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ON THE PHILOSOPHICAL FOUNDATIONS OF DIGITAL HUMANITIES

Кондрашов Ф.А. (Университет ИТМО)
Научный руководитель – доцент ФБИТ, к.г.-м.н. Пшеничный К.А.
(Университет ИТМО)

Annotation
The problem addressed in this work relates the conceptual rethink of newly emerged field, the digital humanities. In particular, the inquiry is made about its possible scientific paradigm and possible consequences of its choice.

Introduction

Digital Humanities (henceforth DH), being a very young field, still claims to be a full-scale science. Opposite to applied activity such as technology or business, any science or, put it broadly, field of research, is supposed and expected not to be driven solely by possibility ("why not to") or demand (coming from industry, business, society, state, or other), but to embed itself into existing scientific paradigms (worldviews) addressed by philosophy of science.
So pretends to do DH, claiming, inter alia, to include philosophical concepts of data transfer. The origin, evolution and interplay of scientific paradigms have been deeply studied by Kuhn, Popper, Lakatos and many other thinkers. Alternatively, if the conceptual foundations of a newly emerging field do not fit any of existing (or even past) paradigms, one may suppose that this field is about to give birth to a new paradigm relevant to a wider range of disciplines. In this context, an urgent issue arises that is required to classify DH as a science: what is its scientific paradigm or, if none, what should be done to bring DH onto a firm methodological basis?

Approach and Results

Paradigm, the term coined by Kuhn to explain the lifecycle of science from "normal science" to "scientific revolution" and on to "normal science" again, was meant (quoting from Kuhn) to cover "works served for a time implicitly to define the legitimate problems and methods of a research field for succeeding generations of practitioners. They were able to do so because they shared two essential characteristics. Their achievement was sufficiently unprecedented to attract an enduring group of adherents away from competing modes of scientific activity.
Simultaneously, it was sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to resolve."

At the meta-level (philosophy of science per se), paradigms include the concept of historical dynamics of science of Kuhn, Popper's critical rationalism, philosophy of language of Wittgenstein, concept of searching programs advocated by Lakatos, pluralistic "collection of paradigms" suggested by Patton, to name only the most discussed ones. Some of these may be partly compatible, some tend to better fit particular type of research (say, natural-scientific vs. humanitarian, or experiment-driven vs. descriptive), and the interrelation (and hierarchy) of paradigms is an open issue of study. At the fundamental scientific level, as summarized by Aliyu et al., the paradigms more or less pronounced in the modern research are positivism with its later extensions (post positivism), interpretivism, and critical theory. More specifically, say, in natural sciences, paradigmatic were Aristotle's Physica, Ptolemy's Almagest, Newton's Principia and Opticks, Franklin's Electricity, Lavoisier's Chemistry, and Lyell's Geology. We may add that in mathematics and logic this role was surely played, e.g., by the works of Frege, Hilbert and Russell, on one side, and Brower and Markov, on the other. As for the computer science, the issue of paradigms is still open, though the idea of early artificial intelligence pioneered by McCarthy and others (the concepts of programs with common sense, logical processing of information and the like) stems from the worldvision of Frege and Russell, while later

developments in the fields of expert systems and “big data” may represent new, still not fully understood, paradigmatic frameworks.
As is known to the authors, no comprehensive study of this issue in DH has been published so far. Therefore, an approach that looks perspective is to grasp the paradigmatic features of DH through its existing applications. At present, DH aims to:

- increase availability of humanitarian knowledge (particularly, for disabled people) by using new technologies of presentation and access;
- extend the concept of ‘expert’ in the humanities, allowing everyone to form and contribute his/her opinion on specific issues to professional discussion;
- improve understanding of history and culture by 3D visualization (visualized scenes, happenings and persons look more realistic than lines in a book);
- support preservation of cultural heritage;
- foster interdisciplinary communication of specialists involved in projects in humanities.

Comparing these issues with known paradigmatic doctrines is hindered by the lack of philosophical rethink of the hierarchically upper level, that of “data science”. Still, ignoring (as far as possible) this gap, one may note that in general the intention of DH is to somehow bring the humanities into a post-positivistic paradigm. However, this, in turn, poses a number of questions regarding the adequacy of approach and, given the latter is appropriate, destiny of humanities when entirely (or still not?) brought into the digital framework, especially such fields as hermeneutics, axiology or philosophy. Nevertheless, even this preliminary statement on the possible paradigm of DH is too loose and definitely needs justification and probably specification.

Preliminary Conclusion

The study of the paradigmatic basis of DH is still at its very onset but is vitally important to understand the real meaning, possible scope and best use of this newly emerging discipline, as well as possible related risks of its incorporation into the humanitarian studies. Thus there is enough ground to consider this issue worth special studies in the nearest future.

Кондрашов Ф.А. (автор)

Пшеничный К.А. (научный руководитель)