

## The spell of ubiquitous knowledge

(Le charme de l'ubiquité des connaissances)

*Europeana*, a portal to European cultural and scientific knowledge

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Qui scit ubi scientia habenti est proximus.

[Who knows, where the knowledge is, is closest to the knowing.]<sup>2</sup>

Par ces instruments d'ubiquité, d'universalité et d'éternité, l'homme se sera rapproché de l'état de divinité,<sup>3</sup>  
...

Content has been and will always be made available on various internet platforms over the years, increasing exponentially: text, sound, (still and moving) image. Owing to private or public funding sometimes gigantic digitization projects were carried out, in order to leave the Gutenberg galaxy. One of the best known projects is *Google Books*. But there are many more initiatives in European countries – and world wide. This contribution means to give a short survey of some of them, their intentions and their future.

The target of *Europeana* is "to make Europe's cultural and scientific resources accessible for all". In detail the aims are:

- "Providing access to Europe's cultural and scientific heritage through a cross-domain portal,
- co-operating in the delivery and sustainability of the joint portal,
- stimulating initiatives to bring together existing digital content,
- supporting digitisation of Europe's cultural and scientific heritage."<sup>4</sup>

These objectives are (and must be) rather general and vague. But at the same time it makes us aware of the fact that we are at the very beginning of a long process. Although *Europeana* has gone online in December 2008, to this day the access to cultural and scientific resources is fairly fragmentary. *Europeana* presents the material that is delivered on a voluntary basis by European cultural heritage institutions. Procedures of data delivery and import are far from regular and easy to handle. But the structure evolves and will be developed by aggregators of data in European and national projects. For example, ATHENA will be a domain specific aggregator of European museums.<sup>5</sup> The *German Digital Library* will begin its work next year and will be a national aggregator for *Europeana*. In many European countries similar endeavours have been and will be undertaken:<sup>6</sup> Gallica,<sup>7</sup> Culturaitalia,<sup>8</sup> the German BAM portal,<sup>9</sup> and many others. So we may expect that in ten or twenty years *Europeana* will be the reliable platform of European digitized material for scholars, students, and the most unknown user: the general public.

The technical approach of *Europeana* is simple. *Europeana* itself administrates the metadata and images in a defined resolution forming the so-called surrogate for the presentation on the Web. The full text e. g. of books, the high resolution image, the moving image are accessible only through the source information of the institution that originally delivered the data. This approach has already been realized by the BAM portal. *Europeana* therefore presents material that is online in a more or less fully digitized form.

When in former times digitized content was offered to the public on different internet platforms, sometimes it was rather concealed in the width of the World Wide Web than published in the traditional sense, and sometimes only known to a small number of select users. In contrast, now the user has to access only one platform in order to get the information collected on it. Tools that are and will be developed by *Europeana* will enhance the usability of the presentation, will

<sup>1</sup> Thanks to Susanne Schuster and Werner Schweibenz for their comments.

<sup>2</sup> Otlet, Paul: *Traité de documentation*. Bruxelles: Mundaneum 1934, p. 2.

<sup>3</sup> Otlet, *ibid.*, p. 431.

<sup>4</sup> <<http://www.europeana.eu/>> [All URL have been accessed 2009.04.05].

<sup>5</sup> <<http://www.athenaeurope.org/>>.

<sup>6</sup> cf. Culture&Recherche 118-119 (2008) presenting the papers of the conference *Numérisation du patrimoine culturel* in November, 2008: <<http://www.culture.gouv.fr/culture/editions/r-cr/cr118-119.pdf>>.

<sup>7</sup> <<http://www.gallica2.bnf.fr/>>.

<sup>8</sup> <<http://www.culturaitalia.it/pico/>>.

<sup>9</sup> <<http://www.bam-portal.de/>>.

provide an easy navigation through the mass of results. At the moment users can browse the results by facets like media type, language, country, date, and provider. The promoters of digitization - in the beginning mostly from the field of libraries - soon realized, that the world not only consists of manuscripts and books, in particular because other institutions such as archives and museums began to digitize their collections. Thus not only books were digitized, but all kinds of media and objects were transformed from an analogous to a digital representation. Media archives (print media, radio and television) produced (and are still producing) more texts and images than all traditional agents of cultural heritage together. Sciences and applied sciences, especially medicine, have been producing exabytes of digitized images and texts through the past decades. It is and will continue to be a challenge to find technical and semantical paths through this gigantic mass of information, particularly since projects on language recognition like e. g. the German *Theseus* programme will multiply this mass.<sup>10</sup> Retrieval tools are developed, too, by the French *Quaero* Programme.<sup>11</sup> In many European countries the projects were lacking a coherent strategy; others like UK, France, Norway, Sweden adopted a centralized approach. Although these efforts had effects on the consistency of results, the technical and professional variety of approaches was enormous. What technical measures are appropriate? High resolution images? Full text digitization or image? What metadata schemata should be followed? Which metadata schemata are most appropriate to the various branches of documentation? Should ontologies like CIDOC CRM be used in order to harmonise different metadata schemata? How should the objects be presented on the screen? In an identical fashion without regard to special presentation models e. g. of the archives? Should the data have a defined quality, in order to meet the requirements of user needs and presentation? Should the full texts be also accessible by search engines of *Europeana* or *Google*? To date many of these questions have only been answered partially. The above mentioned projects will only offer some of the answers. But all endeavours are directed at the main aim: the networked knowledge and the vision that the linking of so different forms of human knowledge might lead to new insights, to new and better forms of knowledge. Whether the hopes of the American Society of Learned Societies in a paper on cyberinfrastructure published in 2005 – the betterment of all – can be realized, seems open to dispute, because the enlargement of technical possibilities too often has enlarged human foolishness – and the internet is the best example for that. Nevertheless *Europeana* could be a reliable source of authentic material examined and offered by hundreds of thousands of European institutions from all cultural and scientific heritage sectors. Such a vision had Paul Otlet in 1934, when he wrote in his *Traité de documentation* about the future of the book:

"...la table de travail ne serait plus chargée d'aucun livre. À leur place se dresse un écran et à portée un téléphone. Là-bas au loin, dans un édifice immense, sont tous les livres et tous les renseignements... De là, on fait apparaître sur l'écran la page à lire pour connaître la réponse aux questions posées par téléphone, avec ou sans fil. Un écran serait double, quadruple ou décuple s'il s'agissait de multiplier les textes et les documents à confronter simultanément; il y aurait un haut parleur si la vue devait être aidée par une donnée ouïe, si la vision devait être complétée par une audition. Utopie aujourd'hui, parce qu'elle n'existe encore nulle part, mais elle pourrait bien devenir la réalité pourvu que se perfectionnent encore nos méthodes et notre instrumentation. Et ce perfectionnement pourrait aller jusqu'à rendre automatique l'appel des documents sur l'écran, automatique aussi la projection consécutive..."<sup>12</sup>

[Will be published in CIDOC Newsletter 2009]

<sup>10</sup> <<http://theseus-programm.de/en-US/home/default.aspx>>.

<sup>11</sup> <[http://www.quaero.org/modules/movie/scenes/home/index.php?FUSEBOX\\_LANG=2](http://www.quaero.org/modules/movie/scenes/home/index.php?FUSEBOX_LANG=2)>.

<sup>12</sup> Otlet, *ibid.*, p. 428.