



# “The Internet: A Belgian Story?” The Mundaneum

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**“The Internet: a Belgian story?”**  
**The Mundaneum**  
**Creating a new forum to debate the Internet issue**  
**in the French-speaking part of Belgium**

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**Abstract:** Today the Mundaneum in Belgium is an archives centre and a museum. But the origins of the Mundaneum go back to the late nineteenth century. Created in Brussels by two Belgian jurists, Paul Otlet (1868-1944), the father of documentation, and Henri La Fontaine (1854-1943), Nobel Peace Prize, the project aimed at gathering the entire world's knowledge to file it using the Universal Decimal Classification system that they had created. Today their work is interpreted as the first paper search engine in History. The cultural project of the institution is both aimed at highlighting the heritage and questioning the future of access to knowledge.

**Keywords:** Information science, heritage, Paul Otlet, Henri La Fontaine, Universal Decimal Classification, Universal Bibliographic Repertory, information technology, search engine, museum, archives, Belgium, Unesco

Brussels, 1934. *“Here, the work desk is no longer loaded with books. Instead, there is a screen, and within easy reach, a telephone. All the books and all the information are somewhere else, far away, in a huge building. From there, the page that needs to be read is made to appear on the screen to find the answer to the question asked on the telephone.”* Paul Otlet (1868-1944), *Treaties on Documentation*.

Without knowing that this was written in 1934 by a lawyer passionate about bibliography, these few sentences may seem somewhat insignificant. However, today they provide an insight into a work that was clearly ahead of its time.

Mons, 6 June 2012, 11:32 p.m. In the wake of the World Science Festival in New York<sup>1</sup>, the story had just broken on Yahoo! News: *“The history of the Internet has been traced back even further into the past. The concept of the “web” in fact dates back to 1934...”*

At the time when we were celebrating the 20<sup>th</sup> anniversary of the World Wide Web (1989-2009) and the 30<sup>th</sup> anniversary of the Internet (1983-2013), the Mundaneum, created at the beginning of the 20<sup>th</sup> century by Belgians Paul Otlet and Henri La Fontaine, invited us to discover a new perspective on the history of information and communication technologies.

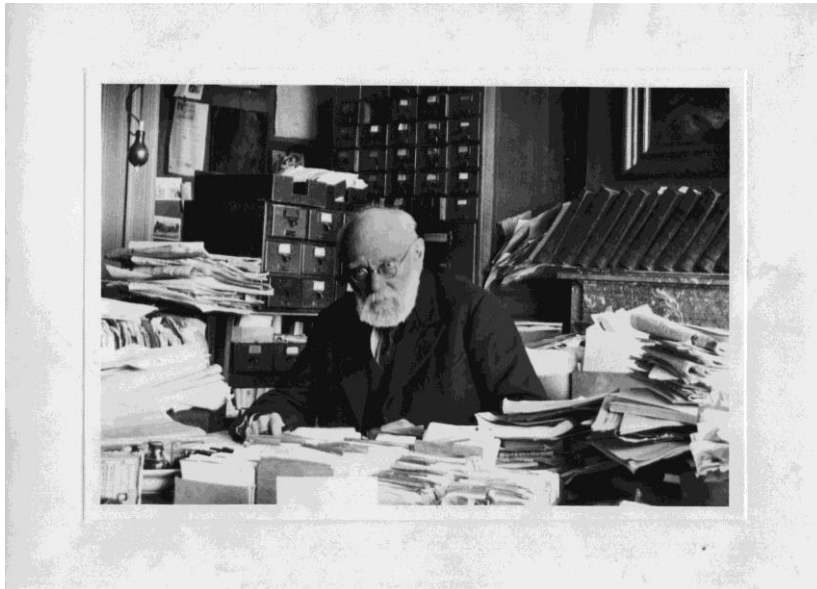
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<sup>1</sup> World Science Festival, New York, June 2012 :  
[http://worldsciencefestival.com/blog/alex\\_wright\\_premonitions\\_of\\_the\\_internet](http://worldsciencefestival.com/blog/alex_wright_premonitions_of_the_internet)

Robert Cailliau, co-founder of the World Wide Web together with Tim Berners Lee (CERN, 1989), admitted<sup>2</sup>: *“The history of the Mundaneum confirms my beliefs with regards to the invention of the Web: it isn’t an invention, but rather a convergence of elements and precursors which have more or less laid the foundations of what we know today; attempts which have been of huge importance. We were just in the right place at the right time to launch what we now call the Web...”*

## 1 A Little Bit of History

The Mundaneum is the work of two Belgian Lawyers, Paul Otlet (1868-1944) and Henri La Fontaine (1854-1943, winner of the Nobel Peace Prize in 1913). At the end of the 19<sup>th</sup> century, both men aspired to collect and index all knowledge in order to share it on a global scale and thereby promote the idea of peace between nations.



**Figure 1:** Paul Otlet, father of Documentation, Brussels, 1934 (collections of the Mundaneum)

It was in Brussels in 1895 that the men laid the foundations of the *Office International de Bibliographie* (OIB). Otlet and La Fontaine drew upon the knowledge and techniques of their time to design and build the very first paper search engine, The “Universal Bibliographic Repertory”, based on record cards indexed using the “Universal Decimal Classification” system (UDC), which they developed from American librarian Melvil Dewey’s Decimal Classification. The UDC is still used in libraries today, but Paul Otlet and Henri La Fontaine’s contribution to the

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<sup>2</sup> October 2012, RTBF La Première ([www.rtbfb.be](http://www.rtbfb.be))

science of modern information management is not limited to just this classification system.



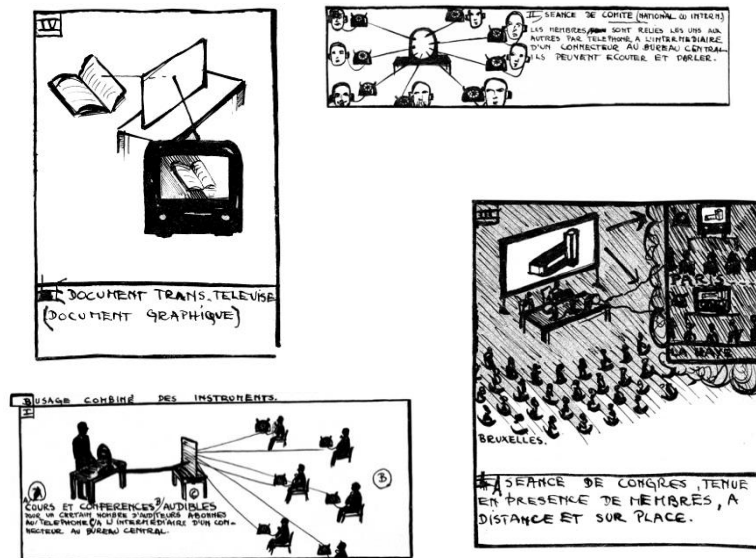
**Figure 2:** Henri La Fontaine, Nobel Prize for Peace in 1913 (collections of the Mundaneum)



**Figure 3:** The Universal Bibliographic Repertory, Brussels, 1910

Paul Otlet, who is recognised as the father of documentation, was the first to conceptualise and devise a classification tool which digitised access to knowledge. Considering the notion of information as independent from its medium but also the need to come up with powerful means of transmitting this information, he created blueprints for many systems between 1900 and 1935, each more visionary than the next. As a result, Paul Otlet left us with many drawings and descriptive notes of what technology would become a century later: the video conference, the conference call,

the mobile phone, cloud computing – in other words, the global communication network!



**Figure 4:** Sketches by Paul Otlet, Brussels, between 1900 and 1934 (collections of the Mundaneum)

*“It was a steampunk version of hypertext!” exclaimed the co-founder of Wired magazine (USA) and author of “What Technology Wants”, Kevin Kelly, when he discovered Otlet’s work.*

*“The Semantic Web is rather Otlet-ish”, maintains Michael Buckland, professor at the School of Information at the University of California, Berkeley.*

As a true data scientist, in 1934 Paul Otlet had already sized up the challenge of the years to come: “Mankind is at a turning point in its history. The mass of data acquired is astounding. We need new instruments to simplify it, to condense it, or intelligence will never be able to overcome the difficulties imposed upon it or achieve the progress that it foresees and to which it aspires.” (Paul Otlet, *Treaties on Documentation*, 1934)

At the heart of their era, Paul Otlet and Henri La Fontaine were truly passionate about the culture of the network. As such, they set up a global intellectual cooperation network rallying together multiple institutions, such as universities, libraries and associations from around the world, to ensure their project’s success. Thanks to their lobbying skills, they formed an international relations network which included personalities such as the Lumière brothers, Ernest Solvay and even the American industrialist and pacifist Andrew Carnegie.



**Figure 5:** Andrew Carnegie's visit to the "Palais mondial", Cinquantenaire, Brussels, 1913 (collections of the Mundaneum)

The Mundaneum, birthplace of international institutions dedicated to knowledge and brotherhood, became a universal documentation centre over the course of the 20<sup>th</sup> century. Its collections, comprising thousands of books, newspapers, small documents, posters, glass plates, postcards, and bibliographic records were gathered and stored in different locations around Brussels, including the Palais du Cinquantenaire, built in 1880 to celebrate the 50<sup>th</sup> anniversary of Belgium's independence.

This gave rise to a much more grandiose project in the mind of Paul Otlet: that of the World City, for which the French architect Le Corbusier would create plans and models. The aim of the City was to bring together the major institutions of intellectual work, such as libraries, museums and universities, on a global scale. Unfortunately, this project would never actually come to fruition.

The Mundaneum project, deeply rooted in utopian ideals, was quickly confronted with the magnitude of the technical development of its era.

Now located in the French speaking part of Belgium in the city of Mons, just a few miles from Brussels, the Mundaneum has become an Archive Centre of the Wallonia-Brussels Federation (Belgian State) and a temporary exhibition space. Mons is preparing itself to turn into a European capital of Culture in 2015.

The documentary heritage that is currently archived there is made up of the personal archives of its founders, books, small documents, posters, post cards, glass plates, the Universal Bibliographic Repertory (UBR), the International Press Museum and archive collections relating to three main themes: pacifism, anarchism and feminism. In June 2013 the UBR was added to the Unesco's "Memory of the World" Register<sup>3</sup>.

Since the publication of the first biography of Paul Otlet in 1974, "The Universe of Information: the Work of Paul Otlet for Documentation and international Organization", by an Australian student named Boyd Rayward<sup>4</sup>, a large international

<sup>3</sup> UNESCO Memory of the World : <http://www.unesco.org/new/en/communication-and-information/flagship-project-activities/memory-of-the-world/register/full-list-of-registered-heritage/registered-heritage-page-9/universal-bibliographic-repertory/>

<sup>4</sup> University of Illinois, USA

scientific community has developed around the legacy of the founders of the Mundaneum.

Today, thanks to an abundance of literature (MIT press, Harvard University, the University of Indiana, the University of Illinois, Ghent University, Cambridge, Paris Sorbonne, UCLA-Berkeley, the Universities of Hamburg, Bologna, Montreal, and so on), Paul Otlet's undeniable contribution to information science during the 20<sup>th</sup> century and to our understanding of information technologies is now recognised.

At the heart of our information society, the Mundaneum project keeps its purpose alive by constantly updating its message. Bringing the ideas, archives and collections bequeathed by its founders face to face with current and future social issues: this is the ambition of the Mundaneum, which is currently looking toward "Mons, European Capital of Culture 2015", whose leitmotiv is none other than "*Where technology meets culture*"!

## 2 Making the History of Computing Relevant

It took the digital revolution for us to recognise Paul Otlet as the visionary that he was... but also to realise that the origins of information and communication technologies are much more deeply rooted in the history of mankind, and came long before the appearance of the first calculators. Could it be, as suggested by Alex Wright, journalist at the New York Times who wrote this great article about the Mundaneum "*The web time forgot*" and author of "GLUT: Mastering information through the ages", that it is "the way the technology industry works which discourages perception of the historical context"?

French philosopher Michel Serres describes the advent of information technologies as "*a cultural and cognitive revolution*". This relates to the very depths of our being: our language, our "existence in the world". The legitimacy of its history makes the Mundaneum a unique place which offers a critical reflection on the digital revolution, of which we are all witnesses and participants. It is a revolution that has resulted in an emergent culture which affects all generations. Today, the Mundaneum takes on meaning in this new cultural landscape. This is why, more than ever, the Mundaneum is turning towards the younger generation who were born into the "digital age".

As a place where history meets technology, the Mundaneum dares to be a space for the socio-cultural mediation of communication technologies.

Spurred on by the revolution, the scope for action and reflection is immense:

Identifying and promoting the understanding of the social impact of these technologies, bringing ICTs and people closer together and demystifying their use, helping people understand how they can be used as medium for building social ties, encouraging everyone to consider their own status as a digital citizen and not only as a consumer of technologies, making the public aware of the development of new knowledge as well as new identities in the web 2.0 era based on issues linked to data organisation and control (big data, open data, etc.), promoting the society of knowledge by highlighting strategies for sharing knowledge, discussing issues related to freedom of expression on the Internet but also respecting and protecting the privacy

of others, highlighting the scientific developments that foretell of a near future where technology permeates all aspects of our everyday lives...

### **3 An Exhibition Space, a Forum for Discussions, a Mediation and Meeting Place for Groups, and a Virtual Platform for Celebrating a Unique Legacy**

In light of this vision, in 2010 the Mundaneum started to offer a programme of events dedicated to these issues. The launch of the collaboration between the Mundaneum and Google in 2012 (formalised in 2013) was intended to give greater impetus to this socio-cultural mediation project – the only one of its kind in Belgium!

Among the events organised by the Mundaneum are:

- An exhibition on the organisation of knowledge (“Renaissance 2.0 : a journey through the origins of the web<sup>5</sup>“)
- A series of conferences/debates based on “The impact of information and communication technologies on society”, addressing many topics from the freedom of expression on the Internet, digital studies, the Internet and multilingualism to scientific mediation in the Web 2.0 era, to name a few
- A series of large conferences led by Google aiming to highlight the European pioneers of computing history, during which we had the opportunity of welcoming Frenchman Louis Pouzin, inventor of the datagram, the Belgian Robert Cailliau, co-founder of the WWW at CERN, and even the researchers Alex Wright (USA), journalist for the New York Times, and Boyd Rayward (Australia), biographer of Paul Otlet, on “The forgotten pioneers of the history of the Internet “
- Every exhibition at the Mundaneum becomes the subject of significant pedagogical mediation (50% of the Mundaneum’s visitors are made up of school groups), including ICTs (development of a serious game to enhance the museum visit)
- The organisation of a ‘web fair day’ designed to bring together young businesses that are involved in the web and the digital domain and students who are in the process of choosing their career path

The creation of a space<sup>6</sup> dedicated to the Mundaneum on the Google Cultural Institute international platform (digital archives.mundaneum.org), which enables the Mundaneum to share its archives on a global scale and also to publish them in an aesthetically pleasing format.

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<sup>5</sup> Mundaneum : <http://expositions.mundaneum.org/en/exhibitions/renaissance2.0-en>

<sup>6</sup> Google cultural Institute : <http://digitalarchives.mundaneum.org>