Hyperdocumentation: what are the limits for documenting processes and practices?

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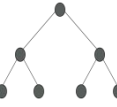
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**Information Science Trends (IST) 2023:
Information Science Perspectives on Documenting Processes
and Practices. Uppsala**

asis&t

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HYPEROTLET (2017-2022)

- The realisation of the augmented corpus (hyperdocument) of Le *traité de documentation* by Paul Otlet (1868-1944).
- Historical recontextualization of documentation and information.
- Reflection on the current issues of documentation in the digital humanities and the epistemological debate on current issues a) digital documentation, b) "documentarity" [Pédauque] and c) "documentality" [Ferraris] within a community that can develop a European documentary tradition.
- The development of new reading, consultation and circulation tools inside an innovative digital ecosystem (HyperOtlet 1.)
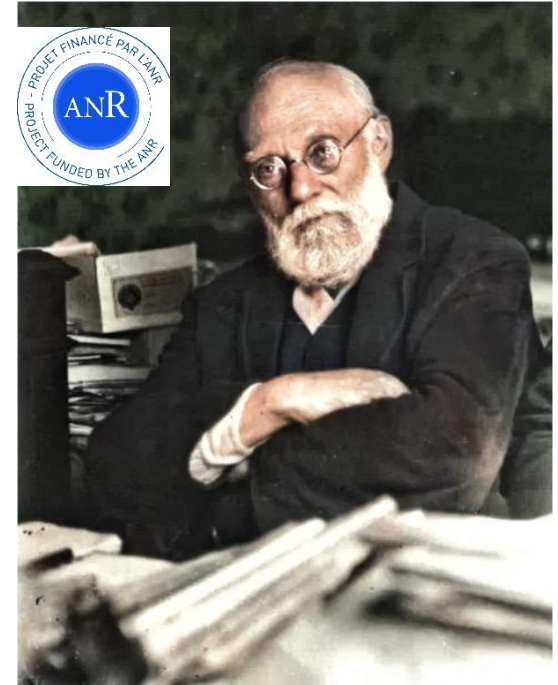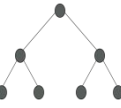
HYPERDOCUMENTATION
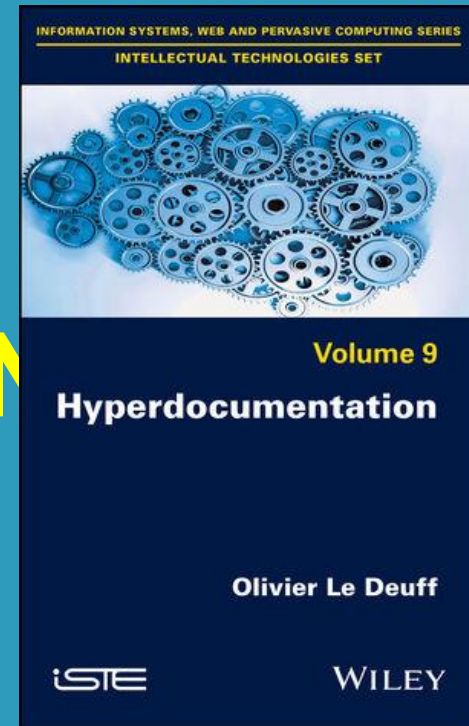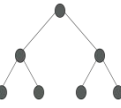
PAUL OTLET (1868–1944), **THE VISIONARY**

- A bibliographer
- The founder of the Mundaneum
- A pacifist
- An utopist?

THE 5 STAGES LEADING TO HYPERDOCUMENTATION

- In the *first stage*, man **sees** the reality of the Universe using his senses. Immediate, intuitive, spontaneous and unthinking knowledge.

- In the *second stage*, he **reasons** reality and, combining his experience, generalizing it, interpreting it, he makes a new representation of it.

- In the *third stage*, he **introduces the document** which records what his senses have perceived and what his reason has constructed.

- At the *fourth stage*, he **creates the scientific instrument**. Reality then appears to be magnified, detailed, specified. Another universe successively reveals all its dimensions.

- In the *fifth stage*, the document intervenes again in order to directly record the perception provided by the instruments. Documents and instruments are so associated that there are no longer two distinct things, but only one: the **Document-Instrument**
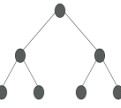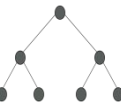
THE ULTIMATE STAGE

- *In the sixth stage, one stage further and all the senses having given rise to a proper development, **a recording instrumentation having been established for each**, **new senses** having come out of the primitive homogeneity and having been defined, while the spirit perfects its conception, in these conditions we glimpse **Hyper-Intelligence.** "Meaning-Perception-Document" are things, concepts welded together. Visual documents and acoustic documents are completed by other documents, with touch, taste, fragrance and more. At this stage also the **"insensitive", the imperceptible,** will become **sensitive and perceptible** through the tangible intermediary of the **instrument-document.** The **irrational** in its turn, all that is incommunicable and neglected, and because of that revolts and rises as it happens these days, the irrational will find its "expression" by ways still unsuspected. And **then it will really be the stage of Hyper-Documentation.**"* (Otlet, 1934).
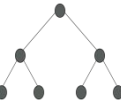
WHAT HYPER MEANS?

- Hyper as Massification
- Hyper as Extension
- Hyper as Reduction
- Hyper as Document Diversity
- Hyper as New methods (statistical machines)
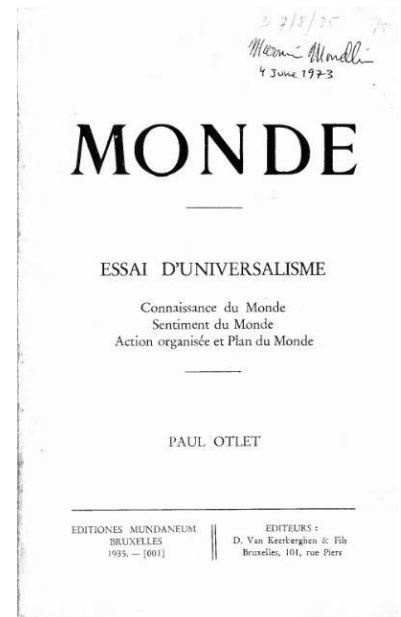- Hyper as New link between documents (Hyper-document)
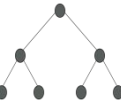
HYPERDOCUMENTATION versus HYPERSEPARATISM

"*As the world goes now, on the lines of hyper-separatism, there will soon be only documentation to establish regular and benevolent contact between man*" (Otlet, 1935, p. 387 ; translated by Rayward, 1975, p. 354).
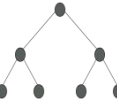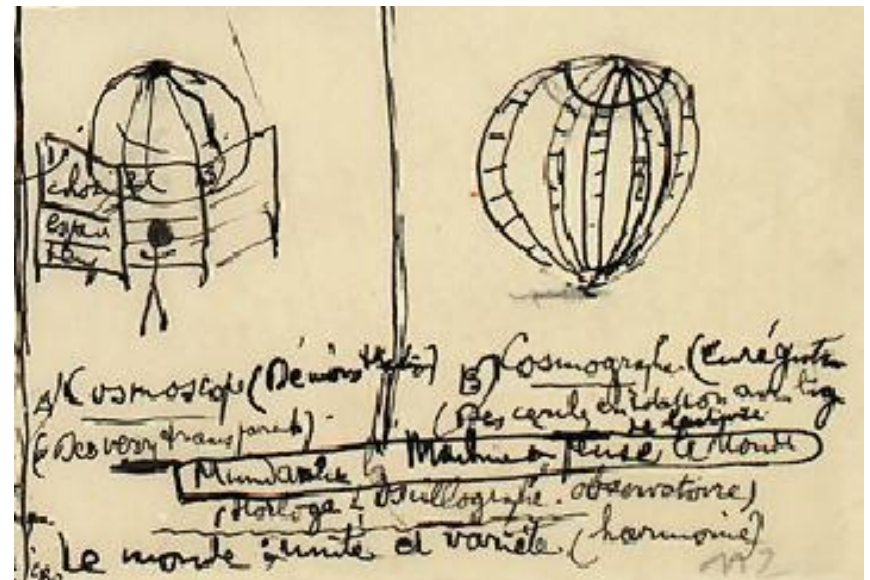
THE ULTIMATE PROSPECT OF DOCUMENTATION

*And here is the **ultimate problem of documentation** (technical and organisational). Man would no longer need documentation if he were assimilated to a **being who had become omniscient,** in the manner of God himself. To a lesser degree, remote instrumentation would be created combining radio, Röntgen rays, cinema and microscopic photography. **All things in the universe, and all things of man, would be recorded remotely as they occurred.** Thus would be established in the moving image of the world, **its memory, its true double. Each one at a distance could read the passage** which, enlarged and limited to the desired subject, would be projected on the individual screen. Thus**, everyone in his chair could contemplate creation**, in its entirety or in some of its parts."* (Otlet, 1935)
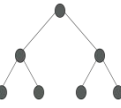
MONDE

ESSAI D'UNIVERSALISME

Connaissance du Monde
Sentiment du Monde
Action organisée et Plan du Monde

PAUL OTLET

EDITIONES MUNDANEUM
BRUXELLES
1935. — [001]

EDITEURS :
D. Van Keerberghen & Fils
Bruxelles, 101, rue Piers

THE ULTIMATE DEVICE: THE INSTRUMENT-DOCUMENT

- # THE COSMOGRAPHE

- # THE COSMOSCOPE

HYPERDOCUMENTATION , HYPERTEXT AND BEYOND

The long history of hypertext and knowledge Machine

"It seems clear that Otlet anticipated the kinds of organisation and technology that were to inspire Vannevar Bush's "Memex" . . . **Otlet's notion of a mechanical brain,** a substratum of memory, an external mechanism and instrument of the mind are anticipations of the functions foreseen by Bush for his Memex. Other work, such as that of Douglas C. Engelbart and the development of the currently fashionable hypertext systems, may also be considered in broad outline and functionality as having been **anticipated by Otlet.** In this connection it is not irrelevant to note that, in following his notions of "documentation" to their ultimate conclusion, Otlet was to speak of "**Hyper Documentation" in terms only slightly more extravagant that those used by hypertext enthusiasts.**" (Rayward, 1990, p. 9)
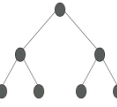
A more complex historical perspective

- Hypertext existed before computers and the internet

- They cannot be "reduced" to the digital ecosystem

- Pioneers like Otlet and Goldberg need to be reconsidered in this history (Buckland, 1992)

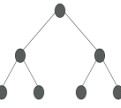- Hypertext should be repositionned within hyperdocumentation (Otlet, 1934)
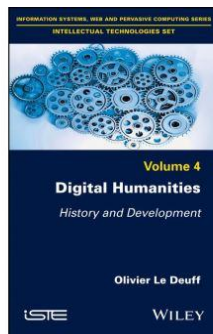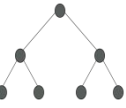
Hypertexts are connected to a serie of operations

- That are meant to reduce, classify, search, combine, project, consult…

- They can ideally be gathered under the same device: World Library, Memex, Personal Computer

- They interlink the smallest elements, like the *biblion*, as well as larger organisations
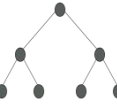
# The *Mundaneum* as a giant network
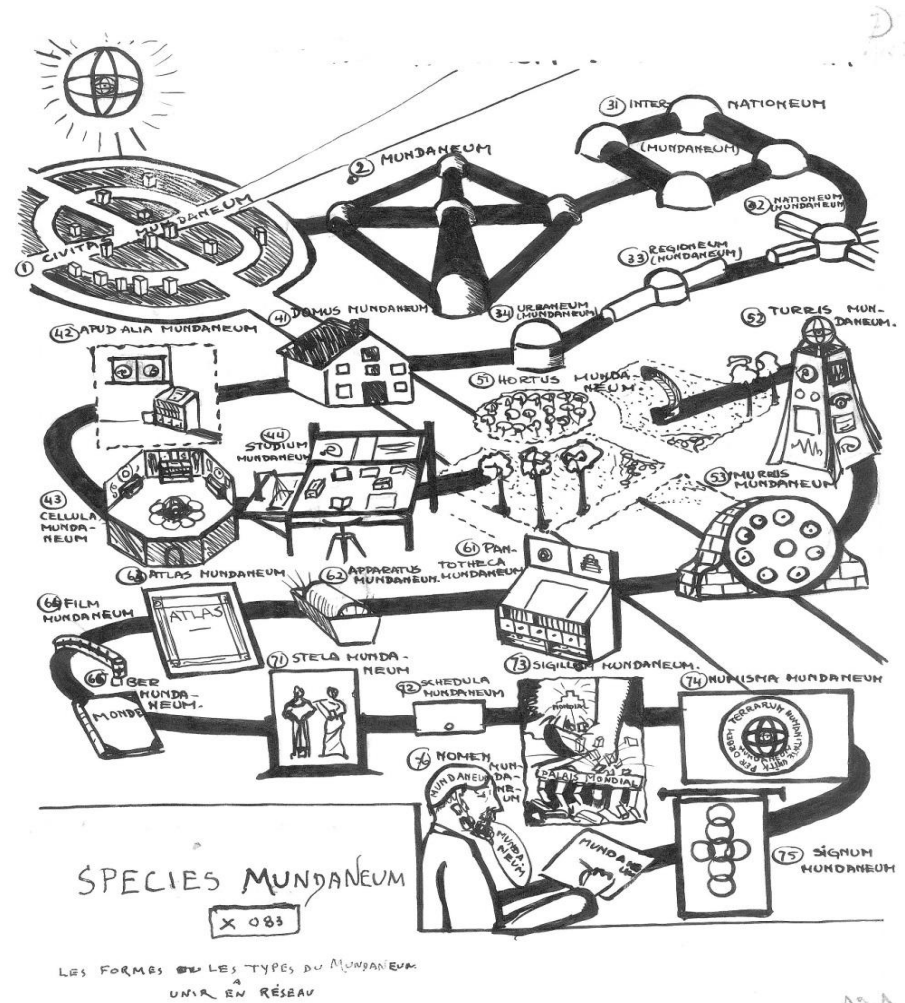
From document to monument

"What are monuments? Documents made of stone, iron, sand and glass. They contain inscriptions, images, statues. They can be dynamic. They are expressions, symbols, ideas. (...) They are the regulating centres of the movements of life, constantly seeking to satisfy needs by personal or collective means".
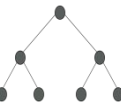
From the Card to the World City

*"**The World City** will be **a colossal Book**, whose buildings and their layouts – and not only their contents – will read like the stones of cathedrals were 'read' by the people in the Middle Ages. And so truly an immense monument would rise over time: '**from the card to the World City**'".*
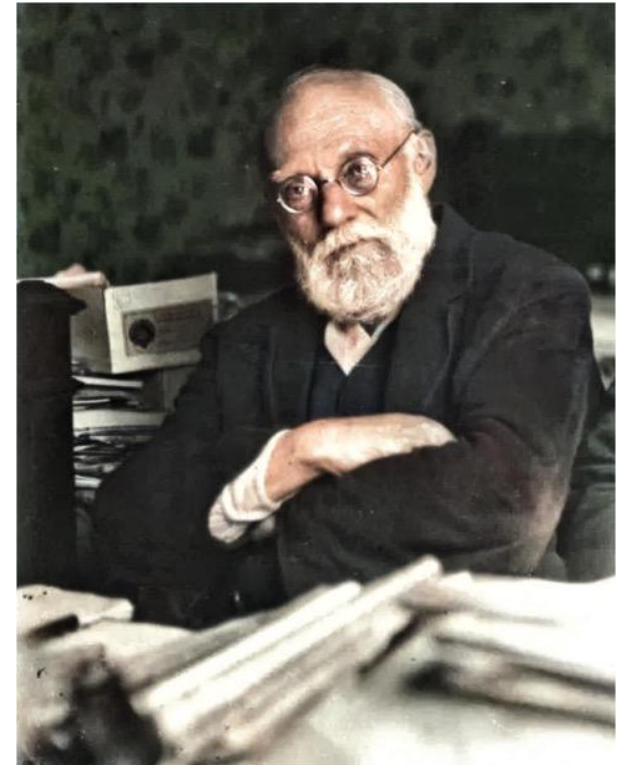
Frontiers of hyperdocumentation

- **Modifying human beings to solve riddles**. - The ultimate enigma of the universe (why is it all, why is it the way it is), this enigma calls, pushes and directs more and more men today; it pushes, calls, directs them to solve, to put all their efforts into science and philosophy. Speculative methods being impotent, new experiments are born. And those that modify the human being himself, will allow him to conceive other relations between himself and things and thus to deepen and enrich his notion of being.
- Thus the epic and adventurous life of man and humanity towards the "never seen" and the "unheard of", leads to a closer knowledge of the word of the enigma. What would we know of the universe if America and the poles had not been explored, and if children playing with glasses had not suggested their lenses and telescopes to Huygens and Galileo. (Otlet, 1935)

# Between augmentation theory and transhumanism?

MECHANICAL BRAIN
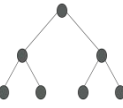
"We must have a group of related machines that simultaneously or one after the other perform the following operations:

1. *transforming sound to writing;*

2. *multiplying this writing as many times as required*

3. *establishing documents in such a way that each data has its own individuality and its individuality in relationship with others in the set, so that it may be referred where required;*

4. *index of the category related to each data, punching documents according to its indices;*

5. *automatically classifying these documents and placing them in a file;*

6. *automatically retrieving documents to be consulted and presenting them either before the eyes or in a part of the machine having to do with additional entries*

7. *mechanically handling at will any entered data to obtain new combinations of facts, new relationships of ideas, and new operations with the help of numbers.*

The machinery that will perform these seven desiderata will be an actual mechanical and collective brain"

[OTLET 34, passage 413.4]. Translated in Le Deuff, 2018)

A TRANSHUMANIST ?
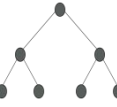
- *The ultimate problem of scientific knowledge: to know so well all reality, its beings, its phenomena and its laws that it is possible to disintegrate all that exists, to reconstitute it, to order it in different ways. The ultimate problem of the technique: One man having only to push a button so that all the factories of the world, settled perfectly between them, start to produce all that is necessary for all the humanity. The ultimate problem of the Society: Freedom creates divergences. In a state limit, more would not need to resort to others. Everyone could get everything he wanted by appealing directly to things alone, and dispensing with men. Thus the machine would have become the liberator of each, its operation being done by one and things being arranged in the right order for this alone.*
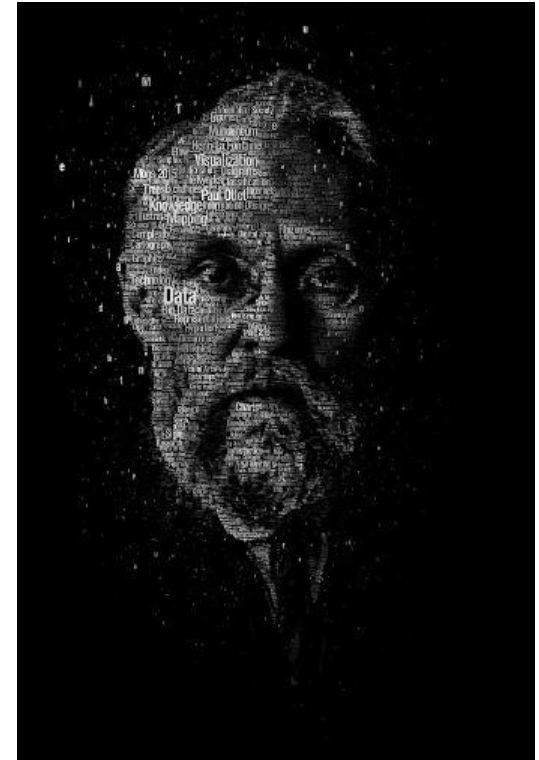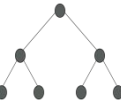
Towards the fluidic man

I.Règne minéral
- Grain d'énergie.
- Électro-noyau positif.
- Atome.
- Corps simples.
- Composés minéraux silicieux, solides et cristallins.

II. Règne organique
- Composés du carbone.
- Cellule
- Protistes.
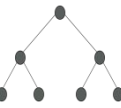- Algues-Végétaux.
- Protozoaires.
- Animaux.
- Précurseurs.

III. Règne humain
- Homme.
- Sur-Homme.

IV. Règne métahumain
- **Hyper-Homme (fluidique).**

A LEGACY

- In 1944, a collaborator, Valère Darchambeau try to explain the thought of Paul Otlet and his legacy :

- « *Mr. Otlet's mental audacities, his "utopias," some would say, take on their full value when considered in terms of the super-fast mechanical brain that these machines constitute. This multiple and differentiated characterization to which Mr. Otlet would like to end, practically unusable in a valid time by our slow and quickly put off human brains, is likely to be the "code" through which statistical machines will soon reveal (in 5, 20, 50 or x years of unsuspected and unsuspected connections between things*. (Darchambeau, 1944°)

Cards as hyperdocumentary instruments
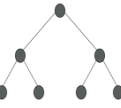
RBU (Répertoire bibliographique universel)

"The number of books printed since Gutenberg reached 12 million at the beginning of this century; the production recorded in the Universal Bibliographic Repertory of the International Institute of Bibliography and Documentation, created in the fifth year, (...) contains **15 million index cards**." (Otlet, 1935)
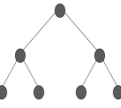
**« *Je me fiche des fiches* »**

(I don't care about cards)

Henri Lafontaine to Paul Otlet, in 1906.

RETURN OF HYPERCARDS

« The room is filled with a **three-dimensional constellation of hypercards**, hanging weightlessly in the air. It looks like a high-speed photograph of a blizzard in progress. In some places, the hypercards are placed in precise geometric patterns, like atoms in a crystal. In other places, whole stacks of them are clumped together. Drifts of them have accumulated in the corners, as though Lagos tossed them away when he was finished. Hiro finds that his avatar can walk right through the hypercards without disturbing the arrangement. It is, in fact, the three-dimensional counterpart of a messy desktop, all the trash still remaining wherever Lagos left it. The cloud of hypercards extends to every corner of the 50-by-50-foot space, and from floor level all the way up to about eight feet, which is about as high as Lagos's avatar could reach.
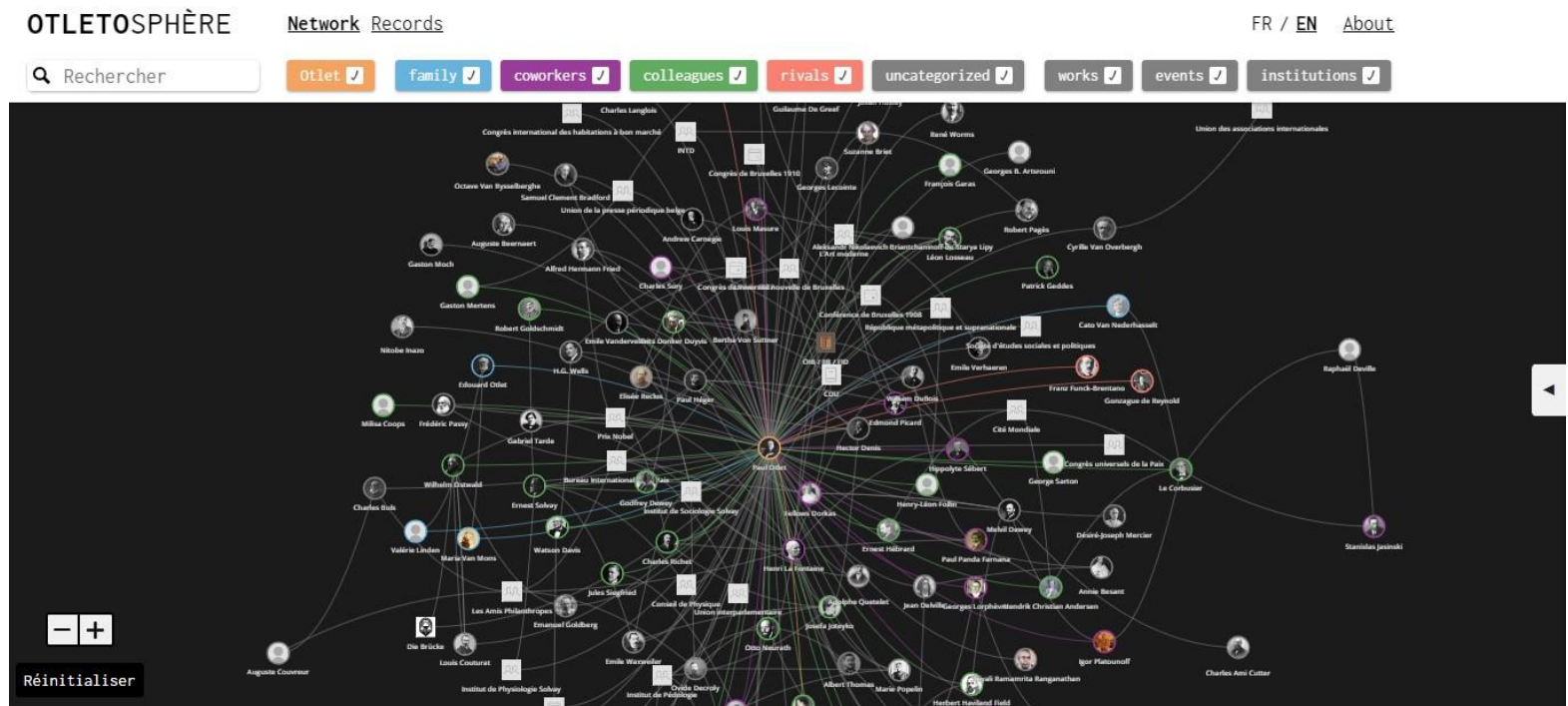
    - How many hypercards in here?

    - Ten thousand, four hundred and sixty-three, the Librarian says. »

(Neal Stephenson, Snow Crash, 1992)
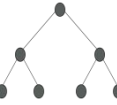
OTLETOSPHERE... The social network of Paul Otlet

A work in progress that incorporate, to date, 200 individuals linked to Paul Otlet

FROM COSMOGRAPH TO COSMA

A knowledge management tool inspired by Otlet

Hyperdocumented Journalism and other projects : collaborative and memorial documentary practices

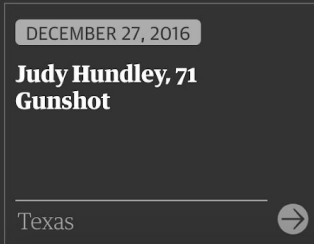[THE COUNTED. People Killed by Police in the US](#) (The Guardian, 2015)

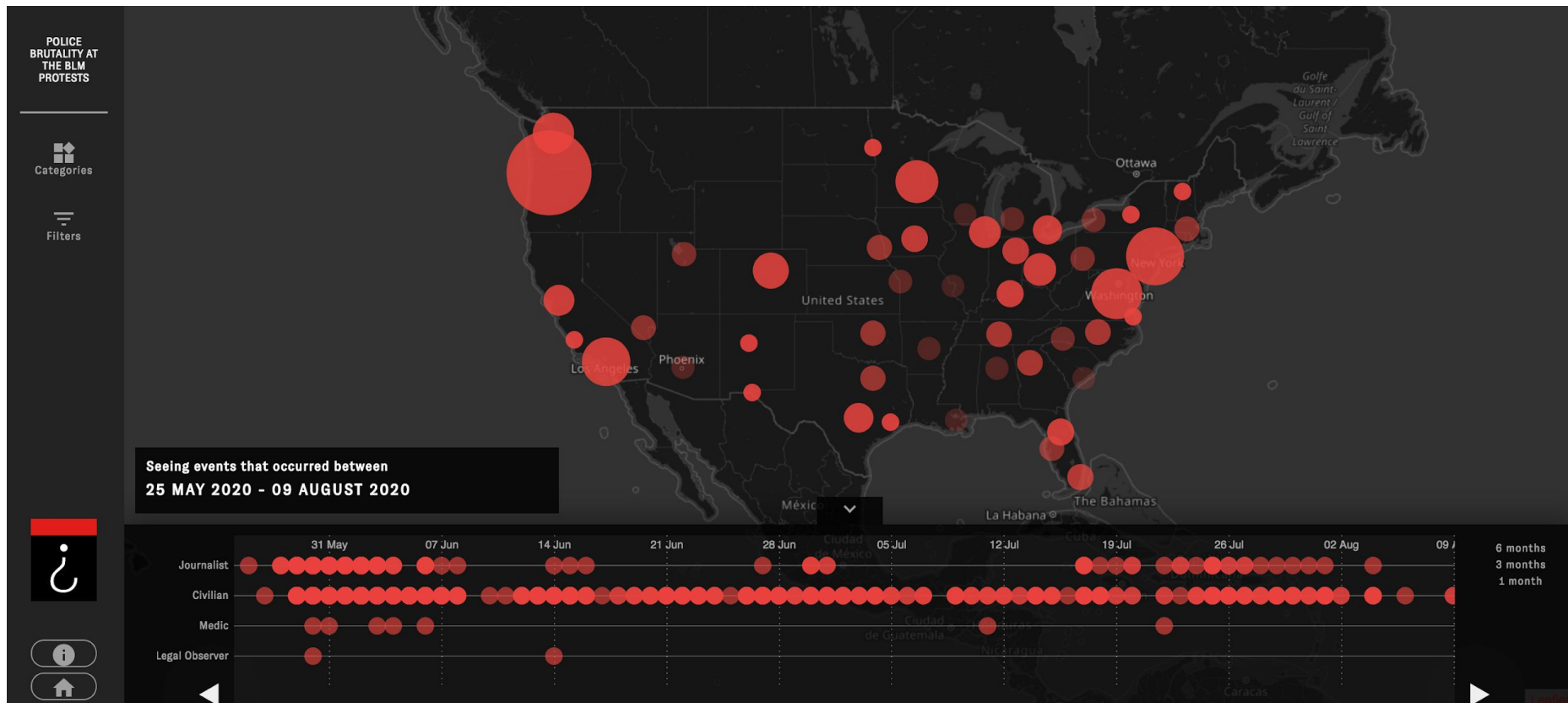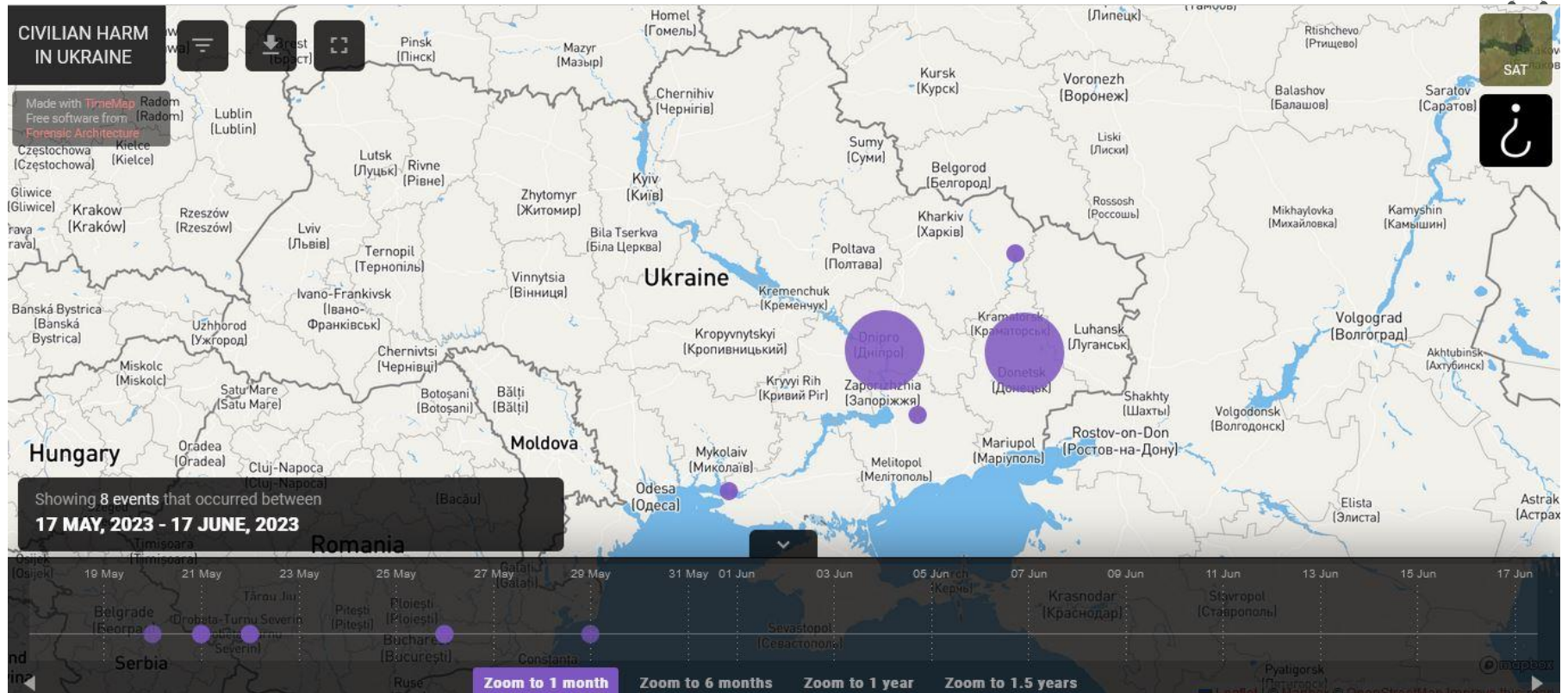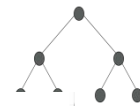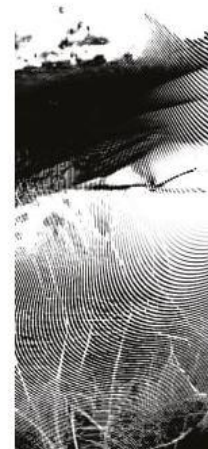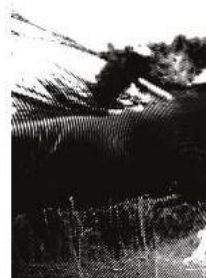**POLICE BRUTALITY IN THE BLM PROTESTS** (Forensic-Architecture & Bellingcat, 2020)

CIVILIAN HARM IN UKRAINE

UKRAINE WAR ARCHIVES

DOCUMENT

INSTRUMENT

MONUMENT