

Preface

The New Manufacture of HSS

The picture that is presented in this book is welcome because it deliberately mixes the “social” issues of ICT, and “scientific” issues of humanities and social sciences (HSS). This is indeed a very tangled situation where a “society” radically changes its devices reflexivity and where researchers who make it their profession to ensure this reflexivity need to follow all ongoing innovations, with the fear of become disqualified. If some can say that the Internet and digitization are equivalent to what happened in the Renaissance with printing, then we can hardly doubt that it is *another scientific era* that is opening, especially for HSS.

If Elisabeth Eisenstein [EIS 91] refuted any technological determinism, she was showing that current changes had gained strength through printing, by its power of spreading information to the masses, by its consultation of works authorizing the confrontation of knowledge confrontation, and by the durability of printed text not subject to being rewritten. The Internet and digital publishing have changed the scale of available information for the first two criteria, while in contrast, they introduce permanent instability, unlike printing. Surely this possibility of revision [LIV 94] noticed worldwide, allows us to confront heterogeneous knowledge and constitutes a profound destabilization of organization of this knowledge itself. Let us specify in what fields:

– Digital allows and forces *explicitation*. Nothing as such for a HSS researcher than to work with a computer scientist to be forced to define and to “lock” its categories and arguments. But all social participants are in the same situation: they need to explain, declare and document what they do, what they say, the people, objects and process as said by quality management. This redocumentarization of the world, which we analyzed in the collective context of Pédauque [PED 06], is still at its beginning. It can certainly usefully help to formalize what was left implicit so

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that the participants can better coordinate or discuss issues. It can also turn into madness in its generalized form and is a powerful indicator, as some managerial tendencies, including research professionals, of what they want through omniscient **ER** or the HSS, the same risk exists (that of only adopting the paradigms incorporated in their digital tools, in their indicators, at all levels of the production chain of scientific statements: gathering/production, processing, analysis and restitution. The “increased reflexivity” that could be expected through ICT would only lead to a new positivism, calculated certainly, but equally unproductive.

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– ICT produce intangibles, we are told, yet the ordinary experience of the computer user tells us to what extent the material of the machine is indeed there (and sometimes it resists even!). Therefore, it becomes possible to say that we “manufacture” HSS, only in the sense that, previously, their equipment seemed weak compared to other sciences. The indirect effect of HSS is to rediscover the work, production, and division of labor that constitute every scientific activity. Objects, terminals, sensors, “monstrators” and software can be thought of and adapted to researchers’ objectives. HSS can now claim to “do laboratory” [LIC 96], in the same way as other sciences have done through their equipment. It is also for this reason that we have encouraged all observation platforms to be equipped and shared among disciplines [BOU 04]. It would be unfortunate if HSS copied the separation movement *vis-à-vis* “society” that constituted the scientific model of moderns [LAT 92], having always buried laboratories far from public view. For it is the whole “society” that is coupled to its objects, its ever-more sophisticated devices, such as it no longer knows how to drive them. It is probably not a coincidence that some HSS approaches have rediscovered that the supposed society would not survive long without material objects that compose it in an inextricable lattice.

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– If there is a reason to avoid carrying out laboratory experiments as in the good old days of natural science, it is that all the tools used by HSS are in everyone’s hand and they gain, through the network, an uncontrollable distribution power. The *Internet destabilizes all authorities* precisely because the notion of copyright is being relativized at high speed. All cultural activities based on copyright are suffering, but neither “hard” sciences nor HSS will be able to avoid it. The asymmetries of knowledge and power can potentially all be destabilized. It is no longer the undisputed laboratory facts that constitute the contemporary truth regime, but rather the proliferation, debate and certain disorientation created by the “opinion economy” [ORL 99] that governs the Internet.

– Knowledge produced by the new observation tools and computing centers thus made available can hardly stand in disciplinary boundaries. Paradigm circulation is facilitated by means of indexing emerging from supposedly shared references and we know that creativity is often born of these heterodox circumstances. But we could also believe that here again it is the tools that would give birth to new

paradigms, to such an extent that some disciplines might feel endangered by some of their specialties: linguistics with TAL (automatic language processing), geography with geomatics and cognitive sciences by cognitics, for example.

The paradox is nevertheless that digital networking allows authors who had revisit their ideas of other types of “social” model. Let us make this hypothesis: if Durkheim was the statistical state child and produced a theory on the social structure in line with its history and the thinking tools of that time, then Tarde should have been considered as the father (or ancestor) of networks and digital since he set up all conceptual tools of contagion, imitation and propagation in late 19th Century before these techniques became so visible and handleable today. The question is whether the HSS will only change the data processing software or whether they will take advantage of it to change the “conceptual software” that govern them, in France at least.

– In all cases, socio-technical realities that the Internet and digital have built constitute *land-continents to explore*, requiring specific tools and methods due to their instability. The idea that on the Web, for example, a new library would be created is a typical way of reproducing old frameworks to grasp new phenomena, and reflects this difficult sidestep in the face of what is emerging. It is not in any way a matter of duplication of a “real world”, but indeed that of another world – an ultra-world that requires an ultra-reading, as we proposed [GHI 03], just as real as the other. HSS will be the essential surveyors of this new universe.

– One of the advantages of the emerging technical worlds’ instability, at their birth, is indeed to give rise to controversies, with exploration possibilities. HSS, when equipped, often depend nevertheless on the offer made by computer scientist in laboratories or on the market. They are therefore lead to make choices that would later appear erroneous or would force them to make unnecessary efforts to adapt. It is the duty of HSS, because of the knowledge of this constant tension between divergence and convergence that animates every social life, to claim a *pluralism of architectures* [LES 99]. No technical fatalities exist any more than a guarantee of winning standards. It is therefore important that the debate – that digitization strengthens – also involves these technical architecture policies, both for researchers and for all collective activities beyond research. There is no winning policy every time for archiving architectures or for those of the publication, to take but two examples.

It is convenient to make choices, but under the condition of organizing debates and preserving pluralism of choice. We have noticed to what extent, over 10 years, the semantic Web model has come to dominate debates by monopolizing all efforts in the field of knowledge engineering, for example. However, its limits, that could be determined from its own theoretical assumptions (the language designed as a label, for simplification) have only recently been allowed, and upset, not so much by

researchers as developers who launch applications under Web2.0 everywhere, from the so-called “social” Web. Research then registers this by moving towards a socio-semantic Web and risks preventing the debate. Client-server architectures have been outrageously maintained as unique references in computer laboratories in the same way despite mass spreading of peer-to-peer architectures in general public use.

HSS could at least have the advantage of not suffering from the influence of the social world of computer science: they are then able to ask and require, at least for themselves, tools adapted to emerging phenomena. More generally, they could be those defending the social dynamism of these techniques and therefore their pluralism and controversies. This is not to recite a new version of critical sociology praising the marvels of popular autoproduction and resistance to domination, but to reopen debates that we would want to conclude too quickly, under the cover of supposed technical certainty. When HSS become equipped, they certainly suffer the tensions and uncertainties of the digital universe that are emerging, but they should also be able to assert their experience of these tensions and controversies as an advantage to show their diversity. If this temporarily slows their effectiveness, it is probably positive in the long term because very few can say exactly how effective HSS is.

These debates go on through the very diverse chapters of this work, and allow us to measure the considerable internal conversion work that is being carried out throughout HSS upon the emergence of ICTs – the new knowledge support.

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