**CLIVAZ — Beyond**

**Beyond Boundaries: Digital Humanities, Life Sciences, and IT Research**

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Within the epistemological explorations of the digital humanities, one of the profound phenomena is the parallel movement of institutional infrastructure development and moving boundaries between various academic fields. At times these movements develop with synergism, at other times in isolation; occasionally they are in conflict. Using a specific case at the University of Lausanne in Switzerland as a starting point, this paper seeks to illustrate and explore how digital humanities and life sciences interact epistemologically. The aim is to demonstrate the impact of research infrastructure on the epistemological reconfiguration of academic knowledge, and vice versa. Thus one may regard such an idea in Foucault’s terms: ‘words’ and ‘things’ are interrelated.

At the beginning of 2015, a new step for DH developments was taken at the University of Lausanne. Collaborations on diverse modes have been developed between the DH team and their bioinformatics colleagues—namely, applications for common projects at Swiss and international levels (research infrastructure, data-life-cycle management, DH applications); publication of a new editorial form, the eTalks;1 a common day of training and education on data visualization.2 Finally we have enrolled two part-time IT and DH postdocs to create an exchange of knowledge between common projects: one has a doctorate in archeology with a good knowledge of databases, and the other a doctorate in bio-IT bioinformatics with a strong interest in DH. There is much to be learned from the 25-year-old experiment at the Swiss Institute of Bioinformatics (SIB)3 that could shed greater light on the digital humanist turn.

Indeed, the digital humanities adventure started in Switzerland at the University of Lausanne in 2010, with the encouragement of the vice-rector research, Philippe Moreillon, a professor in medicine stating that DH would probably follow an evolution similar to the path taken by bioinformatics. This statement sounded perhaps slightly opaque to certain ears at that time, yet it has become increasingly clarified and useful with regards to elements related to the development of DH at UNIL and in Switzerland. Thus, the digital humanists at the UNIL have begun discussions with the SIB and its IT bioinformatics competence center, VITAL-IT.4 In a 2014 lecture in Lille,5 I drew some common points between the developments of bioinformatics and digital humanities. Ioannis Xenarios, director of VITAL-IT, has rewritten Claire Warwick’s definition of the digital humanities6 for bioinformatics, replacing a few words: ‘Bioinformatics is an important multidisciplinary field, undertaking research at the intersection of digital technologies and biology/medicine. It aims to produce applications and models that make possible new kinds of research, both in the biology/medicine and in computer science and its allied technologies. It also studies the impact of these techniques on knowledge representation, data mining technologies, knowledge-base, archives and digital culture’.7

At a national level, Switzerland has started an innovative long-term program of at least eight years (2013–2020). The program, Scientific Information: Access, Processing and Safeguarding,8 will attempt to coordinate all the efforts and strategies regarding computing academic challenges. Within this program, all fields are invited to build the new digital world of science. The title of the program, adopted for the years 2017–2020, clearly relates IT services and information to fundamental research: ‘*Service et information numérique: un nouveau lieu de la recherche*’. One of the main themes of this program is ‘data-life-cycle management’, a perspective encompassing entire cycles from the production of primary data to final publications. Currently, it is unknown whether a common protocol of ‘data-life-cycle management’ for humanities and life sciences is possible and adequate: surely it deserves to be investigated. Such data management rationalization efforts might sound uncommon to certain digital humanist ears and minds, but even a milestone DH work such as Franco Moretti’s *Graphs, Maps and Trees* (2005) is deeply inspired by IT research and what is traditionally referred to as ‘hard sciences’. Not only is this true of its content, but also in its genealogy. Indeed, it was preceded by another Italian book, by Giulio Barsanti, using the same aforementioned title, which explains the emergence of modern sciences: *L’Albero, la scala, la mappa* (1992).9 This genealogy will be examined in this paper.

To better understand what is at stake in such transformations in a specific university and country, we have to look back. Until now, funds for fundamental research and research infrastructure were separate in Switzerland. It is the legacy of what was referred to in 2012 as a ‘blind spot in modernity’ (see Clivaz, 2012, 32): the underestimated influence of writing material on ideas and concepts, as thoroughly demonstrated by Roger Chartier (1995, for example). The climax of printed culture has led to such a situation, as one can observe in the posture adopted by William Osler. In 1919, this famous Canadian physician and professor often described as the ‘father of modern medicine’ (see Fins, 2008), was invited to make a presidential address before the Classical Association at Oxford (Osler, 1919).10 He spoke about ‘the old Humanities and the new science’, honoring the classical medical heritage of Hippocrates and Galen, and underlining the role of the humanities as ‘the hormones’ of intellectual life: ‘the men of your guild secrete materials which do for society at large what the thyroid gland does for the individual’ (Osler, 1919, 3). With a deep attachment to humanities, this lecture deplored the fragmentation of knowledge: ‘Specialism, now a necessity, has fragmented the specialties themselves in a way that makes the outlook hazardous’ (Osler, 1919, 5). Yet at the very same time, he belonged to this ‘specialism‘ trend with respect to his work; all his thinking appears congruent with a child of the maximal stage of printed culture. This famous lecture was followed by an exposition (Warner, 2014) of Osler’s rare books; he was a book lover (Osler, 1901). It is evident that the following decades of the 20th century saw the life sciences and humanities increasingly separated, and since then, knowledge has become like a broken mirror. Such a genealogy will be further examined, and will contribute, along with all the previous elements mentioned, to a consideration of the role of the digital humanities and IT research in life sciences within the epistemological knowledge turn we are currently facing. When the boundaries between research and infrastructures throughout all the fields are overcome, a new world can emerge.

**Notes**

1. etalk.vital-it.ch/rites-funeraires; etalk.vital-it.ch/dh; etalk.vital-it.ch/mooser (all accessed 1 March 2015).

2. http://edu.isb-sib.ch/course/view.php?id=195.

3. http://www.isb-sib.ch/.

4. See http://www.isb-sib.ch/ and http://www.vital-it.ch/: ‘Vital-IT is a bioinformatics competence center that supports and collaborates with life scientists in Switzerland and beyond. The multi-disciplinary team provides expertise, training and maintains a high-performance computing (HPC) and storage infrastructure, so as to help develop, maintain and extend life science and medical research’.

5. Claire Clivaz, Panorama institutionnel des Digital Humanities à partir du cas suisse: vers la dissémination Digital Humanities?, http://publi.meshs.fr/ressources/panorama-institutionnel-digital-humanities/@@video.

6. See http://www.ucl.ac.uk/dh/courses.

7. Ibid.

8. See http://www.swissuniversities.ch/en/organisation/projekte-und-programme/suk-p-2-wissensch-information-zugang-verarbeitung-speicherung/; national strategy English summary: http://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/EN/UH/SUK\_P-2/SUK\_P-2\_NationaleStrategie\_20140403\_EN.pdf. The CUS P2 program is presided over by Prof. Dr. Martin Täuber (rector of the University of Bern), and directed by Dr. Roland Dietlicher (ETHZ) and Gaby Schneider (University of Basel).

9. Thank you to my sociologist colleague Franco Panese for this reference.

10. Thank you to the DARIAH colleague who provided me this reference in September 2014 in Rome, and whose name I have unfortunately forgotten.

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