Global Knowledge in the Global City According to Paul Otlet's Twin Utopias

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This paper discusses some of the philosophical tenets underlying Paul Otlet's work before and after World War I. A Belgian internationalist and documentalist, he anticipated the hyperlinked structure of today's world wide web and designed a universal documentation system to integrate all branches of knowlege. This comprehensive structure was meant to be the central focus to rule a world city representing a new world polity, which would in turn order international relations around a "scientific goverment".

Keywords: City, cosmopolitan, global, science, Utopia.

1 Universal vs. Particular

Paul Otlet's ambition is undoubtedly impressive, but the means to achieve the twin objectives of his project are equally impressive: building the world city on the first hand, and grounding the knowledge of the world and human societies on the other. Three components were defined to this end. The first was a comprehensive coverage and classification of collected data, and their translation into the diverse forms of a universal scientific language to reflect the order of things and beings. Next comes the second, consisting in globalizing human societies as a consequence of globalized knowledge, to eventually generate a kind of "collective brain" which would enshrine science as well as and the feeling, will and memory of the world. The third system poses that the natural order of things is dominated by a supernatural, overhanging order.

As there is obviously no question of examining or commenting upon this project in a few pages, we will deal with better known aspects of Otlet's two axes only: building the world city and systematizing knowledge through a documentary and classifying method. These are the first two components synthetically expressed in Monde, his opus magnum published in 1935.

2 The Historical Context

Whether considered from a purely international or taxonomic perspective, Otlet's work may appear to be anachronistic, especially when presented out of its historical and scientific context. It also reflects a utopian vision which can be explained in part as a rational response to a peculiar phase of what he considers to be a new world in the making, a form of international democracy or, to take a less ambiguous approach, a cosmopolitical ordering in which political institutions allow citizens to act, express opinions and be represented in the international field

regardless of their geographical location (Archibugi 1995, [1]). However, the inter-war period does not provide "black and white" answers, being as it is a transitional phase fraught with tensions clearly appearing in Otlet's work when referring to the status of science and the political representation of social actors.

On the first point, in contrast with Edmond Husserl's observation that a sense of distrust of the role of science goes back to 1935 (Lecourt 1990, [2]), Otlet was still inspired by scientist views from the previous period: "... it is the entirety of human sciences that lead to knowing the Universe as a whole." (Otlet 1935, VII, my translation [5])

Second, the idealist version of conventional philosophical liberalism retakes the claims of such diverse thinkers as Kant, Locke, Hume or Rousseau that after the First World war a peaceful world could be rebuilt, designed as an international society based on multilateral institutions guaranteeing solidarity, civil liberties and democracy. The legal pacifism enshrined in international courts is quickly superseded by a utopian current targeted at a genuine *international government*. Leonard Woolf (Virginia's husband) is asked by the Fabian Society to write a report, released in 1916 under the heading *International Government* (Woolf 1916, [3]), one year after Otlet's publication of his own *Constitution mondiale de la Société des nations* ("World Constitution of the League of Nations", with the subtitle *Le nouveau droit des gens* ("the New Law of Nations") in 1917. Beyond any possible mutual influence, what is relevant here is the wide public and intellectual debate about the idea of international democracy surrounding the creation of the League of Nations as the first attempt to establish a world polity in the wake of World War I. In a way, this idea was a novelty in so far as democracy among equal states was far from being achieved even within states. Indeed, Utopia was for the first time stated in normative terms, predicating international democracy beyond the mere addition of national democracies and considering the very nature of international relations.

Generally, Otlet oscillates between the two ideal poles, political and scientific, with the World City being grounded on the scientific enterprise and vice versa, at least to some extent. In a way, his view diverged from Max Weber, who held in the same period that traditional knowledge legitimation processes (theological and cosmological) were receding to the full rationalization and intellectualization of social life, which in turn led to the "disenchantment of the world", a Schillerian notion (*Weltentzaberung*) now associated with Max Weber's name (Weber 1919, [4]). Whereas Weber was wise enough not to integrate social science into a social physics, Otlet insists that new prediction and planning means are available to improve social order, in line with the epistemological model of physics: "The recent rise of the so-called 'technocracy' gives sociological forecasting the opportunity to develop its full potential." (Otlet, 1935 V, [5])

Fully indeed, in so far as the "sociological equation" considered by Otlet embraces all interactions between existing factors, to be integrated into a "world equation". Logically, the basic reference is Adolphe Quételet (1796-1874), a Belgian mathematician, astronomer, naturalist and statistician, who composed a "social physics" along principles laid down by the Physiocrats, where the natural environment and the notion of *homme moyen* ("average man") can be translated into statistical terms. In the same way as historical and economic cycles, the sociological equation can consequently account for constraints limiting human freedom and evolving from social contract to social legislation. The final destination of society and human creativity becomes determined, albeit in relative and statistical terms, within a constructed order.

In practical terms, Otlet's initiatives focus on documentation and the building of one or more world cities. In 1901, Franz Kemeny had already supported the idea of a world academy to gather "all cultural movements" covering sciences, literature and the arts, and a world centre for education (Grossi 2002, [6]). This led to the creation in 1909 of an international Bureau for Educational Documentation in Oostende, the first comparative institute of this kind (Speeckaert 1980, [7]). With the same universalist and educational aim in mind, he created with Nobel Peace Prize Henri La Fontaine the International Institute of Bibliography (IIB) in 1895, which sponsored the first World Congress of Universal Documentation, held in Paris in 1937, and was the parent organization of the Union of International Associations (UIA) created in Brussels in 1907. The IIB was also responsible for the development of the widely-used Universal Decimal Classification (UDC). The globalization of intellectual life was significantly supported by proliferating international nongovern-

mental organisations, which were to coordinate and unify related bodies so as to gather in one single global system all data collected so far (Mattelart 1999, [8]). Similar congresses were held in Brussels in 1910 and 1913, and an international museum, a collective library and a universal bibliographical repertory containing 11 million cards classified by field and author were created.

The ultimate goal of such initiatives was, as Otlet said, "to unify the civilised world as a whole in a common action with a view to achieving given aims of universal interest which individual states could not achieve, offering human kind the instruments it needed to gain greater power collectively, placing human activities under optimal conditions to develop fully. International organisations are meant to be linked with progress in human achievements and civilisation. Next to national civilisations and superimposed on these, there must be a world civilisation based on what the former share, so as to generate the spirit of a polycivilisation," (UAI 1912, [9]). With this in mind, they proposed in 1920 a plan for an international intellectual labour organisation, a part of which led to the creation of the International Institute of Intellectual Cooperation located in Paris, which provided a permanent secretariat for the League of Nations International Committee on Intellectual Cooperation. Its aim was to promote international cultural/intellectual exchange between scientists, researchers, teachers, artists and other intellectuals.

The systematic collection and processing of data produced by the various analytical and mathematical tools available to researchers makes it possible to create a documentation system which could support sociological forecast: "In doing so, we can find natural resources to be used in forecast analyses. To this aim, a precondition is to posess all data. These data in the sociological area should consequently be registered in a more and more complete, detailed, and fast way." Otlet's continuing commitment, however, was to collect all data needed for global forecast, not only in the social field, but also in weather forecast, astronomy, geology, all the sciences which could "...bring examples of powerful inventories capable of inspiring and supporting social research," (Otlet 1935, 425-426, [5]). The mechanical, systematized operations that announce the development of robotics allow him to think about sociological forecast and to ask : "Is it forbidden to imagine

that society will have a set of adaptive institutions capable of carrying out balancing functions similar to automatic pilots in aircrafts?" (Otlet 1935, 429, [5]).

The influences that can be detected here, among others, are those of Saint-Simon, Fourier, the Fabian Society (Woolf 1916) and more schools which combine scientist and cosmopolitan approaches to what was presented as the establishment of a new world order. From a scientific and philosophical point of view, Otlet's work is characterized by a number of conceptions which recall Kant's rationalism, Leibniz's quest for the philosophical basis of a universal human language – rather than Diderot's *Encyclopédie* - and Novalis's romantic project to integrate the whole of human knowledge. In Kantian style, Otlet's method was aimed at grounding knowledge on immediate evidences, the careful and systematic review of available data referring to the various branches of knowledge. On the other hand, it shares with Kant's humanism the progressive impetus that proclaims faith in reason and freedom and is committed to engage in a way of instructing the whole of mankind, inviting it to get free of this "minority condition", of that "inability to use its own understanding without being controlled by another" (Kant 1795, [10]). Reason, will and sensitivity as faculties that belong to man according to Kant can be found in Otlet's writings, *mutatis mutandi*, as knowledge, action and feeling. Furthermore, he defines his method in the same way as Kant, halfway between a dogmatic rationalism à la Christian Wolff and an empirical scepticism à la Hume. However, the three systems that Otlet sees as the original conception of the world – positive analysis, the synthesis of the laws of thought and intuition, and a supernatural order, recall Wolff's dogmatic rationalism, especially with the tripartition of metaphysics into psychology (science of the soul), cosmology (science of the world) and theology (science of the divine).

3 The Scientific Utopia

Rational knowledge, as a prime component of a modern science that excludes any other dimension of thinking, goes back to the ideal model of Greek philosophy freed from contextual and cultural determinants to the point of severing universal science from its object, and represented by the "deified" thinker in Aristotle's cosmology, immune from doxa, myths

and religion, where each type of substance from humans to primal elements has its own individual telos. The history of sciences has nevertheless shown that such a dichotomy has typically turned out to be deceptive, even more so as the cultural environment constantly biases the structuring of knowledge. In turn, science itself has never ceased to generate myths which often express a degree of mistrust of it (the Fall of Icarus, Faust, Frankenstein...). Thomas Kuhn would say here that conventional science can succeed in making progress only if there is a strong commitment by the relevant scientific community to their shared theoretical beliefs, values, instruments and techniques, and even metaphysics. Such biases imply that human means are finite, that there is no question of making scientists into preachers of truth. In the platonic tradition, this category of myths and representations speaks about the world through discursive and iconographical registers which have a multiplier effect. It is contemplative (*zoon logon echon*, living being endowed with speech and reason) rather than active, teaches rather than transforms the world (*homo faber*). It is the perfect language that Umberto Eco (1994, [11]) or Maurice Olender (1989, [12]) have admirably described, showing that scientific research in language continued to be impregnated with mythical elements until the early twentieth century, particularly with the myth of human origins.

In contrast with these primal myths, a second category appears, which resolutely engages with science, technology and what finally gives birth to contemporary technoscience. The universal science promoted by Otlet strongly interferes with technical inputs, with a science prone to becoming subordinated to technology, opening the way to mechanisation and automation, where humankind is bound to become an organic whole of peaceful and fruitful relationships between its units (Gon), (Otlet 1935, XI, [5]).

Documentation or encyclopaedia?

Otlet's ambition requires certain conditions to be fulfilled, one of them being the need to transcend cultural diversity, for which his approach to some extent goes beyond interdisciplinary inquiries to make transdisciplinary moves: "It is remarkable today that the primary source of new ideas and scientific breakthroughs does not come from traditionally recognized sciences, but from overlapping areas, a kind of scientific no-man's land," (Otlet 1935, 360,

[5]). It therefore requires a unified science of society, whose many contradictions could be solved by an integration of knowledge and the establishment of an expected "scientific governement" able to compensate for the global "hyperseparatism" he deplores, because documentation, he says, is the best means to establish the conditions under which stable and benevolent relationships between human beings can be fostered (Otlet 1935, 388 and 400, [5]). The underlying principles of these proposals refer to mixed traditions inspired by encyclopaedism, from Leibniz to Diderot and Novalis. Such approaches, like Diderot and d'Alembert's encyclopaedia, presupposed an overview of human questions, whereas Leibniz aimed for a universal communication system predicated on universal knowledge and Novalis aimed for the interdisciplinary interconnection of various realms of knowledge. To start with, Leibniz's view is particularly illuminating to understand universalisation in the field of knowledge, but also to conceive of communication beyond sociocultural contexts as well as scientists' subjectivity, not to mention his stance as a diplomat and a senior counselor at the Mainz and Hanover courts and, relatedly, his interest in peace building among European nations. Even though the universal science he grounded in the thesis that there is no mind-body interaction as such, but only a non-causal relationship of pre-established harmony or correspondence between mind and body, and his plan for a universal, artificial language to express concepts or ideas were doomed to fail, Leibniz's insight may look more plausible with hindsight, if we look at the the rise of computer science in the twentieth century. Utopian as it were, the Leibnizian vision actually ignored the arbitrary side of any classification – what Jorge Luis Borges would illustrate with his Chinese classification of animals (Borges 1993, [13]), which no Chinese encyclopaedia has ever described (In which it is written that animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) tame, (d) suckling pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a very fine camelhair brush, (l) etc.) However, it also responded to a practical need, leading to the proposed infinitesimal calculus to solve political and moral issues, or to reduce any discourse to a mere calculus on the condition that it is reformed so as to adopt a strict mathematical structure to adequately match concepts through the

"universal characteristic" of language.

Otlet will retake the Leibnizian idea of a universal symbolic notation to this end. The Dewey Decimal Classification (DDC), or Dewey Decimal System (1873) adopted by the International Bibliographical Institute created in Brussels in 1895 to cover intellectual production in the whole word meets the same needs. The most relevant feature for this discussion, however, is the ability to bring together all elements in a single interconnected whole with varying ways (orders) to proceed to each others, i.e. to create a genuine network structure, which departs from the deductive, linear sequence used by Descartes to describe the order of reasons. Cryptography, mapping, communication and documentation systems are all tools used to constitute a system of signs viewed by Marcelo Dascal (1978, [14]) as a genuine semiotic system, that is, what the Mundaneum was defined by Otlet: an idea, a method, a network, aninstitution and a "Summary of the whole, symbol of all symbols, prototype of all relevant things ordered and connected, classification of classifications, documentation of documentations, focus of focuses, university of universities," (Otlet 1935, 453, [5]). The method applies a Leibnizian combinatorial view of concepts, based on an analysis into primitives, to which symbols or "characters" are then assigned, from which characters are formed for derivative concepts by means of combinations of the symbols. The bibliographical notation is a translation of it, with syntax and semantics. Relations are ruled by the Aritotelian logic, also rehabilitated by Leibniz as an infallible model for language rectitude to be emulated all along the seventeenth century (Kulstad & Carlin 2013, [15]).

This feature of universalism, which drew the attention of Henri Lafontaine more than Otlet's, is closely related to the social and scientific sides of theit cooperation. Not surprisingly, the universal language is introduced as a logical and expected complement of railways, electrical telegraph, big exhibitions illustrating all scientific discoveries and industrial achievements of the time (Auroux 1997, 378, [15]). What distinguishes the two internationalists is only that Otlet was more concerned with a language (*langage*) able to convey the concepts laid down as universal, while La Fontaine was rather aware of the pragmatic dimension of communication, regardless of linguistic diversity, and the need for an international language (langue). Not surprinsigly

either, linguistic universalism appeared at the same time as Ludwik Lejzer Zamenhof's humanism in 1906, which created hillelism as the foundation for a universal religion taking account of all cultural traits and included the mystical Esperanto initiative.

However, it was particularly at the beginning of the last century that this particular universalism took its unique shape, as an ontology perfectly consistent with the ideas so expressed (Auroux 1997, 380-382 [15]), was to be replaced with an auxiliary international language better suited to practical uses. Even though the esperantist project initially supported by Otlet and La Fontaine – the latter was rapporteur of a delegation of eleven countries which submitted a draft resolution to the League of Nations' first Assembly in that same year - is still supported by some, the concept of universal language only survives in formal and computerised systems).

The Romantic Imprint

One of the most highly innovative among romanticist works is Novalis's *Romantic Encyclopaedia*, which fully embodies the author's "Magical Idealism", a personal philosophy containing meditations on mankind and nature, the possible future development of our faculties of reason, imagination, and the senses, and the unification of the different sciences. One salient topic of romanticism is an ever-changing world torn apart by multiple contradictions, and this encyclopaedic project undoubtedly opens up new avenues into German romanticism and idealism in a post-Kantian perspective. In what he called his *unfinished notes for a universal science* (*Das Allgemeine Brouillon*) conceived in 1798-1799, Novalis reflects on numerous aspects of human culture, including philosophy, poetry, the natural sciences, the fine arts, mathematics, mineralogy, history and religion, and brings them all together into a "Romantic Encyclopaedia" or "Scientific Bible." In it, he intends to gather "the members long separated of total science." What should be noted here is, rather than Diderot and d'Alembert's "empirical agreggate" (d'Alembert 1991, 101 and 335, [17]), Novalis envisages a systematic project to deal with the oppositions unsolved by critical thought between subject and object, the ideal and real worlds. From philosophy to literature and science, he thinks of a system which unites knowledge, religion and aesthetics into a relative, plural universalism whose extreme modernity is a reflection on a universe which is both mobile

and inexhaustible, characterised by both identity and contradiction, in an interdisciplinary perspective. As a whole, his system appears as an increased complexity of Leibniz's combinatorial model, inviting to think in several directions, to follow a mathematical sequence or a series of problems without any originating point (Schefer 2000, 15, [18]). It is a genuine opening to a dynamic and decentered universe, free from the Platonic ontology and Leibniz's pre-established harmony, which seems to foreshadow Deleuze's "nomad thinking" and the networking philosophy of which some aspects can also be found in Otlet's work.

Equally romantic is the reference to a cycle defined by a ternary structure, where the third term (art, religion or philosophy) is to synthesize and balance the first two terms (the real and the ideal, even if Otlet falls short of Novalis, who suggests, from another viewpoint, that this closed structure should be overcome to reach an open model without any reference point, "chaotic", "energized by a philosophy of the infinity" (Novalis 2000, 325, [19]). On the contrary, Otlet designs a kind of panopticon, "a single point wherefrom all world events could be observed, all individuals could realize that his conscience, his will, his feeling are but aspects of the great whole, the aspect suited to the synthesis of his own being, his personal case" (Otlet 1935, 385-386, [5]).

The Political Utopia

Considering that Otlet appears to be Leibnizian with a touch of romanticism in the sphere of knowledge and its dissemination, the question is whether a similar approach applies to his view of international relations. At first sight, his idea of a comprehensive restructuring to save humans from the scourge of what was a "total" war, not only military, economic and cultural, but waged also against civil populations. This may be compared to Leibniz's comments in the decades that followed the Thirty Years War (1618–1648), before the Peace of Westphalia was signed with a view to allowing European peoples to better communicate and stemming the devastating power of conflicting theologies that had divided the continent. However, the comparison stops there, because Leibniz was never a pacifist and did not endorse the idea of a "perpetual peace", which first came up during 18th century when abbé de Saint-Pierre was working as the negotiator for the Treaty of Utrecht, while Otlet remained a utopian

in the international field as he was in his view of science. Even if it necessarily presupposes a rational, if not mathematical foundation, the Leibnizian "best of all possible worlds" quite suggests a *Realpolitik* (Leibiniz 1715, 328-336, [20]), where the "world constitution" conceived by Otlet and Lafontaine is overtly cosmopolitical.

Additionally, the associated social model impresses with its platonic overtones, with a "scientific government" (Otlet 1935, 329, [5]) whose purpose and substance are not too different from the aristocratic government embodied in Plato's regime ruled by a philosopher king, and whose contemporary figure may be the oligarchy of scientific and technocratic experts present in various fields of governmental decision making. So, the conception of a "total prediction" and "world equation" was to logically lead to this other side of Otlet's utopia, the concept of world city which fulfilled the vision of a total centralization of international power and knowledge. He tried to reconcile this with the assumption that human freedom and creativity laid in controlling correlations between diverse activities. Despite these apparently conflicting assumptions, both approaches - social forecast and building a world city – were greatly stimulated by the many actions and reflections that supported endeavours toward world peace, the status of science and, as an increasingly pressing need, the architectonic design of societies in the most literal sense, notably of town and cities and the communication networks supplying every place. In this regard, Otlet admired the admired the inventive genius of Le Corbusier (Courtiau 2003, [21]), who illustrated in his mind the concepts of what was unpredictable and unexpected, these "continuing, sudden outbursts of modern events, the powerful disruption in life, the disarray triggered by psychics such as inventors" (Otlet 1935, 418, [5]). The kind of city that resulted from their cooperation may seem filled with a sense of totality, present in similar utopias, opposed to any degree of freedom and creativeness. The progressive momentum – understood as the new avenues opened by science and social and societal advances – that prevails in urban planning in during the first half of the 20th century until 1960 gave rise to the International Congress for Modern Architecture (Congrès internationaux d'architecture moderne, CIAM), an influential association of modern architects and city planners united in a search for solutions to the problems of urban areas. Founded

in 1928 by Le Corbusier and Sigfried Giedion, CIAM served for several decades as the organizational centre of the modern movement in architecture and its alliance with technoscience. In their minds, the world city is one example of a paradoxical utopia combining imagination and social, political and economic issues, in a transition period involving critical reflection, reform projects or even revolutionary ideas (Courtiau 1987, [22]). In this context, the spatial model designed for a similar purpose by Otlet and Le Corbusier reminds us of the Renaissance upheavals, when Thomas More published the founding text of *Utopia* (1516) which criticized the society of that time, designed that "nowhere land", the anti-society opposed to the former. The reference to *topoi*, as mentioned by Aristotle, is in fact one function of imagination to cristallise memory (Wunenburger 1997, [23]) is often made by Otlet to link sensory impressions to artificially visualise them in space in order to control the process. More's utopia had admittedly no practical end, but Otlet's is meant to be a practical achievement justified by the horrorr of WWI. This practical aim may explain the absolute, almost mythical character of model cities promoted in the Athens Charter (Charte d'Athènes), and consequently the charges of scientific terrorism brought against them by their opponents, who exposed the dogmatism displayed by some architects claiming, as argued by Le Corbusier, that "Experimental evidence is available, everything is being tested in scientific experiments" (Choay 2001, [24]).

The political side of this movement is in some ways a natural outgrowth of utopian developments, a recurring pattern since ancient Greece first linked myths to religious narrations providing collective truth in so-called pre-rational or traditional societies to later grant them their autonomy, so that myth became "a meaningful vector, without imposing a single truth, only if it is contemporaneous with a *logos*, a hermeneutic reason which will interpret in an unhindered, open way, according to a form of questioning," (Wunenburger 2002, [25]). Western politics has been gradually nourished by such defeated myths, from the newly-gained autonomy of Greek cities up to the late development of modern democracies. Whether ingenuous or overoptimistic, Otlet's plan is only a revival of this story. As early as the second half of the 18th century, Jacques Tenon (1788, [26]) endeavoured to incorporate the hospital into modern technology. Locating this institution within the cosmopolitan, humanist culture of his time, he saw it as a cumulative, collaborative, supranational effort of scientists, physicians, learned societies, governments, and even ordinary citizens. He referred to the medical institution as a "measure of the civilization of a people" and undertook the transition from the medieval to the modern hospital. Another example, from a more punitive point of view expressing the shared principles and scientific creed of utopians, is Jeremy Bentham's *panopticon*, a penitentiary based upon an idea of his younger brother, who while working in Russia for Prince Potemkin, hit upon the "central inspection principle" which would facilitate the training and supervision of unskilled workers by experienced craftsmen. Bentham came to adapt this principle for his proposed prison, a circular building with the prisoners' cells arranged around the outer wall and the central point dominated by an inspection tower. From this building, the prison's inspector could look into the cells at any time and even speak with them, though the inmates themselves would never be able to see the inspector himself.

The Communication/Information Challenge

In the early 19th century, a variety of critical models thrived, global and no longer fragmentary, from Owen's New Harmony city in Indiana to Etienne Cabet's French-based icarian colonies established as egalitarian communes in several American states, to Hygeia, a City of Health, by Benjamin Ward Richardson in England, and all those Karl Marx called the "utopian socialists" (Owen, Fourier, Cabet and their followers). Otlet's global plan would combine various aspects of them, from the hygienist component to the communication utopia. A common feature that appears in them, whether cognitive, global or focused on communication, is a trend to aggregate individual data within a centralized, if not totalitarian pattern, which threatens individual creativity and freedom in human communities. Followers of the Platonic city have consistently resorted to expressions of dogmatic knowledge, a monopoly of political power, censorship of human expression in its diversity, or for a significant part of it set them down on the side of digitization. However, the historical context of human representations has also held that The *Republic* and *Laws* present model cities more closely related to fairness in mystical communities than the standardization of minds in totalitarian

states. Plato'city would be situated, as suggested by Jean-Jacques Wunenburger, "...between the ideal of Pythagorian brotherhoods and the blueprints for society as imagined by Christian utopias of the Renaissance" (Wunenburger 2002, 90, [25]). Later utopias, from Thomas More to today's contemporary varieties, are pre-arranged, closed communities in the fields of property, religion or sexual life which have little to do with current cosmopolitan projects. In this sense, Otlet's world city ultimately remains paradoxically trapped in a social ideology which, despite its progressive, modern ambition, reflects the basic concepts of its time closer to philosophical and political conservatism.

In some ways, today's political projects have lost good part of their original substance and initial impetus, to the point that even democracy has reached the point where it is threatened by all kinds of dogmatism, religious and economic as well as scientific and, on the other hand, by an implosion which could become, as suggested by Emmanuel Todd with reference to Plato, an olilgarchy of the powerful and the experts (Todd 2002, [27]). True, other dimensions seem to figure on the horizon, emerging or projected from the collective brain and cyberculture, global civil society and universal jurisdiction, namely what is left in the end of a utopian imagination: building a global order based on more democratic international relations, a new world-wide covenant on man and the biosphere, or universal access to knowledge and information. If Otlet foresees the emergence of Teilhard de Chardin' omega point seen as node of ultimate synthesis and consciousness, Joël de Rosnay's global brain as the worldwide network formed by all individuals together with the information and communication technologies, it usually keeps a partial, if not biased or litteral, platonism or neo-platonism, Leibniz's *caracteristica universalis* of the educational legacy of encyclopaedism. Documentation would allow science to gradually be severed from human mind and materialize the world of ideas, man would ultimately and instantaneously contemplate every side of the Universe through his technological tools (Otlet 1935, 390-391, [5]), which would reflect the Idea, this "ideal model of which the artist will make a copy in the physical world," (Wunenburger 1997, 117, [23]). This mimetic gesture is still present in a number of cyberworlds, sometimes in radicalized versions not significantly different from ideas implicit or explicit in Otlet's writings, pointing to a dynamic

and hierarchical pattern toward a "collective brain" which would raise man to that "omniscient being, equivalent to God himself" (Otlet 1935, 358 and 390-391, [5]).

4 Conclusion

Like all utopias, the world city and the Mundaneum draw from history, while taking into account hopes for the future and occasionally carrying out effective projects. Plato, Leibniz, Kant and other thinkers unsurprisingly leave indelible marks, while contemporary intellectual schools celebrate the all-powerful science and embrace the illusion that they would lay down the rational foundation for a brave new communication world mounted into a cosmopolitical framework whose early signs had appeared in the first decades of the 19th century. Among its representations, the metaphor of a sphere (Otlet 1935, 385, 452 and XXV, [5]) is particularly revealing, when it solves in a few concepts the presence to the real world in all its breadth from a central point realises the full potential of being, a *panepticon* of sort which however contradicts the networking assumption usually ascribed to Otlet. Indeed, even as it was known in the 1920s and 1930s networking was a complex web of heterogeneous elements between chaos and hyperstructuring, order and disorder, which was rather reluctant to submit to a single regulator. As Umberto Eco (1972, 368-370, [28]) said some time ago, there is communication because we cannot see everything at a glance, or better still because the whole cannot possibly be seen at a glance. Networks are the setting for the confrontation between centering and decentering, the obliged passage rather than a heuristic instrument. Cyberworld experts say nothing other than that when they see communication tools as an empty place, a crossing point for the future, and not the foundation for a new social structure (Musso 2000, [29], Sfez 1992, [30]).

The social and political aspects of Otlet's views appear equally paradoxical, in so far as their aims are socially progressive and scientifically ambitious, the underlying concepts and implicit outline make them philosophically conservative. From Comte's "social physics" to Durkheim's essentialism, French views in social science focus their efforts mainly on improving social prediction and restoring community relationships and social order through the development and implementation of authorities which would

reach more certainty, control moral behaviours and in fact postpone social change. Similar views can be found with Tönnies, who opposes close personal relationships in "communities" and impersonal relationships in "societies", or with Weber, who deplores the consequences of the increasing rationalisation of social life and the resulting "disenchantment of the world", and particularly the weakening community ties characteristic of modernity (Bottomore 1964, [31]).

These features culminate in a "taxonomic vertigo" with Otlet, a striking example of the classification reason fully consistent with Leibniz and the encyclopaedist aim, the idea of a *deus ex machina*, the illumination under a mechanical system, which conserve the preconceived harmony of the Platonic ontology. In the spirit of Leibniz's interest in Chinese ideograms, he looked for a universal, conceptual language which could become effectively international, sought a documentation synthesis which would generate an "intellectual machine", a kind of duplication of human and social bodies covering varying figurative modes informed by concepts, mathematics and images, to ultimately reach a maximum abstraction accounting for knowledge, national democracies and global governance. Assuming that Otlet's visionary project marks the dawning of contemporary communication technologies, its organicist bias cannot be considered as revolutionary; it also differs from the systemic and network thinking as conceived by Novalis, namely an open-ended, ever-changing universe with no single point of reference. The question remains as to whether modern societies can avoid this shifting nature, either expanding to a multicentric, deterritorialized space or withdrawing into an identitarian closure, the very thing we call premodern.

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