, p. 617).

This disjunction has been significantly influenced by the radical impact on the social sciences of postmodern understandings, which are most readily understood as antagonistic to a positivist framework. The postmodern also intrudes into this study in overt attempts in the literature to link Otlet to a prescient understanding of it. In response to these twin pressures, this study's reflective approach will therefore be strongly influenced by a postmodern understanding, in an attempt to resolve competing interpretations of the significance of the work of Paul Otlet, and of the nature and ontology of the library. In some sense, this is to deal in paradoxes, as 'postmodernists do not talk about methodology [...] one could even say that postmodernism is anti-methodological' (Alvesson and Sköldberg, 2009, p. 212).

However, postmodernism can also be seen as the logical conclusion of a reflective practice, in that ‘postmodernism is Western civilization’s best attempt to date to critique its own fundamental assumptions, particularly those assumptions that constitute reality, subjectivity, research, and knowledge’ (Scheurich, 1997, p. 2).

Moreover, this does not mean that this study accepts of itself, as some critics dismissively argue of postmodernism, that within such a view it is ‘hardly possible to accomplish a progression in knowledge development’ (Alvesson and Sköldberg, 2009, p. 205). While Bryman might resentfully suggest that ‘postmodernism is a deeply disruptive stance on social research’ (2008, p. 680), this study will argue that it is redemptive of Otlet’s reputation, and of the wider purpose of the library, to embrace ‘indeterminacy rather than determinism, diversity rather than unity, difference rather than synthesis, complexity rather than simplification’ (Rosenau, 1992, p. 8). Even if this comes at the price of social research being ‘a more subjective and humble enterprise’ (ibid.), this is offered as preferable to an atavistic and ultimately ideologically unsupportable devotion to ‘validity, the positivist ghost’ (Scheurich, 1997, p. 4). Indeed, the literature supports the idea that ‘most social scientists’ accept much of the fundamental insight of the postmodern, that ‘society and its institutions are not given, but in some wide sense socially created’ (Alvesson and Sköldberg, 2009, p. 34); all that remains is to pursue that acceptance into fundamental discussion.

Lastly, there will be no attempt to divide up the intellectual density of postmodernism into distinct subdivisions or varieties, as is sometimes attempted. Methodological practice adopted below may sometimes be described more fittingly as either post-structuralist or postmodern, but it is assumed with Alvesson and Sköldberg

that such labels are at best more ‘a matter of emphasis than substantive differences’ (2009, p. 181).

#### 2.4 Limitations and lesson learned

This study unambiguously accepts the limitations of its insight which are offered as intending to generate further discussion and to suggest new approaches to the legacy of Paul Otlet and to the role of the library in a postmodern context. With Scheurich, this dissertation foregrounds its faith that even if it believes it is ‘doing good works or creating useful knowledge or helping people’ it is ‘unknowingly enacting or being enacted by “deep” civilizational and cultural biases’ (1997, p. 1) which in turn await their rejection by another researcher. However, in so doing it aims to at least ‘enrich human discourse’ (Bryman, 2008, p. 92).

On a practical level, the collation of primary material was restricted by access to the collections of the Mundaneum museum in Mons, Belgium. A very significant personal archive of the activities of Paul Otlet exists here which it was impractical to visit. However, much material by Otlet has been reprinted in the last ten years, and the author was able to consult his two great works, the *Traite de Documentation* and his *Monde*, which have not been translated into English, in their original language and to attempt translations for this study as appropriate.

#### 2.5 Summary

Consideration of the literature relating to Paul Otlet led this study in an increasingly questioning, postmodern direction which reflects attempts to both revivify Otlet’s

reputation and to find a role and ontology for the library in the contemporary setting. While its findings are openly tentative and subjective, it is hoped that all conception of value has not been drained from the discussion; as Squires eloquently phrases it, ‘the question of value within postmodern theories is simply problematic; values have not disappeared’ (1993, p. 5).

### **3. Literature Review**

#### 3.1 Introduction

As discussed in the methodology, the literature review led this study towards a combined analysis of the figures of Paul Otlet and the contemporary library. The literature revealed repeated attempts to use Otlet to explore, and frequently champion, the relevance and history of the library. The structure of the literature review reflects this, and it is broken into four sections. The first reveals a shared and diverse awareness of a potential and serious disjunction between the library and its ideological and social context; the second deals with the repeated presentation of Otlet as operating in a positivist, modernist tradition; the third explores briefly the most significant discussion of Otlet as presciently aware of the postmodern; the fourth looks to the published discussion of one potential vision of the future library, and the role it may have in providing a new perspective on Otlet's work.

#### 3.2 Postmodernity and the contemporary library

The current state of library and information science is markedly different to Paul Otlet's bombastic certainty that he could construct from 'the intellectual effort of centuries [...] a monument erected to the glory of human thought' (1914, p. 119) which would perfectly meet the needs of all researchers. Rather, as Rayward suggests, Otlet's successors are paralysed by 'the pressing exigencies of the current moment, especially in relation to a group of modern library and information science-based occupations reconstituting themselves around cutting-edge technology' (2004, p. 672). As Radford emphasises, however, this is not merely a matter of technology, but rather that 'traditional concepts of knowledge, meaning, and communication in library

and information science are facing a crisis; they are unable to adequately characterize and structure the experience of interacting with the modern [...] library' (1998, p. 616). The essential terms of the interaction have radically altered, and in some sense the library profession must alter too; as Michael Buckland states, 'we have, or should have, a stronger sense of the importance of the semiotic, the social, and the cultural dimensions of how knowledge is related to reality and of how documents are related to knowledge' (2004, p. 4).

The very nature of information is shifting here, so that it has lost its univalent role as a transferrable commodity, and there is a growing doubt of what Otlet took for granted, the 'rational and universal apprehension of facts' (Frohmann, 2008, p. 82). As Garrett argues, what has fundamentally begun to evaporate here is 'our collective belief [...] in the existence of a scientifically derived and classifiable body of knowledge' (1991, p. 382). Jean-Francois Lyotard amplifies this awareness, by arguing that this is a purely self-referential system, where 'the conditions of truth' of that scientific knowledge are merely 'the rules of the game of science' and are 'immanent in that game' with 'no other proof that the rules are good (1984, p. 29). The roots of this debate will be examined further below, but the library profession is facing a critical challenge to its ontology inherent in this dissolution of certainty. It will be argued below that one mistaken, if popular path, is to turn to 'the value of history in helping us to achieve a reasonably full understanding of current trends of development in [...] society's knowledge apparatus' (Rayward, 2004, p. 671). In an era when Jean-Francois Lyotard has influentially identified a pervasive 'incredulity to metanarratives' (1984, p.xxiv), there is a danger that the library profession is busily building a metanarrative of its own development, with the writings of Otlet

resurrected not to honour its responses to the needs of his own time, but rather to portray them as inexplicably prescient of those ‘pressing exigencies’ of today. There is a risk of a grand, quasi-Whig narrative of the omnisciently rational profession which wholly ignores the intellectual culture in which it finds itself and closes off opportunities to reorganise itself in such a manner to preserve its relevance.

### 3.3 Modernist anachronism: Otlet, positivism and the library

Otlet ‘firmly believed that one could give a unique description and classification of reality’ (Ducheyne, 2009, p. 223), the paradigm of the rationalist, positivist assemblage and manipulation of information. Otlet’s project moved towards a cosmos of knowledge marked by order and efficiency, arguably a distinctly modernist conception. Indeed, Rayward has commented on how Otlet was ‘committed [...] to a pervasive modernist belief in rationality, planning, standardization, mechanization’ (Rayward, 2008, p. 12). Similarly, Day remarks that ‘Otlet’s writings retain the sense of futurity and trust in machinery and rational organization which are hallmarks of modernism’ (Day, 1997, p. 315). Frohmann goes so far as to cast Otlet’s project explicitly as a ‘modernist frenzy’ (2008, p. 76), marvelling at the ‘force and power of the massive apparatus of Otlet’s modernist project of documentation’ (p. 84).

Beneath this mechanistic response lay a faith that one could ‘in a single glance grasp this complex universal, the world’ (Otlet, 1935, p. 105).<sup>2</sup> Rayward eloquently summed up this relationship to information when he declared that Otlet’s ‘view of knowledge was authoritarian, reductionist, positivist, simplistic – and optimistic’ (1994, p. 247). Firstly, it must be made clear that it would be a mistake to berate Otlet

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<sup>2</sup> ‘d’un coup d’oeil embrasser ce complexe universel, le Monde’ (author’s translation).

or to attempt to belittle his status as a library pioneer simply for reflecting the broadly positivist trends which dominated his period. As Buckland convincingly warns ‘we will fail to understand the documentalists and their achievements unless we remember that their intellectual and cultural environment, as well as their technology, was different from ours’ (2008, p. 54).

However, through this ‘positivistic optimistic scheme’ (Rieusset-Lemarié, 1997, p. 306), Otlet is arguably tied to a conception of knowledge which exacerbates the current crisis in the library’s role. While Radford has issued a strident call that ‘the epistemology of library science must become explicitly recognized as a significant problem to be addressed by library scholars’ (Radford, 1998, p. 617), this has not found acceptance in the wider practising community. Indeed, such demands are more likely to be met with emphatic rejection that library professionals ‘do not need, nor do we have, one single philosophy’, but should rather fall back on the pragmatic, and inescapably positivist, hope to ‘do useful things [...] and be helpful to our patrons (Zwadlo, 1997, p. 1). This is despite the fact that the call to reject positivism is not only well documented in library and information science literature, but has its own heritage stretching back several decades. Harris describes the library research community having ‘fallen prey to the siren called “positivism”’, but suggests that by 1960 most realised that ‘it was impossible to separate the subject (the researcher) from the object’ (1986, pp. 517, 521), and that the positivist model must be abandoned. Indeed, he describes social scientists of the period as ‘amazed at the degree to which they had subscribed to the value-free proposition in the first place’ (p. 521).

However, despite this work, there is undeniable evidence of the continued presence of the modernist, positivist conceptions of Otlet's generation in contemporary information practice; as Budd suggests, 'positivism [...]governs thought and work in library and information science, whether or not it is realized or accepted' (1995, p. 295). Indeed, ten years after this remark, Birger Hjørland, in an insightful and sensitive analysis, laments that 'positivism [is] still dominant in LIS [library and information science]' (2005, p. 130).

As Budd goes on to say, the persistence of a positivist outlook is not surprising, 'perhaps because of the attractiveness of its claims, specifically the phantasm of certainty' (1995, p. 298). In the library, this certainty relates to the truth and value of the information curated, the desire for it amongst the patrons, and the possibility of accurately uniting these two. This is the model Zwadlo champions, and it is hard to differentiate from Otlet's desire to construct one 'vast intellectual mechanism designed to capture and condense scattered and diffuse information and then to distribute it to everywhere it is needed' (Otlet, 1907, p. 110). Of course, at best, as Muddiman cautions, such schemes will 'construct a privileged form of knowledge which [...] amounts to a partial yet dominant culture which is male, European, positivist and humanist' (1999, p. 6). It is this type of restricted discourse, blind to contemporary changes in understanding, which threatens the relevance of the library. It will be argued below that much of the discussion of Paul Otlet, seeking to claim his work as 'an important and neglected part of the history of information science' (Rayward, 1994, p. 235), is evidence of a rearguard struggle to reinvigorate the underlying positivist traditions in the library. This effort is arguably nowhere

clearer than in many critics' problematic, superficial linkage of this arch positivist to postmodern sensibilities.

### 3.4 Prophetic knowledge architect of the postmodern

Otlet's work has been variously linked to the postmodern, from the detection of underlying patterns of thought to claims of his prescience of the contemporary position. For example, Day insists that Otlet was 'involved in a proto-deconstructionist understanding of textuality' (1997, p. 310), and Rayward that Otlet's systems contain the basic components of modern information technology. For example, he claims that 'it is hard not to see prefigured [...] a version of what we now know as the Internet' (Rayward, 1997, p. 296) in his international networks. Similarly, and most influentially, he has argued that his repertoires, structured around the 'highly flexible database management system' of UDC (1994, p. 238), 'constitute an important chapter in the history of hypertext', of which much of the 'functionality was anticipated by [...] Paul Otlet' (p. 235). In others' hands, this nuanced comparison becomes a blunt and simplistic causal relationship, as for example when it is boldly stated that 'Otlet [...] foresaw the technical devices for international communication' (Rieusset-Lemarié, 1997, p. 303).

However, it is undeniably in hypertext that claims for Otlet as having somehow anticipated and absorbed the postmodern are at their most charged. Hypertext has been unambiguously declared to be both perfect expression and midwife of postmodern text; as George Landow insists, 'networked hypertext [...] offers liberation, idiosyncrasy, and even anarchy [and] obviates the kind of control feared by Lyotard' (1994, p. 33). Despite his seeming positivism, some commentators

have sought to suggest that Otlet himself perceived the world and the raw materials of his documentalist project in a presciently postmodern manner. For example, Day argues that

What does not seem to have been fully appreciated [...] is how the book itself for Otlet is the basis for such a 'hypertextuality' [...] For the book is an 'accumulator,' is an assemblage of a multiplicity of forces, bodies, and senses, challenges the assumed boundaries which mark what is 'inside' and what is 'outside' the text (1997, p. 313)

Day is here gesturing towards the deconstruction of the text typified by Roland Barthes, who influentially argued that while one material book may be regarded as

a fragment of substance, occupying part of the space of books (in a library for example), the Text is a methodological field [...] its constitutive movement is that of cutting across (in particular, it can cut across the work, several works) (Barthes, 1977, pp. 156-7)

Moreover, such a connection is latent in any comparison between Otlet and hypertext, which 'seeks to exploit the kinds of inter-relationship that Barthes suggests exists between texts' (Tredinnick, 2007, p. 173).

Such analyses may reveal new approaches to the history of hypertext or to Otlet and his 'fabulous but eclectic collection of ideas and projects' (Uyttenhove, 2008, p. 89). However, such an appreciation of Otlet is fundamentally and inescapably incompatible with the approaches already discussed, which foreground positivist modernism. It is important to be clear that seeking to resolve this dichotomy is not purely a matter of arcane interest for the historically minded librarian, but rather goes to the heart of interpretations the ontology of the library itself. When Otlet's prescience of the hypertextual is being declared, what is arguably being enacted is an attempt to legitimize the besieged underlying positivist discourse of the contemporary library by associating it with an aura of postmodernity. By drawing seeming connections between the stable, univalent and classificatory processing of information

championed by Otlet and the most seemingly contemporary technological revolutions, the current malaise of information science is obscured. It will be necessary to explore below in detail a possible resolution of these issues, which cannot ignore a view of the future of the library heavily influenced by postmodern understanding.

### 3.5 The (postmodern) future of Otlet and the library.

What can emerge from a review of readings of Paul Otlet is an (ironically potentially postmodern) overdetermination of Otlet and his work, with competing and wholly incompatible interpretations strenuously advanced as the only genuinely acceptable interpretation. In this, the information profession once more reveals its positivist determination to discover, classify and fix rather than to study or to enquire into the essence of the problem. Budd's remarks on the power of positivism to inhibit genuine understanding are relevant here:

In an extreme operational positivism, empirical investigation is confused with inquiring into essence; there is a belief that it is through empiricism that understanding of ontology arises. A substantial portion of research in library and information science is a result of an upsetting of the hierarchy (1995, p. 305)

If we are to attempt a review of the relations between the postmodern and the library, we must not indulge in historical re-examination or in drawing out partial resemblances between positivist practice and postmodern suggestion. Rather, we should perhaps be prepared to question the ontology of the library and the validity of its gathering and processing of information, in a way which is anathema to Otlet's certainties.

Without this boldness of inquiry, the library is prevented from growing into something more amenable to the revealed nature of information. In a setting where all

information 'is potentially valuable or worthless' (Garrett, 1991, p. 381), libraries must abandon the mission to 'capture and condense scattered and diffuse information and then to distribute it to everywhere it is needed' (Otlet, 1907, p. 110). As Brooks argues, library staff's certainty of their helpfulness is not enough: 'disregarding the reference librarian's fervent belief in acting in the public good, how is the relevance of her answers proven?' (1989, p. 238). Rather, as Anderson powerfully and eloquently argues, 'by providing the shared space [...] for the relationship between readers and knowledge' libraries can become 'knowledge creation organizations' (Anderson, 1994, p. 108). This creation must occur on multiple levels, practised by each user, and must be allowed to take precedence over an 'imposed, external organization of that knowledge' (Anderson, 1994, p. 114). Each user of the library, exactly as each reader of postmodern text, creates his or her own meaning from interaction with the information, where 'dichotomies such as the true and the false, the important and the trivial, and the enduring and the ephemeral lose their previous importance' (Radford, 1998, p. 631).

Whatever Otlet's own epistemology, there appears to be an implicit fear in some critics' mind that such an approach will lead to the abandonment of his work. However, in the notions of fixed value and relevance, this liberated vision will rather remove a significant barrier to its proper appreciation. Otlet's work will no longer be subject either to accusations of ideological irrelevance, or to crude attempts to force superficial relevance upon it. It can be released into its own textual identity, to generate an ungoverned play of knowledge creation with those who encounter it, just as the library in the same process can be revived in a new, creative, role.

## **4. Paul Otlet and visions of hypertext**

### 4.1 Introduction

As has been explored above, there is a fundamental tension in operation between mutually exclusive portrayals of Otlet as a positivist, and as a presciently postmodern author undermining the integrity of the text. Moreover, there is arguably a submerged dimension to this debate in which the heritage, importance and future of the information profession is being explored and evaluated at one remove. One area where the interaction of these discourses is most obvious is in persistent attempts to link Otlet to a seemingly radical expression of the postmodern, hypertext.

This connection is at the heart of perceptions that Otlet ‘foresaw the technical devices for international communication’ (Rieusset-Lemarié, 1997, p. 303). It has become perhaps the most frequently repeated reason to celebrate or re-evaluate Otlet as a ‘forgotten forefather’ (Wright, 2003, title), in both scholarly and populist works. For example, we are informed that Otlet ‘anticipated the hyperlinked structure of today’s Web’ (Wright, 2008, para. 4) or played a ‘prophetic role in framing insight into the possibilities of hypertext’ (Judge & Fischer, 2001, para. 2). In these examples and many more, the emphasis is specifically on his ability to foresee future developments. If we are to accept this vision of Otlet as sage and seer, then the connection between his projects and the current environment must be examined from several directions. Most pressingly, it is necessary to compare the structures and aims of Otlet’s work to those of hypertext as described in the literature, and then to interrogate the ideological and cultural foundations of both to determine whether there is any valid connection. Should there not be, the study must move on to consider the reason for the persistence of these claims.

#### 4.2 Structural and epistemological (in)consistencies

For Rayward, hypertext ‘functionality was anticipated by [...] Paul Otlet’ (1994, p. 235) in the *Repertoire Bibliographique Universelle* (RBU), the cards of which ‘constitute an important chapter in the history of hypertext’ (1994, p. 235). The justification for this claim is in the multiple linkage of discrete items, with numerous pieces of bibliographic information ‘interrelated by their common standardized organizational methods, most especially by and through their arrangement by the UDC’ (1994, p. 239). Indeed, Rayward’s only significant reservation when making this comparison is that ‘explicit links between items [...] were not made’ (1994, p. 235) but rather were built through the intermediate text of the UDC tables. The tacit working definition of hypertext appears to be any system of structured, flexible linkage, and in many respects this is reliable, for as Landow, arguably the most influential early writer on the subject, states, ‘linking is the most important fact about hypertext’ (1994, p. 6). While ‘hypertext is difficult or even controversial to define’ (Fitzgibbons, 2008, p. 1), the ‘nodes or chunks organized by a system of links and navigational devices’ (Rayward 1994, p. 240) do indeed suggest the liberated movement of the hypertext reader.

However, there are reasonable questions here as to whether all linkage is equal. Otlet’s linkage, as Rayward continues, allows ‘movement of the user from bibliographic reference to full text to image and object’ (1994, p. 240). While this is powerful, it reveals a rather closed, ordered flow along a clearly established hierarchy, which ends finally at full text, image or object. By contrast, hypertext is defined as creating associations to a second piece of text, but where ‘the second Web page can also contain linked phrases that in turn lead the reader to other pages. The process can

continue indefinitely' (Bolter, 2001, p. 27). Even at this most basic level, the correspondence between linking bibliographic data to the object it describes and multiple linkages between all 'paragraphs, sentences, individual words' (Bolter, 2001, p. 35) seems strained. While this rejection may seem rather blunt, it is nonetheless fundamental. By following Rayward's logic, any system of library classification or indexing could be claimed as having foreseen hypertext, in its implied or explicit linkages between similarly coded references. Otlet's approach is further incompatible with hypertext in that via UDC, all documents with a matching code would be linked indiscriminately, rather than the extremely specific system of relation that can be constructed with hypertext. It is important to stress here that many writers merely gloss over such fundamental details in their eagerness to detect meaningful connections between Otlet and hypertext, and, perhaps more importantly, evidence of Otlet's prescience.

It is true that, at least in ambition, Otlet's project does see beyond linkage between reference and text, although the actual bibliographic repertory he constructed was almost exclusively a listing of titles and authors. For example, Otlet variously repeated his aspiration that 'having completed the inventory of written works' the documentalist would 'attempt an inventory of the contents of these works' (Otlet, 1903, p. 78). His project always aspired to 'recording facts,' not texts, in such a way to 'automatically and instantly permit their retrieval' (1907, p. 110). Indeed, in some eventually aborted supplementary indexes 'of limited scope and special application' (Rayward 1994, p. 43) Otlet's staff did attempt the kind of detailed breaking apart of facts from text that he wrote of throughout his career, for example on specific subjects such as hunting. However, what is important to stress here is the attitude which Otlet

took to the nature of linkage. For him, there was one expressly authorised version of reality, enshrined in the Universal Decimal Classification. That which was pronounced worthy of recording was to be noted down in order that it might 'be re-distributed according to the standard categories of a general structure' (1920, p. 185). In other words, each unit within the system, corresponding to each linked word or phrase within a hypertext, was identified always and only against a pre-existing and idealised plan of human knowledge rather than merely to another word or phrase.

In stark contrast to this standardisation and control, Landow suggests that 'networked hypertext [...] offers liberation, idiosyncrasy, and even anarchy' (1994, p. 33). This 'anarchy' certainly appears anathema to Otlet's motivations, built explicitly upon a bitter rejection of the unregulated 'anarchy of intellectual production' (Otlet, 1903, p. 79). This promiscuity of linkage, presented as fundamental to and inseparable from hypertext, presents formidable difficulties for the critic seeking to ally Paul Otlet with this form of writing. In Otlet's system, the Office of Documentation was in total control of the process of linkage, whereas in hypertext, as defined by its leading critics, linkages are created by each reader who feels motivated to do so, fostering 'idiosyncrasy and personal association in particularly liberating ways' (Landow, 1994, p. 32). Indeed, Rieusset-Lemarié has, uniquely amongst critics, suggested that Otlet's centralised projects are 'the opposite of the dematerialized virtual structures which are developing today' (1997, p. 305). Not only does this put Otlet in a fundamentally antagonistic position to hypertext as it is currently defined, but also to the pioneers of the technology. For example, Vannevar Bush, usually cited as the first theorist of hypertext, envisioned a microfilm based system where 'any item may be caused at will to select immediately and automatically another' (Bush, 1991, p. 103)

according to the associations formed in the mind of the reader. The important development here was that such associations could be wholly personal, and indeed Bush describes the network of connections as ‘intimate’ (p. 102). Such associations are difficult to ally with Otlet’s predefined structuring of the universe of information through UDC.

Landow suggests that hypertext grew out of a dissatisfaction with ‘hierarchical thought’ (Landow, 1994, p. 1), which is inseparable from the published schemes of Paul Otlet. He regarded published texts with suspicion for the very fact that they failed to make facts and statements clear enough, but communicated ‘only particular, incomplete, subjective statements’ (Otlet, 1920, p. 194). He sought for all valuable pieces of information to be ‘broken out and disaggregated’ and only ‘those that are original’ to be ‘re-distributed according to the standard categories of a general structure’ (1920, p. 185). The hierarchies here are clear and multiple, and indeed the very heart of Otlet’s conception was that all facts should find their place in a strictly ordered, valued system, which made clear ‘the links, the genealogy even, of ideas and objects, their relationships of dependence and subordination, of similarity and difference’ (1895, p. 34).

There is therefore substantial cause to question, if not abandon, the claimed connection between Otlet’s systems and hypertext in their structure and epistemology. This is perhaps not surprising in that hypertext has been defined as enacting ‘an explicit rejection of the epistemological models applied to traditional approaches to managing information’ (Tredinnick, 2007, p. 169). What Tredinnick is gesturing towards here, however, is the postmodern revolution in thought which is frequently

advanced as underlying hypertext, and which must be examined below before it can be understood why Otlet has become embroiled in this comparison.

### 4.3 Hypertext and postmodernism

Landow insisted on a close conjunction between hypertext and postmodernism, as 'both grew out of dissatisfaction with the related phenomena of the printed book and hierarchical thought' (Landow, 1994, p. 1). He moreover suggests that hypertext 'obviates the kind of control feared by Lyotard' (1994, p. 33), arguably the most widely cited cartographer of the postmodern. While these are very broad claims which could be subject to some revision, they encapsulate a connection between these two intellectual densities which is not only temporal but intellectual and demands further exploration.

Tredinnick suggests that hypertext seeks 'to exploit the kinds of inter-relationship that Barthes suggests exists between texts, to allow individual texts to draw meaning from other texts through the use of associative connections' (Tredinnick, 2007, p. 173). Roland Barthes, for much of his career an arch structuralist, came to reject the kinds of innate values and meanings which Otlet laboured to classify and record. He is mentioned by Tredinnick for a perception of Text which fundamentally erodes if not erases the boundaries between all units of text, in a manner which hypertext seems to physically embody. Barthes stated that while each material book might be

a fragment of substance, occupying part of the space of books (in a library for example), the Text is a methodological field [...] its constitutive movement is that of cutting across (in particular, it can cut across the work, several works)' (Barthes, 1977, pp. 156-7)

By extension, the text finds its joyously liberated meaning not in authorial intention, but rather in the endlessly fluid interpretations of readers. The text itself is revealed not as something which can be read, but rather as that which is '*scriptible*' (Barthes, 1974, p. 4) or 'writable'.<sup>3</sup> To Barthes, the goal 'is to make the reader no longer a consumer, but a producer of the text' (1990, p. 4).

By emphasising personal and contingent reconstruction, the textual fluidity of the postmodern wholly eradicates the kinds of objective truth that Otlet laboured to identify in two ways. Firstly, it draws into question any stability of the objective truths contained within a piece of text, the 'substance of what each publication contributes to knowledge' (Otlet, 1903, p. 79) which must rather remain open to a subsequent reading, or 'writing' by another reader; secondly, it works to undermine any suggestion of a distinction of the signifier from the signified, or what Otlet called the 'container from the contents' (1903, p. 73). Each becomes in Barthes' view contingent upon the inherent slippage and impermanence of the other. This is wholly anathema to Otlet's own thinking, where texts are mere vessels and 'knowledge is not identical with the documents which make it available' (Otlet, 1903, p. 73). Such a division of stable content from an imperfect medium cannot be reconciled to Barthes' view of the text, where 'the intertextual' is the space 'in which every text is held' (1977, p. 160).

This further amplifies the argument advanced above that Otlet's work has no substantive connection to hypertext. However, the critical heritage is so insistent on this matter that it cannot be dismissed as a mere misunderstanding; rather, it is productive to more closely consider the arguments attempted.

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<sup>3</sup> Usually translated as 'writerly'.

#### 4.4 Championing Otlet into the postmodern

Rayward himself is aware of at least one of the objections made above to any substantial connection between Otlet and hypertext, stating that it was Otlet's positivist belief in the unchanging 'objective knowledge that was both contained in and hidden by documents' (1994, p. 247) which precludes him from being considered as having created hypertext.

However, several critics refuse to abandon the idea of Otlet as immersed in a version of hypertext which somehow becomes more satisfying and more successful than that which Landow and Bolter analyse. For example, Alex Wright has suggested that 'Otlet's version of hypertext held a few important advantages over today's Web' (2008, para. 25), namely that:

Whereas links on the Web today serve as a kind of mute bond between documents, Otlet envisioned links that carried meaning, for example, annotating if particular documents agreed or disagreed with each other (2008, para. 25)

Otlet's links may well have carried further meaning than the 'mute' links of hypertext, but the origin and nature of that meaning is problematic. Once enshrined in the bibliographic repertory, such meanings were fixed and unchanging, locking two documents in a static relationship. This not only ignores the problems of reconciling a positivist theory of knowledge with hypertext, it rather seeks to celebrate the positivist certainties over 'hypertext's multiplicity (or overdetermination)' (Bolter 2001, p. 35).

In a more sophisticated analysis, Day insists that in Otlet's desire to break texts apart to get at the information they contain, 'the book itself for Otlet is the basis for such a "hypertextuality"' (1997, p. 313). Indeed, he suggests, in ways which the analysis above make clear are unreliable, that Otlet is 'involved in a proto-deconstructionist understanding of textuality' (1997, p. 310). It is worth explicitly

stating that in both cases here, fundamental definitions of knowledge, Otlet's chief preoccupation and aim, are being brushed aside in favour of superficial remarks on structure.

What Wright and Day valorise in Otlet's systems is so radically different from the current incarnation of hypertext, that, whether or not there is any grounds for defining it as better or worse, any real connection seems forced and artificial. Indeed, it begs the question why a connection should be attempted between Otlet and hypertext if his systems are felt to be superior. It is productive to respond to this paradox by considering the possibility that critics drawn to praise Otlet are motivated at least partially by an attempt to legitimise and rehabilitate his fundamental, positivist approach to knowledge. It remains to be seen, however, why this attempt should be made through hypertext, and a closer interrogation of this question will reveal not only the attraction of the medium to Otlet's champions, but also further evidence for the positivism which has repeatedly been detected as 'still dominant in LIS [Library and Information Science]' (Hjørland, 2005, p. 130).

#### 4.5 Hypertext's inherent anti-positivism?

Some critics have questioned the potential anarchy of hypertext, and suggested that the liberation promised is nullified by the limited options presented in any actual unit of hypertext. For example, Miall has persuasively argued that by enforcing explicit linkages, the reader is presented with a controlled set of associations, eliminating 'the array of potentially infinite connections' (1999, p. 156) which his or her unguided interaction with a printed text may have generated. In other words, rather as Tredinnick suggests classification schemes such as Otlet's UDC operate, some

hypertext linkage may 'impose upon texts surrogate meanings that mediate the interpretation of texts' (Tredinnick, 2007, p. 176). However multitudinous the linkages expressed in hypertext, they can never express more than an inconsiderable fraction of the total potential associations of all readers at all times.

This limitation is apparent in some of the examples presented by even the most breathless celebrants of hypertextual power, such as Bolter. For example, he suggests of the problem of 'organization' of a text that 'in the static medium of print, the writer must normally settle on one hierarchy, one order of topics, although he may find that the topics could be arranged equally well in, say, three orders' (2001, p. 32). However, when he contrasts a hypertext, he suggests that 'multiple relationships pose no special problem, so that a Web site, for example, may have three different organizations' (2001, p. 32). His ambition for a format which he suggests promises so much is underwhelming; three hierarchal and pre-determined organisations of text is scarcely the fruitful textual anarchy suggested elsewhere. Indeed, if Otlet's bibliographic project had ever been successful, the data contained within the text, the organisation of which concerns Bolter, could have been extracted and retrieved in any order as discrete pieces of information recorded on cards. In practice, hypertext is beginning to appear, at least in some instances, no more productive of anarchy and the multiplication of meanings than Otlet's own projects.

Perhaps most suggestively, Landow, who is largely more cautious and qualified in his examples and claims than Bolter, praises how hypertext aircraft repair manuals allow a maintenance worker 'to trace the history of a particular component or system and also to follow out its connections to other components' (1994, p. 8). It is abundantly clear that this example is a controlled, inflexible corporate voice where

one fixed value is paramount and any multivocality is utterly banished. Therefore, at least some hypertext is purely a differently enacted development of the printed medium which can serve almost any ideological purpose, including those sympathetic to Otlet's stated aims. It is perhaps wise here to bear in mind Wills' injunction not to 'confuse the properties of hypertext, in general, with particular environments' (1999, p. 134). In this light, Rayward's retreat from his claim of Otletian hypertext in the face of detected positivism seems premature. More significantly, whatever the potential of hypertext, in many instances its production and organization has no significant debt to a postmodern understanding of textuality.

This has a series of consequences for the critic considering the role of Paul Otlet and the effect of the residual power of positivism in the library. Firstly, it further undermines any conception that Otlet in some manner foresaw the future and adopted a presciently postmodern mindset in his repertoires, for it is clear that not only does linkage alone not necessarily involve a postmodern perception of the text, but that the same is true even of hypertext linkage. Secondly, it leaves the status of hypertext, the facet of the postmodern which has made greatest inroads into the library environment, open to question as a genuinely revolutionary technology. Indeed, in some of the manifestations described by its most prominent proponents, it can appear to bring the discussion back to the mechanistic modernism of Paul Otlet.

#### 4.6 Positivist hypertext

It was briefly suggested above that the attraction of the idea of linking Otlet and hypertext may lie in a submerged attempt to revivify a positivist tradition. Closer analysis has revealed that whatever the potential of hypertext, in at least many

instances its use does not usher in the kind of revolution often posited for it. This study proceeds from the assumption that in discussion of Otlet and hypertext, it is such sanitised manifestations of hypertext which are being considered. Moreover, the most prominent considerations of hypertext from within the library research community also reflect such understandings. Tredinnick suggests that hypertext allows the demonstration of the way in which ‘the meaning of any text is diffused across this network of inter-related texts’ (2007, p. 180). However, he misunderstands the real power of that understanding of textual profusion, for he proceeds as if the Text itself retains its integrity until the moment an informed reader modifies it. This perception fundamentally misunderstands Barthes’ argument over the nature of Text, which does not wait to be disassembled into explicit, controlled associations with other texts but rather is ‘held in language [and] only exists in the movement of discourse’ (Barthes, 1977, p. 157). Similarly, Kristeva writes that any text is constituted of ‘an intersection of textual surfaces rather than a point (a fixed meaning), as a dialogue among several writings: that of the writer, the addressee (or the character) and the contemporary or earlier cultural context’ (1986, p. 36).

However, Tredinnick’s view is entirely in accordance with Otlet’s understanding of passive, finished if imperfect texts awaiting the ‘dissection [...] into their primary components and the redistribution of these’ (Otlet, 1920, p. 194). For all the claims made for the synthesis of hypertext and postmodern dissolution, there is a broad and influential body of literature which proceeds without apprehending the fundamental insubstantiality of the superficially finished text which these theories not only suggest but are built upon. This trend leaves hypertext as a controlled, mechanistic system, a technologically improved card index, offering the promise not

of textual production, but of authorised cross referencing. It is therefore perhaps not surprising that Otlet is cast as an enlightened forefather of such a system, for it recalls the image of his generation running the 'engine room of the project of modernity, with the librarian, both educator and technician, as a kind of enlightened mechanic' (Muddiman, 1999, p. 4). What has changed is not a fundamental attitude to text, but rather the piece of technology which a new documentalist movement has adopted. It is not a concrete expression of postmodernism but rather a new iteration of the 'industrial modernity' that was 'technocratic in its nature' (Muddiman, 1999, p. 7). Indeed, some critics' approach to hypertext is oddly reminiscent of Otlet's hopes for microfilm, or as he called it the 'microphotographic book'. In both cases, the new technology 'seem like marvels' and offer 'yesterday's utopia as today's dream and tomorrow's reality' (Otlet, 1906, p. 93); in neither case is the aim of the documentalist or the nature of the information significantly altered by the change in medium. Such visions of hypertext might be well tempered by Hjørland's well-aimed warning that if information science is to 'contribute valuable knowledge, its focus must be abstracted from concrete technologies' (2000, p. 512). While Barthes may argue for an implicit and infinite deconstructing of the text, what is being embraced in many interpretations of hypertext is a beguilingly easily grasped manifestation of controlled linkage.

Such interpretations of hypertext can emerge as disguised championing of a positivist understanding of the nature of knowledge, while assuming the superficial trappings of the postmodern. In at least some investigations of hypertext and the wider internet which is structured around it, there are atavistic desires for the same monitored, meaningful linkage which Otlet laboured for. One is reminded here of Wright's insistence on the 'advantages' of Otletian linkage over the 'mute bonds' of

hypertext (2008, para. 25). With this realisation, claims of a connection therefore seem less surprising, and less significant. There is a serious and seemingly unchallenged failure here to recognise that once postmodern ideology is employed to justify the hypertext medium, then the consequence is the embracing of the infinitely greater destabilisation of the text which was not only already inherent in the text but indeed was the Text. Some interpretations of hypertext, while claiming kinship with postmodernism, are in fact reclothing a causal, positivist framework with selected attributes of what should be a holistic diffusion of meaning.

#### 4.7 Myths of filiation

Alongside this rather enervated absorption of postmodern energy, there is a further irony in the rigorous pursuit of Otlet as a founding or spiritual father of hypertext, and thus of a library profession that has connections and relevance to a postmodern culture. Roland Barthes utterly rejected such searches, alongside the figure of the author, declaring that ‘to try to find the “sources”, the “influences” of a work, is to fall in with the myth of filiation’ (Barthes, 1977, p. 160). Indeed, Barthes suggests that the very idea of the author, seemingly indispensable, is in fact a short lived and unreliable cultural construction, allied to ‘positivism, [and] the epitome and culmination of capitalist ideology’ (1977, p. 143). There has been an attempt here to reclothe an earlier period of library history, represented by Otlet, in the trappings of the postmodern while failing to truly understand the concepts of the diffusion of and destabilisation of meaning with which it engages. This has arguably been attempted in order to re-imbue the profession with a relevance and purpose which has evaporated since the zeal of Otlet’s drive to documentation.

The debates of the library's interaction with the postmodern and of the significance of Otlet are obscured by the selective focus on hypertext. By extension, Otlet's positivist ideologies are partially vindicated by the suggestion that hypertext, while archly postmodern, is compatible with the aim of objectively connecting information across texts for an idealised user with clearly articulated needs. This is simply further evidence, from another area of the discipline, of the well documented detection of the 'positivism [...]governs thought and work in library and information science' (Budd, 1995, p. 295). Thus, while some manifestations and accounts of hypertext are the intellectual children of an undying, positivist desire for universal, controlled access to knowledge, readers are rather being encouraged to accept the enthronement of Otlet as a prescient and benevolent father of hypertext, and the vision of the library in a seamless union with postmodernism.

What is perhaps most importantly wholly lost in this discourse is the fundamental and primary instability of the text, the dissolution of the individual text into the intertextual space. Rayward speaks briefly and with seeming discomfort of 'the deconstructionist world of textuality and intertextuality of recent literary theory' (1994, p. 246) but it is here, rather than in the unreliably valued area of hypertext, that Otlet can arguably be brought back to some kind of relevance to the contemporary library, and that institution returned to relevance to the society around it. However, this cannot be by praising Otlet for prescience, or by seeking to revivify a belief in objective, positivist truth. Rather, Otlet, his texts and by extension the library might all be released into a post-modern space, freed of certainty and narratives of causality and filiation.

## **5. Paul Otlet and the postmodern**

### 5.1 Introduction

It is in intertextuality, in the dissolution of the conception of the whole, authorised text, and stable, unified reality, that the postmodern is most clearly understood. While analysis of Otlet's relationship to hypertext has been revealed as a partial attempt to reclaim his broadly positivist conception of information in a contemporary, pseudo-postmodern context, there have also been attempts to reread his own works to reveal a subversive, presciently postmodern understanding of text. After exploring these, this chapter will advance another potential application of the postmodern to the work of Paul Otlet.

### 5.2 Otlet's postmodern (inter)textuality

A pre-eminent example of an attempt to locate a postmodern grasp of textuality in Otlet's work is in Day's analysis of Otlet's 1934 *Traité de documentation*. Day insists that Otlet 'acknowledges and honours the role which the fragmentary and the provisional have for the production of documents and, in general, for the production of the human world' (1997, p. 315). Initially, it is important to be clear that there is a distinct possibility that Day is confusing two concepts in this reading, that of the book as an entirety, and individual instances. In Otlet's terms, there is a danger of conflation of 'the Book, the "Biblion", the Source, the permanent encyclopedia, the Summa', the accumulation of all published text, and those 'vague and useless productions which have nothing seriously new to say' (Otlet, 1903, p. 83).

Consequently, there is a serious risk of misunderstanding Otlet's aspirations, which were always to document the plethora of texts only to construct something further.

However, Day attempts with close observation of Otlet's text to construct a notion of the documentalist as perceiving Text in a postmodern fashion, where boundaries between books are broken down and eroded. For example, he quotes Otlet as proclaiming that 'books conserve mental energy, what is contained in books passes to other books when they themselves have been destroyed' (Otlet, 1934, p. 423), which appears to advance the beginning of a rather postmodern dissolution of texts into Text. However, Day perhaps exceeds reasonable interpretation of such statements when he goes on to suggest that Otlet's conception is 'deterritorializing the book [...] beyond its traditional unitary material identity with print and the closure of its paper covers' (1997, p. 313). Such a statement is attempting to draw Otlet's conception of the book into line with postmodern thinkers such as Roland Barthes.

There is more than one response available to the critically aware reader of such an argument. One is to join with Day in close reading of Otlet's work to determine whether such prescient insights do meaningfully originate there, or whether Day may have been mistaken in his selective interpretation. For example, it is possible to demonstrate with wider quotation that to Otlet each book or document remains always a discrete unit from which can be pressed truths or knowledge. The fact that some of that knowledge, or false knowledge, is inherited from other books and passes on into more, does nothing to destabilise that document. Otlet seeks still to extract from the imperfect text what is required for his imagined scholar and to pass on. In the same text as the passage quoted by Day, he could still describe the individual book as 'a true intellectual edifice' in which the 'words, the phrases, the chapters, follow one another as a means to express, to make understood and felt a

single thought'<sup>4</sup> (Otlet, 1934, p. 317). This is a closed, constructed text, doing its author's bidding, though the knowledge it expresses may reach out to others. A book contains for Otlet knowledge to be extracted, but regardless of whether or not that knowledge is unique, the text from which it comes certainly is. It is important for Otlet that each text offers a fixed, authorially constructed message to the reader, and 'if the thinking of the book has not been perceived, understood, assimilated, the book has not been well read' (Otlet, 1934, p. 317).<sup>5</sup>

However, there is a further response available here, and it is one which will offer a potential solution for the reader immersed in a quagmire of competing presentations chased through Otlet's voluminous prose. There is a considerable and important irony in Day's method as he seeks to prove that the author Paul Otlet was presciently postmodern in his vision of intertextuality. He shows total faith himself in the integrity of Otlet's text, and defends one narrow interpretation of it to the exclusion of all others. Indeed, in his painstaking parsing of excerpts, he has wholly failed to heed Barthes' words that 'a text is not a line of words releasing a single "theological" meaning (the "message" of the Author-God)' (Barthes, 1977, p. 146). He is seeking to praise Otlet for a perception of the text which he himself utterly refuses by focussing on Otlet's bequeathed and unambiguous wisdom. Moreover, in his profuse, well-referenced quotation he is himself far from embracing the postmodern 'birth of the reader [...] at the cost of the death of the Author' (Barthes, 1977, p. 148). In both instances, Day's approach is trapping itself in a logical cul-de-

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<sup>4</sup> 'Un véritable édifice intellectuel [...] les mots, les phrases, les chapitres, se succèdent comme moyen d'exprimer, de faire comprendre et sentir une pensée unique' - author's translation from the French.

<sup>5</sup> 'Tant que la pensée du livre n'est pas perçue, comprise, assimilée, le livre n'est pas bien lu' - author's translation from the French.

sac, insisting on the universality and power of postmodern insight and seeking to demonstrate it through the concepts it displaces and rejects.

Rayward similarly displays a flawed grasp of the consequences of the postmodern beyond the neat fragmentation of a hypertext. He suggests that Otlet 'could only have been appalled by the deconstructionist, postmodern interpretations of text and hypertext' (1994, p. 247), but Otlet's opinion, let alone an imagined and impossibly anachronistic one, is irrelevant. By analogy, Jacques Derrida's seminal printed work *Glas* is frequently cited as a pioneering expression of the postmodern ideology, presenting extracts and commentary on Hegel and Genet on facing pages, allowing connections to emerge. The status of this text and its suggestive power to the reader do not rely on an assumption that Hegel himself would have welcomed this interpretation of his work, nor is that question relevant. Post-structuralist discoveries are made from Text, 'a multi-dimensional space in which a variety of writings, none of them original, blend and clash' (Barthes 1977, p. 146). They do not, cannot, derive from authorised, approved texts and authorial intention.

Both critics find it impossible to relinquish the figure of Otlet as author, as do the many writers who hymn his foresight and his relevance to a contemporary intellectual context. This reluctance is merely a revived symptom of a fundamental positivism, despite it being a truism in the literature that 'a positivist approach has proven of little value' (Harris, 1986, p. 522).

As the praise and elaboration of hypertext in library science is a discourse deeply marked by decidedly positivist, quasi-modernist thinking, so Otlet's claimed postmodernism is being pursued in the same spirit. Through a partial interpretation of the conception of intertextuality, Otlet's project is aligned with postmodernism in a

way which never seriously questions univalent truth and certainty. Day's attempt to force the postmodern opening of the 'text [...] to infinity' (Day, 1997, p. 316) into compatibility with Otlet's underlying certainty of the status of information is one more manifestation of what Budd describes as the 'positivism [...] that governs thought and work in library and information science, whether or not it is realized or accepted' (1995, p. 295). Similarly, Rayward can summarise Otlet's aim as identifying 'what is factually true and, therefore, of use' and criticise him for not addressing 'the question of how what has been established as true is to be recognised' (1994, p. 247), but he does not extend this observation to even consider the fact that notions such as truth and value are so contingent as to be in themselves unreliable. As Lyotard influentially insisted, 'the conditions of truth' are merely the 'rules of the game of science, [...] immanent in that game [...] and there is no other proof that the rules are good' (1984, p. 29). Such fundamentally positivist interpretations are incapable of engaging meaningfully with the postmodern ideologies they seek to absorb, and the result is unconvincing.

Critically, it is plausible to suggest here again that this positivism is allied with the profession's desire to identify a sagacious founding father to justify its own approach. In this, the library profession is merely repeating a pattern of insecurity exhibited everywhere by social science as it seeks to place itself on terms of equality with the natural sciences and their perceived attendant sureties. As Bryant suggests, social scientists are determined 'to submit to rigours comparable to those they attribute to natural sciences' (Bryant, 1985, p. 133). In this, critics such as Day unwittingly reveal themselves to be trapped in the same flight from inexactitude as Otlet, who felt that compared to the 'discipline' of the natural sciences, 'signs of

social facts suffer the ill effects of a disturbing promiscuity' (Frohmann, 2008, p. 84). However, if this promiscuity is embraced and the search for stable certainty is abandoned, then Otlet's text can be released into a genuine and illuminating relationship with the plurality of the postmodern.

### 5.3 The death of Paul Otlet and the rebirth of the RBU

Rather than attempting to locate a conscious drive to the postmodern in Otlet's personal beliefs or an incipient hypertext in his paper files, it is feasible and indeed philosophically unassailable to approach the entire output of the man's life as a gloriously protean, unstable amalgamation of Text. In order to achieve this, it is paramount to set aside the motivating thoughts and beliefs of Paul Otlet as author and father of that which has followed.

Such a rejection may mean ceasing to focus on Otlet's explanatory and didactic writings which have up until now formed the heart of much discussion. From this point on, this dissertation will seek to advance the opinion that the significant area of Text linked to Paul Otlet lies not in the magisterial if challenging *Traité de documentation* or his *Monde*, but rather in the voluminous and seemingly endlessly various systems which these were merely meant to explain and extend. Most importantly, the Otletian Textual space focussed on will be the Universal Bibliographic Repertory (RBU) and its many contributing and tributary subdivisions, and the Universal Decimal Classification which structured and maintained it.

Looked at fundamentally as millions of items of text, each independently inchoate and unfinished, and reaching out to the universe of Text around them as they attempt to reflect it, the work of Otlet begins to resemble the postmodern deconstructed

text *par excellence*, offering fragments of meaning that cut helplessly across one another while constantly changing. Frohmann concludes a nuanced and intriguing analysis by reflecting that the final image of Otlet's projects is of documentalists who 'mechanically manipulate facts *at will*, turning kaleidoscopes of signifiers of facts, only to contemplate the infinite varieties of their patterns [...] a peculiarly postmodern image' (Frohmann, 2008, p. 87). What renders this image postmodern is the plurality, and indistinguishable value, of the contingent meanings produced by each turn of the kaleidoscope. Such richly unravelling profusions of meaning continue to pour forth from the accumulated work of Otlet and his Office of Documentation in ways which as both critics of Otlet's significance and stakeholders in the future ontology of the library it may prove beneficial to explore and even perhaps to celebrate.

Otlet's RBU lay at the heart of his attempts to impose order upon the world of textual production, and was for him the foundation of all communicable knowledge and of all conceptions of intellectual order. It was constructed to seek to 'replace chaos with a cosmos' (Otlet, 1903, p. 83), and each card within it was a contribution to 'the objective blueprint of the scientific edifice' (Otlet 1920, p. 185). It was the greatest expression of Otlet's positivist project, where data was defined and fixed on unchanging cards to be universally available to those who asked the specific question necessary to retrieve them. In this it should be the antithesis of postmodern Text, 'not a co-existence of meanings but a passage, an overcrossing; thus it answers not to an interpretation, even a liberal one, but to an explosion, a dissemination' (Barthes, 1977, p. 159). It is therefore satisfying that the fullest expression of the inherent protean mutability of significance in the RBU comes from Rayward's attempt to celebrate it as a positivist information retrieval tool. Coming to praise Otlet's achievement,

Rayward presents it as robbed of all but a performative meaning in its status as ‘part of the *mise en scène* or scenography of the museum’ (Rayward, 2010, p. 13) of the Mundaneum in Mons, Belgium. Such is the degree to which fixed, known meaning is drained from its corpus that the repertory cannot even constitute its own exhibit, but is merely become part of an expression of its own history. Even to Rayward, the significance of the repertory appears to have shifted, and the content of the drawers is largely forgotten in a strikingly detailed, almost libidinally lingering, description of its construction and materiality. The description strays into the bizarre displaced veneration of a relic:

The cards of the RBU had a hole at the bottom through which a metal rod was passed to hold the cards in place. A block of wood was placed inside the drawers and could be shifted along the metal rod in order to make sure the cards were kept upright if the drawer were not completely filled. The triangular form of this block let cards be tilted to facilitate reading. The card cabinets varied in height and could have up to seventy-two drawers. A pullout shelf on which drawers could be rested during consultation was provided at chest height (Rayward, 2010, p. 13)

This admittedly lengthy quotation is only around half of Rayward’s description of the physical RBU, but is given to demonstrate the minuteness of detail offered and the seemingly unconscious avoidance of discussion of the content. While such a repertory was conceived as what Garrett might describe as ‘one of the most visible and important temples that society has erected’ to the belief in ‘the existence of a scientifically derived and classifiable body of knowledge’ (1991, p. 382), it has become an uncharted land where navigation is impractical and discoveries are made by unplanned, aimless excursions. For example, Rayward mentions ‘the recent discovery in these cabinets of various card drawers with entries relating to the management and organization of OIB-IIB [Office Internationale de Bibliographie – Institute Internationale de Bibliographie] activities’ (Rayward, 2010, p.14). Seemingly

setting to one side his earlier conviction that ‘navigation in and between’ all ‘special or general files or repertories’ required only ‘an understanding of how these codes [UDC classifications] worked’ (Rayward, 1994, p. 241), the repertories are now realms where whole areas of content can be discovered only by chance. Far from the documentalist seeking to find the definitive answer to a well constructed query, those consulting the RBU now seem more akin to Barthes’ ‘reader of the Text’ who

may be compared to someone at a loose end [...] this passably empty subject strolls [...] what he perceives is multiple, irreducible, coming from a disconnected, heterogeneous variety of substances and perspectives’ (1977, p. 159)

In their sheer physical size and lack of overall navigability, the cards begin to signify at once too much and nothing, to offer only Barthes’ ‘explosion [and] dissemination’ (1977, p. 159) of meaning. While this is the antithesis of what Otlet may have intended, the Text becomes a perfect encapsulation of the postmodern, especially as it is constituted almost entirely of fragmentary information on millions of further, absent texts, many of which may not even any longer be extant or locatable.

However, rather than mourning this loss of certainty, it is plausible to celebrate the new possibilities of knowledge that arise from Barthes’ reader ‘strolling’ through Otlet’s files, presented with a dizzying profusion of new information. Indeed, the millions of units of data have been immersed in ‘the intertextual in which every text is held, is itself being the text-between of another text’ (Barthes, 1977, p. 160). In this, they are freed to become involved in the construction of an infinite number of readers’ unplanned connections across an infinite world of text. Seeking to describe and map with clarity the ‘entire universe of knowledge’, the Repertory has become a catalogue which in itself has become a labyrinthine library, amongst which readers may only wander and find objects by chance. Indeed, the RBU has become uncannily

suggestive of a shrunken, microform version of Borges' postmodernist conception of the universal library, with 'its elegant endowment of shelves, of enigmatical volumes, of inexhaustible stairways for the traveller' (1970, p. 79).

This is before it is considered that the Repertory is merely one of a series, a fragment of the total that is the Mundaneum. Rayward's description is dotted with phrases such as 'there are at least one thousand boxes of the papers of Paul Otlet in the Mundaneum' (2010, p. 39). Such statements, without context of size, have no impact beyond bewitching the reader with notions of immensity and implied impenetrability. They are, furthermore, usually followed by remarks which seek to unsettle any inkling that the scope and significance of the collection is beginning to take shape, for example, 'in the Otlet papers are of course many documents relating to the work of La Fontaine' (p. 39).

This is repeated seemingly endlessly, so that the reader's chief impression is of the failure of claimed boundaries as condensations of text cut across one another. For example, Rayward tries to locate a key to unlock the meaning of the 'World's Fair Collection' in its origins, but they escape him. It was perhaps 'gathered together by the two men [Otlet and La Fontaine] in the course of their actual participation in various Fairs' or again perhaps 'intended to form a specialized documentary section' (p. 42). Moreover, before any progress can be made to resolve this through study of the text, its unity bleeds into others, for Rayward admits that it certainly 'does not contain all the relevant documents in the Mundaneum on the subject' (p. 42). Such layers of uncertainty and promiscuity with other series of text frustrate Rayward's every attempt to define. What fundamentally emerges is a resistance to being known or of communicating anything unquestionably of value in a positivist conception.

Rayward, like Otlet, is trying to defend the Mundaneum not on the value of the contents, but 'in terms of the value they acquire by virtue of occupying a certain place in [...] the Encyclopedia' (Lyotard, 1984, p. 35). However, any significance of these cards which has survived is not in 'the standard categories of a general structure' (Otlet, 1920, p. 185), but in the experience of the browsing, strolling reader; as Barthes predicted, the 'text's unity lies not in its origins but in its destination [...] the reader' (Barthes, 1977, p. 148). The challenge for those who seek to appreciate Otlet, and to construct a continued relevance for the library, is to celebrate this relocation of significance in the inexhaustible contingency of the reader.

Perhaps the most perfect encapsulation of the dissolution and contradiction of the intended single significance of these records is in Rayward's description of the collections on anarchism. We are told that 'George Lophèvre, the secretary to and spiritual son of Paul Otlet' and an associate were 'representatives' of anarchism and, somewhat incongruously, sought 'to preserve documents on this theme' (2010, p. 41). Rayward explains with care and an apparent lack of irony that this collection is particularly valuable as 'it is not generally in the nature of this ideological movement for its records to endure' (2010, p. 41). For final measure, we are again informed of the size and unknowability of the holdings, '58 linear metres and 450 archive boxes [...] though the Mundaneum has still to finish inventorying the individual collections' (ibid.). The collection is being hymned for attempting to document and know that which exists to defy all documentation and univalent knowledge; the final irony, completing the circle, is that in the attempt, the documentation became too voluminous to be truly known, even by those appointed to do so, let alone by the reader.

This underlines another significant point, that the Mundaneum collections are not purely the work of Paul Otlet. Many of the writers quoted above proceed as if Otlet himself personally created the '16 million cards' (Rayward, 2010, p. 13) that made up the RBU. There is a desire to underplay the significance of any contributor other than Otlet, with the possible exception of a few named men. This once more reveals the fundamental myths of authority and filiation revealed by Kristeva and Barthes at work in such commentary, especially when successors are anointed with quasi-filial status, 'the spiritual son of Paul Otlet' (Rayward, 2010, p. 41). If we attempt to see beyond this vision of the sole author of an impossibly sophisticated and prophetic network, what is revealed is the richly collaborative and unstable concentration of text which neither he, nor any other, could possibly have wholly known any more than the reader staggering through the present Mundaneum.

Faced with this overwhelming, unstable body of paper and Text, we could borrow Landow's phrase that it can 'simply offer too many lexias for critics ever to read' (1994, p. 35), though he is thinking of 'large hypertexts and cybertexts' (1994, pp. 34-35). The mechanics of hypertext are not necessary here for the bewildered reader or critic to be forced 'to give up the idea of mastery but also that of a single text at all as the mastery and mastered object disappear' (Landow, 1994, p. 35). In such situations, as Landow struggles to accept, the ostentatious technological marking of Text is unnecessary for the Text to evade the reader's capacity for mastery or certainty of knowledge and thus to exceed univocal meaning. Without the need for hypertext, its claimed liberation and anarchy pour forth from Otlet's RBU unaided. Otlet's positivist machinery, geared for universal access to controlled facts, has

become a perfect object lesson in the irresistible and productive postmodern dissolution and proliferation of meaning.

The aggregate result of the work of Otlet and the entire Institute of Documentation becomes in this perspective a borderless, unmappable area of text which perfectly encapsulates the postmodern. Each fragment of its body bleeds into others and inevitably out into the entire world of publication which it sought to reflect, drawing in to its body fragments not of all knowledge but rather of that which happened to chance into the purview of the Office. They are fragments shorn against a ruin that Otlet perceived with abject horror at the outset of his career as the ‘anarchy of intellectual production’ (Otlet, 1903, p. 79) and which, almost certainly without his knowledge, entirely engulfed his response. His ambition is hubristic and its failure inevitable.

However, this is not primarily a failure to be mourned, but rather a particularly vigorous and challenging body of text to be celebrated and released into its own jouissant collapse of structure and univocal significance. In this liberation, it can once more serve the user who encounters it, providing that which is productively ‘multiple, irreducible’ (Barthes, 1977, p. 159). Moreover, as will be seen below, this collapse is not restricted to the documentary excesses of the Mundaneum, but has intriguing relevance for the future of the library profession.

## 6. Conclusion

Faced with the vast conglomeration of text which Otlet's project bequeathed, there have been many attempts to claim it as a founding document of a still evolving and vigorous profession, or to extract from it a prescience of the postmodern. However, as has been demonstrated, it can have its own existence in the postmodern abundance of Text, without explanation, apology or anachronistic comparisons.

In this light, the contents of the Mundaneum can be seen as the most eruptively unstable and multi-authored text. Moreover, this can be extended into the entire body of the UDC classification structure (and by extension every classification scheme), which has outlived the text it was originally designed to navigate.

Uninterruptedly developed from Otlet's first published brief, this becomes a gloriously promiscuous assemblage of texts that proliferates and changes form every day, as a plethora of library cataloguers assign varying UDC number sequences. The totality of all UDC classification across thousands of catalogues becomes one more infinitely sprawling condensation of Text. Together, this can become in Otlet's words 'the "Universal Book" of knowledge, a book which will never be completed but which will grow unceasingly' (1903, p. 84), with the important reservation that it can never be known, indexed, or read. Barthes captures this frenetic energy expended towards a goal that nevertheless incessantly recedes when he suggests that 'writing ceaselessly posits meaning ceaselessly to evaporate it' (1977, p. 147).

The critical heritage of the detection and repudiation of the underlying cultural positivism of library science has been discussed and extended into new areas above.

At its heart lies an endlessly repeated vision of painstaking preparation for an idealised anticipated search, of the recording of that 'truth that will alleviate a specific

“information need” (Radford, 1998, p. 618). Otlet placed this interaction at the heart of his understanding of knowledge, which he sought to ‘distribute [...]to everywhere it is needed’ (Otlet, 1907, p. 110), never doubting the ability of the user to frame the question, the documentalist to comprehend it and the Text he had assembled to provide the relevant answer. However, information science literature has already moved significantly away from this model, so that Hjørland can remark that the ‘belief in the independent development of [...] needs in the head of the user [...] can only lead to stagnation’ (1997, p. 176). Moreover, in the contemporary library, it must be accepted that ‘the research experience suggests that [...] relevance may be a chimera’ (1989, p. 239). It is, though, as ever, in that interaction between user and library that a re-imagining of the library may lift it from its current malaise, albeit with the abandonment of Otlet’s basic underlying premises. However, this radical change in perception does not mean that Otlet and his work should be simply abandoned, rather simply that we must appreciate both in less hierarchical fashion. An acceptance of the postmodern does not mean the wholesale abandonment of enquiry in the face of uncertainty; as Squires suggests ‘value within postmodern theories is simply problematic; values have not disappeared, but have been driven into the critical unconscious’ (1993, p. 5).

Otlet’s extraordinary vigour and intellectual brio, and its chief expression in the RBU, can be released into a space where the positivist insistence on univocal relevance and truth can be set aside. Otlet can be released from his status as ‘Author-God’ (Barthes, 1977, p. 146) into the freedom of the text, and the vast, disordered and disordering paper network associated with his name may beguile the user into travelling to chance discoveries. One potentially helpful conception of Otlet is as a

notional supreme library user, endlessly building the most grandiose and hubristic library search which effortlessly exceeds all ability to control or understand it. It is a figure constructing what Radford's reading of Foucault reveals as a 'bibliothèque fantastique,' the ad hoc assemblage of materials based on an interaction with the world of Text which every user builds with every interaction with the library.

This is an extremely powerful concept, which unites what has been absorbed about the postmodern with the quotidian world of library practice. Otlet's gathering of facts is released from dogmatic positivism into an infinitely contingent and progressive searching for that which is of value in the moment. The contemporary library may benefit from according this privilege to all of its users, rendering them all documentalists of their own 'bibliothèque fantastique', where 'no authority is "privileged" over any other' (Radford, 1998, p. 631) beyond the user's / author's own unknowably personal priorities. Rather than expecting the user to 'engage directly with the rationality of the library' (Radford, 1998, p. 620), the library can support the unfettered exploration of disorder and its myriad concealed orders. It is arguably redemptive of the ontology of the institution to release the user into 'the many recesses of the multicursal maze' (Garrett, 1991, p. 381) of the library catalogue. It allows the library to surrender its impossible task of determining what is of value, as

everything is potentially valuable or worthless, depending on its position in the temporary contexts that are created in individual library searches [...] dichotomies such as the true and the false, the important and the trivial, and the enduring and the ephemeral lose their previous importance (Radford, 1998, p. 631)

A proper response to this, and an embracing of the personal *bibliothèque fantastique*, allows the library user, who is hard to distinguish from the reader of any Text, to be released into the genuine 'liberation, idiosyncrasy, and even anarchy' (Landow, 1994, p. 33) which has been exaggeratedly claimed for hypertext, with the library as a

genuinely neutral enabler. The library can thus become an institution which allows indiscriminate contact with the world of text and of intertextuality, in as pluralistic and unfettered means as is possible. It can ultimately in this model 'fully support organizational and personal freedom in the pursuit of knowledge creation' (Anderson, 1994, p. 107), where 'knowledge' is to be regarded not as Otlet's positivist fixity but as the shifting, re-used gleanings of the user. In this manner, the library can move from an illusory 'domain [...] of the creation and maintenance of order' (Radford, 1998, p. 618) to 'focus energy on the creation of knowledge' (Anderson, 1994, p. 114).

It is useful here to revisit Rayward's suspicion that the current crisis of the library is due to the forced manner in which 'a group of modern library and information science-based occupations [are] reconstituting themselves around cutting-edge technology' (2004, p. 672). Anderson's redemptive vision of the library operating for the user-led creation of flexibly validated knowledge is, in fact, reliant on an adoption of 'multimedia technologies' and 'the world of networked information' (1994, p. 107). However, analogously to the excessive claims made for hypertext, this insistence on technology is an illusion which overrates the impact which this latest round of technology has had on the library as an institution. It is clear from the brief exploration of the current status of the RBU and the many Mundaneum files that a paper-based library, or indeed any concentration of text in any form, can easily lead to the kinds of 'relationships between readers and knowledge' (1994, p. 108) which Anderson rightly celebrates. Almost any library can easily offer to the user a body of text constructed of 'too many lexias for critics ever to read' (Landow, 1994, p. 34) and certainly more than can be read in a single interaction. All that

Anderson says of this networked environment was and is also true of the ‘traditional’ library of printed books, catalogues and index cards. The later technology merely heightens our awareness, and provides an easily appreciable demonstration of some of the consequences. However, the pressure to redefine the ontology of the library into the productive immersion of the user into the freedom of Text exists independently of such developments. The growth of technology merely provides another iteration of the ‘abundance and variety of matter’ (Otlet, 1903, p. 84), not a radically different environment.

Ultimately, the library can in this light surrender its grand narrative of order, rationality and classification without loss of its value. In the postmodern context in which the library finds itself, ‘the nature of knowledge cannot survive unchanged’ (Lyotard, 1984, p. 4) where whole ‘disciplines disappear, overlappings occur [...] the speculative hierarchy of learning gives way to an immanent [...] “flat” network of areas of inquiry’ (Lyotard, 1984, p. 39). Neither Rayward’s analogy to a ‘database management system’ nor Wright’s insistence that Otlet’s systems provided ‘important advantages over today’s Web’ (2008, p. 25) can ultimately conceal the irrelevance of a hierarchical, positivist conception of knowledge in such a context. Similarly, the library can afford to relinquish its search for its own metanarrative of the sagacious ‘librarian-god’ (Radford, 1998, p. 621), problematically frequently focussed around Paul Otlet as ‘forgotten forefather’ (Wright, 2003, title).

Rather, by replacing fixity and hierarchy with abundance and multivocality, the multifarious texts in the library’s seeming care can be released into their ‘activity of associations, contiguities, carryings-over’ (Barthes, 1977, p. 158). In this manner, the files of the RBU can once more shower any reader who consults them with an

abundance of text freed from the necessity to defend the relevance, the accuracy or the contemporaneity of any of it. Similarly, Otlet can retain his position as a notable user and reader of the world of text, the constructor of a library search so gargantuan that it has become its own library. The library itself, its users and all of its texts can be transformed rather into densities of ‘play activity, production, practice’ (Barthes, 1977, p. 162). This does not marginalise the library or the lives of those working within it, who already operate within a system where ‘there is no general agreement [...] as to what information is, or what relevance means, or what the two together (that is “relevant information”) might mean’ (Brooks, 1989, p. 239). Ironically, such an approach answers Zwadlo’s call to action when he so vigorously rejects any theoretical exploration of the library, and insists that we must ‘use methods that work, that serve the ends of the library, its users, and the community’ (1997, p. 119). It is simply that we can no longer expect the library, or indeed the user, to appreciate in advance what the ends of the user may be, or to believe in the continued relevance of the data which serve those ends on one occasion. The ends of the library may rather become the immersion of the reader in a self-led exploration of a world of text, on a scale such as that Otlet attempted, but over which no judgment or control should be exercised. It is in this way that the library can answer Lyotard’s clarion call, ‘let us wage war on totality; let us be witnesses to the unrepresentable’ (1984, p. 82); it is in this way that the library’s connection to societal knowledge can be maintained, not by controlling or fixing it, but by permitting its promiscuous, multiple production.

## 7. List of works cited.

### 7.1 Primary works cited

Note: where essays of Paul Otlet have been latterly reprinted, the date of original publication has been given in citations within the text, and in the list of works cited below. This decision was taken to better reflect the development of Otlet's thought, but the republication date is given below after the publication information.

Otlet, P. (1895). Creation of a universal bibliographic repertory: a preliminary note. In W.B. Rayward (Ed.), *International organisation and dissemination of knowledge: selected essays of Paul Otlet* (pp. 25-50). Amsterdam: Elsevier, 1990.

--. (1903). The science of bibliography and documentation. In W.B. Rayward (Ed.), *International organisation and dissemination of knowledge: selected essays of Paul Otlet* (pp. 71-86). Amsterdam: Elsevier, 1990.

-- (1907). The systematic organisation of documentation and the development of the International Institute of Bibliography. In W.B. Rayward (Ed.), *International organisation and dissemination of knowledge: selected essays of Paul Otlet* (pp. 105-111). Amsterdam: Elsevier, 1990.

--(1914). The Union of International Associations: a world centre. In W.B. Rayward (Ed.), *International organisation and dissemination of knowledge: selected essays of Paul Otlet* (pp. 112-129). Amsterdam: Elsevier, 1990.

--(1920). The international organisation of bibliography and documentation. In W.B. Rayward (Ed.), *International organisation and dissemination of knowledge: selected essays of Paul Otlet* (pp. 173-203). Amsterdam: Elsevier, 1990.

--(1934). *Traité de documentation: le livre sur le livre, théorie et pratique*. Brussels: Editiones Mundaneum.

## 7.2 List of secondary works cited

- Alvesson, M. & Sköldberg, K. (2009). *Reflexive methodology: new vistas for qualitative research* (2nd ed.). Los Angeles: Sage.
- Anderson, G. T. (1994). Dimensions, context and freedom: the library in the social creation of knowledge. In E. Barrett (Ed.), *Sociomedia: multimedia, hypermedia, and the social construction of knowledge* (pp. 107-124). Cambridge, Massachusetts: MIT Press.
- Armstrong, T. (2005). *Modernism: a cultural history*. Cambridge: Polity.
- Barthes, R. (1977). *Image music text*. (S. Heath, selected and ed.). London: Fontana.
- Bolter, J.D. (2001). *Writing space: computers, hypertext and the remediation of print* (2nd. ed.). Mahwah, New Jersey: Lawrence Erlbaum.
- Borges, J. L. (1970). The library of Babel. In D.A. Yates & J.E. Irby (Eds.), *Labyrinths: selected stories and other writings* (pp. 78-86). London: Penguin.
- Bradford, S.C. (1971). *Documentation* (revised ed.). High Wycombe, Buckinghamshire: University Microfilms for the College of Librarianship Wales.
- Brooks, T.A. (1989). The model of science and scientific models in librarianship. *Library Trends*, 38(2), 237-249.
- Bryant, C.A. (1985). *Positivism in social theory and research*. New York: St. Martin's.
- Bryman, A. (2008). *Social research methods* (3rd ed.). Oxford: Oxford University Press.
- Buckland, M.K. (2004). *Reflections on social and cultural awareness and responsibility in library, information, and documentation*. Retrieved February 12, 2011, from <http://people.ischool.berkeley.edu/~buckland/Scarlid1.pdf>

- Buckland, M. (2008). On the cultural and intellectual context of European documentation in the early twentieth century. In W.B. Rayward (Ed.), *European modernism and the information society: informing the present, understanding the past* (pp. 45-57). Aldershot, Hampshire: Ashgate.
- Budd, J. M. (1995). An epistemological foundation for library and information science. *The Library Quarterly*, 65(3), 295-318.
- Bush, V. (1991). As we may think. In J.M. Nyce & P. Kahn (Eds.), *From memex to hypertext: Vannevar Bush and the mind's machine* (pp. 85-107). Boston: Academic. (Original work published 1945)
- Day, R. (1997). Paul Otlet's book and the writing of social space. *Journal of the American Society for Information Science*, 48(4), 310-317.
- Ducheyne, S. (2009). "To treat of the world": Paul Otlet's ontology and epistemology and the circle of knowledge. *Journal of Documentation*, 65(2), 223-244.
- Fitzgibbons, M. (2008). Implications of hypertext theory for the reading, organization, and retrieval of information. *Library Philosophy and Practice*, 2008, 1-6.
- Frohmann, B. (2008). The role of facts in Paul Otlet's modernist project of documentation. In W.B. Rayward (Ed.), *European modernism and the information society: informing the present, understanding the past* (pp. 75-88). Aldershot, Hampshire: Ashgate.
- Garrett, J. (1991). Missing Eco: reading *The Name of the rose* as library criticism. *Library Quarterly*, 61(4), 373-388.
- Harris, M. (1986). The Dialectic of Defeat: Antimonies in Research in Library and Information Science. *Library Trends*, 34(3), 515-531.

- Hjørland, B. (1997). *Information seeking and subject representation: an activity-theoretical approach to information science*. Westport, Connecticut: Greenwood.
- Hjørland, B. (2000). Library and information science: practice, theory, and philosophical basis. *Information Processing and Management*, 36, 501-531.
- Hjørland, B. (2005). Empiricism, rationalism and positivism in library and information science. *Journal of Documentation*, 61(1), 130-155.
- Judge, A., & Fischer, J. (2001). *Union of International Associations – virtual organization: Paul Otlet’s 100-year hypertext conundrum?* Retrieved January 25, 2011, from <http://www.laetusinpraesens.org/docs.otlethyp.php>
- Kristeva, J. (1986). *The Kristeva reader* (T. Moi, Ed.). Oxford: Basil Blackwell.
- Landow, G. P. (1994). What’s a critic to do?: Critical theory in the age of hypertext. In G.P. Landow (Ed.), *Hyper/Text/Theory* (pp. 1-48). Baltimore: John Hopkins.
- Lyotard, J-F. (1984). *The postmodern condition: a report on knowledge*. Manchester: Manchester University Press.
- Miall, D. S. (1999). Trivializing or liberating? The limitations of hypertext theorizing. *Mosaic*, 32(2), 157-171.
- Muddiman, D. (1999). Towards a postmodern context for information and library education. *Education for Information*, 17, 1-19.
- Radford, G. (1998). Flaubert, Foucault, and the bibliothèque fantastique: toward a postmodern epistemology for library science. *Library Trends*, 46(4), 616-634.
- Rayward, W.B. (1975). *The universe of information: the work of Paul Otlet for documentation and international organisation*. Moscow: All-Union Institute for Scientific and Technical Information (VINITI), for International Federation for Documentation (FID).

- Rayward, W. B. (1994). Visions of Xanadu: Paul Otlet (1868-1944) and hypertext. *Journal of the American Society for Information Science*, 45(4), 235-250.
- Rayward, W. B. (1997). The origins of information science and the International Institute of Bibliography/International Federation for Information and Documentation. *Journal of the American Society for Information Science*, 48(4), p. 289-300.
- Rayward, W. B. (2004). When and why is a pioneer?: history and heritage in library and information science. *Library Trends*, 52(4), 671-682.
- Rayward, W. B. (2008). European modernism and the information society: introduction. In W.B. Rayward (Ed.), *European modernism and the information society: informing the present, understanding the past* (pp. 1-25). Aldershot, Hampshire: Ashgate.
- Rayward, W.B. (2010). *Mundaneum: archives of knowledge*. (Occasional Paper No. 215). Urbana-Champaign, Illinois: Graduate School of Library and Information Science, University of Illinois.
- Rieusset-Lemarié, I. (1997). 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(4), 301-309.
- Rosenau, P.M. *Post-modernism and the social sciences: insights, inroads, and intrusions*. Princeton, New Jersey: Princeton University Press.
- Sarantakos, S. (2005). *Social research*. Basingstoke, Hampshire: Palgrave Macmillan.
- Scheurich, J. (1997). *Research method in the postmodern*. London: Falmer.
- Squires, J. (1993). Introduction. In Squires, J. (Ed.), *Principled positions: postmodernism and the rediscovery of value* (pp. 1-13). London: Lawrence and Wishart, London.

- Swanson, D. R. (1986). Undiscovered public knowledge. *Library Quarterly*, 56(2), 103-118.
- Tredinnick, L. (2007). Post-structuralism, hypertext, and the World Wide Web. *Aslib Proceedings New Information Perspectives*, 59(2), 169-186.
- Uyttenhove, P., & Van Peterghem, S. (2008). Ferdinand van der Haeghe's shadow on Otlet: European resistance to the Americanized modernism of the Office International de Bibliographie. In W.B. Rayward (Ed.), *European modernism and the information society: informing the present, understanding the past* (pp. 89-104). Aldershot, Hampshire: Ashgate.
- Van Acker, W. (2011). International utopias of visual education: the graphic and scenographic transformation of the universal encyclopedia in the work of Paul Otlet, Patrick Geddes, and Otto Neurath. *Perspectives on Science*, 19(1), 32-80.
- Wills, D. (1999). The nature of hypertext: background implications for librarians. *Journal of Academic Librarianship*, 25(2), 134-141.
- Wright, Alex. (2003). *Forgotten forefather: Paul Otlet*. Retrieved January 25, 2011, from [http://www.boxesandarrows.com/view/forgotten\\_forefather\\_paul\\_otlet](http://www.boxesandarrows.com/view/forgotten_forefather_paul_otlet)
- Wright, Alex. (2008, 17 June). The web time forgot. *New York Times*. Retrieved February 14, 2011, from <http://www.nytimes.com/2008/06/17/science/17mund.html>
- Zwadlo, J. (1997). We don't need a philosophy of library and information science: we're confused enough already. *Library Quarterly* 67(2), 103-121.

Postmodernism, as the "post" preface implies, is something that follows modernism. ADVERTISEMENTS During 1970s the concept of postmodernism began to be connected with that of the post-industrial society, the increasingly service or knowledge dominated economies of the most advanced societies after World War a post-industrial society, characterized by the shift from industrial manufacturing to the service industries, now centred on information technology. Modern being "the first generation or iteration of moderne ideas of shape, lighting, materials" was a clean departure from any style say pre-1900s. I use the classic example of the Bauhaus by Gropius as a marker. In my opinion the tools of modernists were fresh and simple and expressions were bold. Post modern was a revival or second look (bro) of the modernist in the 1980s and is portrayed by a sort of whimsy or romanticism. Some examples can seem rather gauche or over the top that is for you to sermon. Once the trade and populist buy into a style both the populist and architects push t Postmodern architecture emerged in the 1960s as a reaction against the perceived shortcomings of modern architecture, particularly its rigid doctrines, its uniformity, its lack of ornament, and its habit of ignoring the history and culture of the cities where it appeared. The architect and architectural historian Robert Venturi led the attack in 1966 in his book, Complexity and Contradiction in Architecture. The philosophical modernism at issue in postmodernism begins with Kant's "Copernican revolution," that is, his assumption that we cannot know things in themselves and that objects of knowledge must conform to our faculties of representation (Kant 1787). Ideas such as God, freedom, immortality, the world, first beginning, and final end have only a regulative function for knowledge, since they cannot find fulfilling instances among objects of experience. Hence, Nietzsche believes only a return of the Dionysian art impulse can save modern society from sterility and nihilism. This interpretation presages postmodern concepts of art and representation, and also anticipates postmodernists' fascination with the prospect of a revolutionary moment auguring a new, anarchic sense of community. 'The times are wrong': Paul Otlet, modernist anachronism or prophetic knowledge architect of the postmodern? Article. Jan 2011. The author discusses the architectural plans of the Mundaneum made in the 1930s by the Belgian modernist architect Maurice Heymans in the footsteps of Le Corbusier and in collaboration with Paul Otlet. The Mundaneum was the utopian concept of a world center for the accumulation, organization, and dissemination of knowledge, invented by the visionary encyclopedist and internationalist Paul Otlet. In Heymans's architecture, a complex architectural metaphor is created for the Mundaneum, conveying its hidden meaning as a center of initiation into synthesized knowledge.