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## **Paul Otlet's Book and The Writing of Social Space**

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This paper argues that a close reading of Otlet's notion of the book in his *Traité de documentation*, along with the general metaphysics in his *Monde*, reveals a concern with force and dynamics which undermine traditional notions of the book and raise questions about accepted readings of Otlet which characterize his work as positivistic.

"Fragmentation, the mark of a coherence all the firmer in that it has to come undone in order to be reached, and reached not through a dispersed system, or through dispersion as a system, for fragmentation is the pulling to pieces (the tearing) of that which never has preexisted (really or ideally) as a whole, nor can it ever be reassembled in any future presence whatever. Fragmentation is the spacing, the separation effected by a temporalization which can only be understood--fallaciously--as the absence of time."

--Maurice Blanchot

### Social/Text

Perhaps there has never been an information theorist who took so seriously the mapping of information upon the social, and who was so optimistic about the possibility of social change by information as Paul Otlet. This may seem like an outrageous claim given many of the great names in Library and Information Science and related fields such as cybernetics, as well as the contemporary clamor about the 'information age.' However, one must consider not only that Otlet foresaw many of the technical advances later made possible by the advent of the computer (see Buckland, 1991a,b, 1996, and Rayward), but also, one must consider that Otlet's efforts in these regards were always toward the social goals of world peace, intellectual communication, and what became known in the 20th century as 'internationalism.'

The means toward this interreading of the textual and the social were possible for Otlet due to the privilege which Otlet gives to the destiny of "man" in his writing. Bibliological law and physical law, for example, meet around this central

problematic of man's coming into his own. Rayward in his article "Visions of Xanadu: Paul Otlet (1868-1944) and Hypertext," emphasizes Otlet's obsession with "facts" (247). Yet in Otlet's texts, in particular his magnum opus, his *Traité de documentation*, metaphor and other figures of speech such as hyperbole abound, giving to the text a speculative character that reaches beyond the present and into the future. By means of such writing devices of the imagination, Otlet's text goes beyond its own time, projecting "man" into a future which Otlet desired to create, both through mechanical technology and through his writing. In particular, Otlet's examination of "the question of the book" in his *Traité* suggests the very freedom and expansiveness of the *Traité* itself--a freedom and expansiveness that can only be understood when we read it, paying attention to its metaphors and hyperboles.

What I will attempt in this paper is to suggest a reading of Otlet's examination of the question of the book which argues that Otlet undertook in his *Traité* a radical rereading of the traditional notions of the book. As Rayward argues, such a reading may announce that Otlet was involved in a proto-deconstructionist understanding of textuality (Rayward, 246). Responding to Rayward's caveat that such a reading is met with by a general tone of positivism in Otlet's works, I would like to argue, by particular attention to Otlet's chapter on "Bibliographical Law" (*Traité*, 421-427) that even Otlet's positivism becomes problematic when read in relation to Otlet's understanding of the book. And further, I would like to argue that any ultimate closure of meaning which Otlet may be understood as performing through his notion of a grand encyclopedia (which Rayward reads in terms of Wells' "world brain" (245)) encounters resistance upon a close examination of Otlet's basic premises about the book. Consequently, in this paper I have largely focused upon a small section of the *Traité* in order to subject it to a methodology of close reading. I have chosen this 'micro' reading to open up problems which I believe are lost in current 'macro' readings of the text. My purpose is to offer a reading which differs from the usual view of Otlet's text(s) as positivistic, and I will do this by a reliance upon textual evidence which, to my mind at least, raises doubts as to the truth of the currently accepted thesis. Beyond these methodological considerations, however, this paper would like to ask two questions: first, how does the nature of the book for Otlet (*le Livre* or *le Livre-Documents*) go beyond any positivism which may be read into Otlet's text? And second, how does such an excess create both a present and a future for "man"?

### The Figure of the Book

As various authors note, the historical figure of the book in Western culture has been characterized by notions of closure, individual identity, and representational truth. That is, books are individual, self-contained, and give a true picture of reality. For example, for Foucault, the book is the preeminent figure for the author; for Derrida, the "civilization of the book" is the civilization of truth or "full speech" (the theological *logos*) (Derrida, 8); and for Deleuze and Guattari, the book most often is

organized under a master signifier which directs its 'content'--e.g., a title, a subject, or the proper name of an author (Deleuze and Guattari, 3-25). Our ordinary cultural practices, such as equating the work and the book, speaking of sacred texts in terms of their being the word of God, referring to books in terms of their author, and asking what a book says, and then just as easily asking what an author says even though we are referring to an act of reading, are just some obvious examples of what the authors above are referring to. These characterizations are historically and culturally specific. For example, as Chartier notes, the construction of a single authorial identity as a "guarantee of the book's coherence" increased in the 15th century, at least in regard to vernacular texts (57). And with the advent of the mechanical reproduction of books, no doubt, the proper name of the author authenticated as true those words which would be dispersed over a wide geographical and social landscape without the authenticating function of scribes and clergy.

As Chartier argues, the formal construction of the book helped to organize specific practices of reading (3-4). However, it is not only true that "reading is always a practice embodied in acts, spaces, and habits" (3), but, also, that reading and, indeed, writing are organized by the historical metaphysics of the book--that is, by the prevailing assumptions concerning the nature of the book. The book has not only played the role of representing and embodying truth, but it has also acted as a metaphor for the organization of larger social practices and spaces, such as the construction and use of libraries.

For example, for Dominique Perrault, the architect of the new Bibliothèque de France, the design of this library is characterized by four book-towers opening to each other across a courtyard, symbolizing the "salvation" of an "abandoned" industrial railway site (Perrault, 106). For Perrault, the Bibliothèque de France is a gift of space and of nature to the French nation, presented within the frame of books and knowledge. In its original architectural design, Perrault metaphorically appropriates nature within the figure of the book through, for example, using the sun's rays to highlight the presence of the book shelves within the towers and by presenting a 'natural' courtyard within the definition of the four book-towers. The metaphoricity of such design features is central to Perrault's description of his project, and this metaphoricity is possible because, in French, the word, "rayon" denotes both a ray of light and bookshelving, and "feuille," as in English, denotes both a leaf of a tree and a sheet of paper. Mixing metaphors between the book and nature, while literally enclosing the latter in the former in both his architectural design and in his description of that design, Perrault's project, despite the electronic future of the library, was to open a space for nature through the figure of the book, thus preserving the representation of nature through the book. As Anthony Vidler notes, this embodiment of the library was retrograde and even, given the future of libraries, bizarre, though it played perfectly well within the modernist arena of the other Mitterand grand projects (131). As Buckland suggests, however, the fundamental social innovation of electronic texts is to displace the site of the library and of public reading over a wide, and potentially unlimited, space (Buckland,

1988). Hence, the irony of France's new library is that it solidly takes its place within the metaphysics of the book just as that metaphysics is being destroyed by, at least, technological advances.

But as the Mitterrand/Perrault library demonstrates, in a very grand fashion, what is at stake with the figure of the book and the process of reading is the distribution and construction of social space. Otlet, too, was concerned with this, to the point of hiring Le Corbusier to design his Mundaneum in order to give his ideas a concrete architectural form. But the book, too, for Otlet was a major site of social contestation for the shape of the future. So it is tremendously significant that in the *Traité de documentation* Otlet contests these metaphysical figures of the book even within the framework of his own book.

### Energy, Transformation, and Renewal

In the section of the *Traité* entitled "Bibliographical Laws" (section 51) (presented in the table of contents as "Bibliological Laws"--though Otlet at places within and before the *Traité* defines these terms in distinction to each other, in practice they are as often used synonymously as they are differentially--), Otlet attempts to explain bibliographical law in terms of the laws of other sciences as well as in terms of the book itself. Fundamental to Otlet are the notions that the book is: a) an organism, b) a machine, and c) a dynamic embodiment of energy, both in terms of the evolution of books in relation to one another, and, as the material embodiment of thought (*l'esprit*).

Otlet's understanding that the book is an organism is not unique. This conception dates, at least, from the organic tendencies of the Romantics. But what is unique to Otlet is how this figure is understood in relation to notions usually attributed to books: wholeness, singularity, and positivist representation. For Otlet, the bibliographical "law of organization" suggests that books constitute a network or a web ("*réseau*") both within themselves and between one another (423). This expansion of the book's totality is made more clear when we come to understand that books are evolutionary, and as such, books contain what came before them in other books. The manner of this evolution is very specific: it occurs in terms of "*répétition*" (423). Repetition for Otlet is a universal law of not simply repeating the same with the same result, but is a repeating which is characterized as an amplification ("*La loi de répétition amplifiante*" (422)). Repetition, as an amplification, leads to universal expansion and geometrical change (422), that is, a changing of scale for the value of the textual object and its contexts and materials. Thus, Otlet's notion of textuality is one based upon a dynamic repetition, leading to an expansion of knowledge and a change in the form of knowledge. This understanding of texts is very different from the traditional understanding of texts in terms of representation or mimesis (e.g., realistic representation in the arts or positive representation in the sciences). Textual expansion means that the scale of

representation changes with each new book, and thus, the world is historically expanded and reshaped with each new writing of the world into being.

For Otlet, this movement of repetition follows the "physical-chemical" laws of the transformation of energy. Books conserve or embody energy. What this conservation means, however, is that books are part of an economy of knowledge which neither begins nor ends with the book itself, but circulates with the energy of previous books, which, like the current book, were imbued with "mental energy." In section 512.4 of the *Traité*, Otlet deduces abstract laws of the book from abstract "physical-chemical" laws, one of which is,

The law of the conservation of energy: never lost, never created, all is transformation. In the book also: books conserve mental energy, what is contained in books passes to other books when they themselves have been destroyed; and all bibliological creation, no matter how original and how powerful, implies redistribution, combination and new amalgamations from what is previously given.

(422-423)

Otlet illustrates the nature of bibliological energy flows by comparing them to the movement of water through rivers and seas, clouds and condensation. By analogy, the book is part of "the chain of operations of production, distribution, conservation, utilization, and destruction" (423). Much as Wersig suggests that a postmodern Library and Information Science must model itself upon the dynamic and productive flows of ecology (Wersig, 229), Otlet's metaphor suggests that the study of the book belongs not to the metaphysics of representation, but to a dynamic and productive understanding of textuality.

### The Book-Machine

Otlet's understanding of the book as an organism which is not a representation of nature, but is a form of mental and bibliographical energy, is further amplified by his understanding of the book as a machine. For Otlet, the book is an (organic) machine. This means that it is an assemblage of parts connected to other forces and mechanisms which it both embodies and acts upon:

The mechanism which studies or which produces the application of the mechanical is a combination of organs or parts disposed for the production of a functional assemblage. The Book is a mechanism, a dynamism and to it one is also given to apply the words of Archimedes:

"Da mihi ubi consistarrs et terram loco dimouebo"

"Give me a fulcrum and I will move the earth."

(422)

The book-machine is connected to other machines to form larger assemblages in the movement of energy. Earlier in the *Traité*, Otlet explains that machines are extensions ("prolongement") of the human body. As transformational organisms, machines not only aid the human body, but also replace or intensify it ("Le but de la machine est d'aider, remplacer ou intensifier la puissance de l'homme" (387)). It is because the book-machine transforms the human body that Otlet asks what detriment books may cause the brain:

The mechanism of the book realizes the means of forming the reserves of intellectual forces: it is an accumulator. Exteriorization of the brain itself, it develops to the detriment of the brain as tools develop to the detriment of the body. In his development, man, in place of acquiring new senses, new organs (for example, three eyes, six ears, four noses), has developed his brain by abstraction, the latter by the sign, and the sign by the book.

(426)

The book not only states theories, but constructs them; the book not only translates thought, but forms it:

And as an intellectual instrument, the book serves not only to state theories, but to construct them; not only to translate thought, but to form it.

(426)

The book-machine, as an assemblage of production, gains its power and its meaning through the presence of the world "within" it. The book-machine is not simply the mouthpiece or the face of an author, but it always already contains a multiplicity of forces, bodies, and senses. The book-machine seems to explode with an outside which always already accumulates within it. That multiplicity of forces, bodies, and senses is a multiplicity that is intrinsic to the book. The social space which the book proposes is not added to the book, but is always already immanent as the book.

### Original Multiplicity and Contemporary Hypertextuality

In a contemporary vein, we may look at a work that has often been cited as a theoretical source for hypertext studies and which shares many of the themes we have seen in Otlet in order to illuminate the relationship between Otlet's book and what may currently be seen as issues of hypertextuality in his work. Gilles Deleuze and Félix Guattari in the introduction to their book, *A Thousand Plateaus*, also describe their book in terms of being a machine ("A book itself is a little machine"

(4)). Beginning with an original multiplicity of authorship ("The two of us wrote Anti-Oedipus together. Since each of us was several, there was already quite a crowd"), Deleuze and Guattari continue by arguing their text not in terms of being a multiplicity of attributes predicating an essentialist "book" (for example, supposedly predicating "the book" according to "its" subjects), but rather, they argue that *A Thousand Plateaus* is an always already "substantive" multiplicity of parts, linkages, and production:

A book has neither object nor subject; it is made of variously formed matters, and very different dates and speeds. To attribute the book to a subject is to overlook this working of matters, and the exteriority of their relations. It is to fabricate a beneficent God to explain geological movements. In a book, as in all things, there are lines of articulation or segmentarity, strata and territories; but also lines of flight, movements of deterritorialization and destratification. Comparative rates of flow on these lines produce phenomena of relative slowness and viscosity, or, on the contrary, of acceleration and rupture. All this, lines and measurable speeds, constitutes an assemblage. A book is an assemblage of this kind, and as such is unattributable. It is a multiplicity--but we don't know yet what the multiple entails when it is no longer attributed, that is, after it has been elevated to the status of a substantive.

(3-4)

As several writers in the field of hypertext have noted, *A Thousand Plateaus* provides some conceptual tools for theorizing hyperspace. Theorists such as Landlow (1994), Rosenberg (1994), Moulthrop (1994) and Burnett (1993) emphasize the concept of rhizome in Deleuze and Guattari's work in order to illuminate the redistribution of power, authority, and authorship which can occur when a traditionally hierarchical and linear text is expanded through hypertext links (particularly, user-driven links). Rayward has argued extensively that Otlet both argued for and put into practice a paper-based (what today we might refer to as a) "hypertext" system. What does not seem to have been fully appreciated, however, is how the book itself for Otlet is the basis for such a "hypertextuality"--and not just in a functional manner of being something that can be cut-up and redistributed into more atomic documentary parts. For the very fact that a 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.

The notion of the book as a closed totality of re-presented facts gave the book its authority and its positive realism, as well as its ability to be read as something that could be cut-up and redistributed as atomic re-presented facts. Such a reading of Otlet's notion of the text, however, not only fails to account for the themes of textual production and original multiplicity which are evident in the *Traité*, but its spirit seems to lie contrary to the passages presented above.

As we have seen, for Otlet books are machines that link and change human energy as well as energy from other books. As Rayward points out, Otlet had envisioned also what we now might think of as hypermedia designs, thus deterritorializing the book further beyond its traditional unitary material identity with print and the closure of its paper covers. The assemblage or multiple nature of the evolutionary book-machine links its contents to an always already present multiplicity of words, documents, and concepts. It appears that for Otlet "hypertext" and "hypermedia" were the natural and logical extension of an infinite multiplicity always already present in the book. And further, that as the notion of the book is already spoken together with that of the "document" through the notion of the "book-document" in the *Traité*, the multiplicity envisioned in the book is also present in its excerpted chunks as distributed in "hypertextual" form. (See also, section 111: "Book (Biblion or Document or Gramme) is the conventional term employed here for expressing all species of documents," etc..) Hence, there can be no clear distinction between the notion of the book and the document in terms of quality, and thus, Otlet's documentary encyclopedia is, in principle, unable to be read in terms of simple atomic units of facts. It appears that the contrary is the case, for expansion, for Otlet, is an inherent and immanent principle of textuality, both in terms of the text's production and in terms of its expressive possibilities. There is no strict inside or outside of the text because the notion of the book as a positive representation of reality from an "objective" position outside of that reality has been supplanted by an outside which inhabits the very essence of a text, and indeed, makes it textual. Only because this historical and social essence of the text inhabits the book can the book be both an embodiment of meaning and transformational upon meaning. Understanding the importance of force and of textual multiplicity in Otlet's text is essential not only for understanding Otlet's work, but also for understanding how important the notions of force, machine, and dynamics are in the history of documentation. In this sense, documentation formed a radical break with 18th and 19th (and even 20th) century notions of classification and representation in Library Science because it challenges a cultural paradigm based on stratification and retrieval.

## Otlet and Positivism

Within a section grandly entitled "The Laws Proper to Books," we find several indications that a reading of Otlet's understanding of the book as strictly positivistic is insufficient. If positivism is understood as a theory of absolute representation, as the impossibility or severe restriction of interpretation when faced with 'reality'--in sum, of obtaining a form of knowledge which directly re-presents reality--, then the function of "illusion" in reading would stand in direct contradiction to the positivistic instrumentality proper to books, except perhaps, in the special case of literature. But the section quoted below defines the book not strictly as an instrument of representation, but instead as an "instrument of illusion." (In fact, nowhere in "The Laws Proper to Books" is a positive representational function



privileged at this level). Although it is true that the exemplar here is the literary book, Otlet's title heading is not in regard to literature (Otlet discusses literature, per se, elsewhere in the *Traité*), and this section is one of six sections dealing with different aspects or instrumentalities of the book, often discussed in terms of all three Kantian aspects of human experience (understanding, practical knowledge, and the aesthetic). Though the literary function cannot be generalized upon, the passage in its context strongly suggests that for Otlet the function of "illusion" cannot be reduced to the literary alone, any more than "intellectual work" can be excluded from the aesthetic (section 3, 426) or the book's instrumentality of freedom can be reduced to action (section 5, 426). Far from being restricted to the literary, this passage in its context suggests that the illusions which the book produces give to humans their specific human existence, their specific human mobility, and in sum we may say, their specific human facticity. The book as an "instrument of illusion" has direct relations with not only the aesthetic world, but the practical and intellectual world of humanity:

4. The Book, instrument of illusion. -- Man largely lives from illusion: it plays a very great role in the mobility of his actions, so that it would not be possible for him to exist without it. "A humanity in which one removes all his beliefs, which one breaks all ideals, and which would see clearly the reality of things would soon be condemned to perish" (Gustave Lebon). The Book, that of literature, is largely an instrument which generates illusions. Thus, the Book responds to a profound need of the human being (l'être humain).

(426)

But perhaps the strongest and most unambiguous undercutting of a strictly positivist reading of, at least, Otlet's later works comes from a contemporaneous text by Otlet, published just one year after the *Traité*. Contrary to Rayward's statement that Otlet's "view of knowledge was authoritarian, reductionistic, positivistic, simplistic--and optimistic" (Rayward, 247), I would like to suggest that the "optimism" in Otlet's works functions as a regulative ideal in the same way that the notion of Truth has always functioned as a regulative ideal in Enlightenment knowledge. This is to say that Otlet's ideals are not totalitarian at all, but instead, function as ideals which guide, but do not define, human historical existence (including documents and documentation).

In the introduction to his book, *Monde: essai d'universalisme*, Otlet discusses documents in much the same terms as in the *Traité*, but, more generally, Otlet presents his guiding metaphysics ("La Conception du monde") in a complex and subtle manner. Centrally, Otlet discusses language and writes that concepts give rise to vocabulary terms, which themselves give rise to expression and to grammar through the relations between the terms. The most general relations between concepts constitutes logic, and this logic, when applied to the understanding results in Science. The totality of the sciences (which include "Science") gives us the "World in its totality." But just as Wittgenstein in his *Tractatus Logico-Philosophicus* gives

us a similar schema, only to amplify the linguistic 'limitations' in his later Philosophical Investigations, so Otlet immediately introduces the element of error and other limitations upon expression, and, a little later, he mentions the limitations of different registers of expression in relation to the real and in relation to one another (Thought, Language, and Document). Within these limitations, an idealism of expression can be functional only within the historical movements of knowledge. The understanding of the world is as perfect as it can be at any moment; necessity gives us a perfection which falls short of Truth and the Divine. I will quote at length this passage which directly bears upon the problem of positivistic expression in documentation and elsewhere:

Communication between humans in regard to the practical things of life, as well as in regard to their ideas, their sentiments, and their will is conducted in language [langage]. The expression of each concept gives rise to a corresponding vocabulary term, and the relations between the terms give rise to some methods of expression which constitute grammar. Most high and most general, the relations of concepts between themselves give rise to logic. Applied to an order of knowledge [connaissance] and to the placing in order of elements, logic gives rise to Science. At last, the totality of the sciences aims toward the knowledge of the world in its totality [aboutit à la connaissance du Monde en sa totalité]. Language takes two aspects: exterior and interior. It is not innate; it is acquired. Its acquisitions correspond to that of knowledge or ideas, and soon, between the interior speech [parole] and exterior speech [parole], there is established a perfect parallelism, which is subject to deviations caused by errors, forgetfulness, or falsehoods, or, the inability to express something completely.

However, language tends to fix itself within material and conventional forms--that is, graphically [c'est la graphie] (design, hieroglyphs, alphabets, writing). Its product is the document, and in their totality documents must be understood as conventional representations of the world. Thus, to men living in societies, the world offers itself according to these four modalities: the real World (Reality), the known World [Monde connu] (Thought), the expressed World (Language) [Langage], and the graphic World [Monde graphisé] (Document). These four modalities of the same world are interdependent. In principle, in all their parts, they should perfectly agree with one another [elles devraient concorder parfaitement]. In fact, there is a discordance, inexactitude, and incompleteness from one to another. Thought does not know all, Language does not express all, and Document does not register all. Though they tend toward this or should tend toward this [doivent y tendre].

(Monde, vii-viii)

Far from espousing positivism, Otlet, in the passage which we will examine next, rejects positivism as he rejects an earlier Kantianism and Hegelianism as epistemologies which are passé. Instead of any totalization of knowledge in relation to the world, he calls for a continual striving and a "pragmatism" which

acknowledges the role which limitations have upon the production of texts and the generation of knowledge. I would propose that Otlet, through this gesture, acknowledges and honors the role which the fragmentary and the provisional have for the production of documents and, in general, for the production of the human world. At the same time, Otlet's writings retain the sense of futurity and trust in machinery and rational organization which are hallmarks of modernism. This combination of Enlightenment progress and modern limitation, of acknowledging the difference between "reality" and its interpreted articulations is not, as Rayward claims, the voice of "an outmoded paradigm: nineteenth century positivism" (247), but instead, is a voice of late modernity. Within the context of historical limitations, Otlet's optimism leads neither to unfettered idealism nor to strict positivism, but rather, to a pragmatism guided by regulative ideals and hopes. Otlet's later works, whether speaking generally in terms of metaphysics or specifically in terms of documentation, speak of a limitless expansion, a renewal, developed out of, and made possible only by, limitation, interpretation, invention, and industry. I would propose that at least in the *Traité* and in *Monde*, Otlet adopts a pragmatics, not a positivism. His writing has an optimism built out of the realization of the failures of Reason and the necessity for experiment and growth, not an optimism born out of simplicity and reductionism. This claim may be seen as a radically controversial reading of Otlet, but the following excerpt makes extremely problematic any strictly positivist reading of Otlet's work and, instead, it argues that Otlet's work occupies a particular sort of pragmatic idealism within the context of the beginnings of late modernity following the First World War. As such, it speaks to our own era which remains governed by Enlightenment ideals and some remnants of the modern notion of science, but which lacks (or is often cynical toward) the positivistic certainty of 19th century modernity. This is not to say, of course, that Otlet's era is our own, but rather, that there is a correspondence which we must critically take part in between the beginnings and endings of late modernity, a correspondence which, I would propose, occurs when we read Otlet's text:

Our immediate predecessors extricated themselves from difficulties born out of the antinomies of thought--first with the Kantian solutions of distinguishing the two planes of reason: pure and practical, *nomena* and *phenomena*. Then, with the Hegelian propositions of thesis, antithesis, and synthesis. And last, with Positivism: breaking with all "metaphysics," repudiating the search for causes in order to confine itself to the "how," eliminating all final causes in order to limit itself to the ascertainment of that which is. But now the course of events in the physical and mental orders has forced us to take up once again the old problems. It has subjected them to new methods, and they are extended, better coordinated, and better aided by observation, experimentation, and instrumentation. No fact, no domain escapes anymore the possible influence of these methods. So that, even now, all is declared not knowable, not solvable, but continually always subject to research, to trial, to invention, and by consequence, to growth, whatever may be the form of the problems, the desiderata of creation.

Thought--is it true? Action--is it good? The Work--is it beautiful? From facts the ideals of Truth, Goodness, and Beauty were freed and were attributed to the Divine. But what foundation grounds the human world, the world of thought, of sentiment, and of action, if the real world--the natural--is illogical, evil, and ugly. While thinkers have turned and returned the problem, practical men have elevated even their point of view to being part of a system (pragmatism) headed toward the future [allant de l'avant]--always, always, everywhere, everywhere. They were building a new civilization, making an appeal to organization, implementing the most educated and disciplined men, the most submissive and the most powerful machinery, and the capital of advantage, accumulated and made supple for all situations. The producers [Les réalisateurs] worked to make operative assemblages [organismes] which were more and more considerable.

(Monde, x-xi)

#### Documentation, War, and Freedom.

For Otlet, the simultaneous division and repetition (dédoublement, (Traité, 425)) which the text performs--its simultaneous fragmentation and binding through writing and images--can develop in one of two ways. These two ways constitute two understandings of information--that is, two ways in which the world may be informed ("in-formé") or understood ("con-scient" (Monde, vi)) through the machinery of textuality. Writing after the failure of internationalism in the First World War, Otlet proposes, first, that there is the construction of a plan or plane (the prescriptivity of the English "plan" and the descriptivity of the English "plane" are combined in Otlet's French "plan") which subordinates the individual to society through "the concentration of extraordinary forces." Otlet associates this plane with war, and it brings about a form of documentation that is characterized by the "creation and diffusion of favorable documents" and the "elimination of documentation considered as contrary to an end (game of authorities, of censors, of destructions)" (427). On the other hand, Otlet states simply, books can be "instruments of intellectual freedom helping to disengage individuals from all mental submission and all types of imposed life" (427).

Given the originary multiplicity of the book for Otlet, and given its ability to produce planes of State war or produce events of freedom through writing and images, we end by asking once again, what is the nature of the "fact" which Rayward argues as the bottom line for Otlet's project? Moreover, given the machinic quality of books for Otlet, and given their immanent posture toward the dynamics of documentation, the more important question may be, what, for Otlet, is the nature of textuality--a textuality or weaving which is both bibliographical and social? Clearly, the diffusion and editing of documents toward a single plane of production and reality is

associated with fascism and the State war-machine. On the other hand, as a machine of writing--of writing and rewriting--, as a dynamic of force and renewal and as a site of original multiplicity, the text opens to infinity:

One is permitted to see conciliation and synthesis in the deeper workings of the characteristics proper to the two elements which are present: the human person and the Book-Document. In effect: while material goods are in number limited, intellectual goods are unlimited. Now, the Book-Document allows that intellectual goods be given corporeal existence, a form of accessibility, and multiplication to infinity. It thus helps to modify the conditions of existence for individuals and that social bond [lien, links] between individuals.

(427)

## Conclusion

In this paper I have suggested that Otlet's notion of the book or book-document is more subtle than it may at first appear. Its subtlety lies in the complex and extended nature of the book for Otlet. Such complexity begins with the notions of force and an original multiplicity in the book which is simultaneously both "inside" and "outside" the book. Consequently, this complexity and richness extends to any part or fragment of the book--to any other forms or chunks of documents--ad infinitum. The "net" or encyclopedia which Otlet often mentions in the *Traité*, is thus, in principle, boundlessly expansive, though its actual form would be subject to modes of reading/writing which would turn its information into specific shapes and types of "knowledge" (say, for example, through the actions of the State's war-machine). This "net" of textuality could, as Otlet foresaw, be given material form in varieties of "hypertext." In this case, though, we are reminded by Otlet that the freedom of hypertextual space originates in a complexity and a temporal unfolding that goes beyond the space of preformed links and the orders of State rhetoric.

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