

## **Digital Humanities Culture: Enabler or Obstacle for the Development of Human Dignity?**

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**ABSTRACT:** The turn imposed by new digital technologies of information and communication to humanities and social sciences is not limited to a mutation in the sphere of superficial uses. The phenomenon of digital humanities is before all but after all, an expression of the profound changes taking place in scientific thinking, a change whose major effect is the blurring of the border between substance and function. Therefore, the question that arises is that of the consequences of the penetration of technique into epistemic order. **KEY WORDS:** digitalization, épistémè and techné, Humanities and Social Sciences, percolation, technique.

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### **Introduction**

This text has the objective to relate the growing presence of digitalization in our daily life with the idea of more and more prevalent digitizing of the humanities and social sciences.

To highlight this movement, I will consider here the original distinction between *technè* and *épistémè*.

I understand this distinction in my symbolic framework where the historical foundations of European science are situated in the field of Myth (Bratosin, 2007; Bratosin & Tudor, 2009, Bratosin, 2014) in the field of pure *theoria*, as emphasized Alexandre Kojève in his introduction to the phenomenology of mind: “Everything seems to indicate that science was born in the form of the Myth. The Myth is a theory, ie a discursive revelation of the reality. [...] The stage of the Myth is a stage of the monolog, and at this stage, it does not prove anything because it does not “discuss” anything.”

In this context, the epistemic construction, starting from the pure contemplation, which is the *theoria*, relies on dialogue. This dialogue has as the first consequence to introduce the idea of objectification of the Truth, because “There is no truth itself, ie scientific or philosophical or dialectical or synthetic, that where there was a discussion or dialogue, ie an antithesis denying a thesis.” (*idem*)

However, this truth not yet reached the real and can remain suspended in a sterile verbiage, as was often the case in Aristotelian scholasticism. This access to real discourse requires experience, experimented by the scientist and directed to the object of knowledge. But, as G. W. Hegel highlights, this object is not set there, detached from the subject; “Hegel’s experience relates neither to the Real, or to the speech considered isolated, but in their indissoluble unity.” But this tendential rapprochement between the Discourse and the Real through the Experience progressively moves away the knowledge from its theoretical origin to a *praxis*. Starting from this movement I will try to open here a reflection on the construction of knowledge, which in this convergence, is also in charge of *technè*. In this regards, the

digitalization as the most advanced form of percolation of the technics within the epistemic environment will be the thesis of my presentation organized into three parts:

- ♦ digitalization of the logos;
- ♦ digitalization of the reality;
- ♦ digitalization of the experience.

## 1. The digitalization of the logos

The discourses are marked with both *épistémè* and *techné*. They generated epistemological figures, and the disciplinary scholasticism was often its receptacle. The construction of knowledge, the history of science, is actually based mainly on the objectification of the ideas and their sedimentation; the language and the writing represent for these phenomena the condition of both objectification and transmission. The conceptualization and the sedimentation being articulated in order to form construction rules, a necessary condition for the historicization. The construction of knowledge is thus interpreted primarily as the history of discourses and discursive formations around a “scientific object”.

The object of discourse in science dissolves into the discourse itself. This proposal may appear as a repetition, aimed at highlighting the obliteration of the object behind the speaking subject; perhaps, but not only. If there were that the objects in question history do would be meaningless; they are by definition unchanging. That which defines the construction of knowledge on the movements of the planets in the solar system, for example, does not reside in the solar system, but in the discourses that are built around its various epistemic constructions. From Aristotelian cosmology to modern astrophysics, we (except for some details)

always have the same starry sky above us, our manner of looking at it, to perceive and know it is radically different.

Our remarks must not, however, be assimilated here a solipsism or radical constructivism which would claim that the discourse on the moon gives it its shine. The moon such as crystal are objects and remain objects, neutral as long as we do not designate them as objects of knowledge (in the broadest sense).

As long as they are not a target in the consciousness of mankind in search of knowledge; as long as they are not the object of discourse, as long as they are not present in the lockers labeled by cosmology, astronomy or crystallography, they remain in this anonymity of the objects without history that makes them expressionless because without interrogation. As the stone by the roadside, it deserves no attention, a stone among others, it represents a point and nothing else; that we could distinguish a fossilized dinosaur egg or the result of a distant volcano eruption, and it's not the same anonymous stone, it becomes the subject of a discourse and this discourse transforms it in the eyes of the observer. The object has no history, it is the look that is placed on it which places it in a history: Foucault said: "The purpose [of discourse] does not wait in the limbo the order that will release it and allow it to incarnate in a visible and talkative objectivity; it does not pre-exist itself, held back by some obstacle at the first edges of light. It exists in the positive conditions of a complex set of reports. These relations are established between institutions, economic and social processes, forms of behavior, norm systems, techniques, types of classification, characterization methods; and these relations are not present in the object; there are not they that are deployed when the analysis is made; they do not draw the frame, the immanent rationality, that ideal rib that reappears totally or partially when it is thought in the truth of its concept."<sup>1</sup>

Furthermore, the language is the starting point of the movement of objectivation; but the language does not always refer to the discourse. The discourse is already part of a completed process of objectivation, and the language constitutes only the beginnings. The discourse is like a culmination in which words lose their autonomy to represent, through the discourse, the object; but not the object in its neutrality, the object itself that becomes part of another discourse: « Certes, les discours sont fait de signes—observait Foucault—mais ce qu'ils font, c'est plus que d'utiliser ces signes pour désigner des choses. C'est ce *plus*, qui les rend irréductibles à la langue et à la parole. C'est « ce plus » qu'il faut faire apparaître et qu'il faut décrire. »<sup>2</sup>

So we come to a form of the primacy of discourse on the object, a form of construction of the object by the discourse that articulates another discourse, broader one. This process reveals the technical role of the symbolic system as a first condition in the historicization of knowledge, that is to say, it is indicative of the effective participation of *techné* to the intellectual effort to carry the discourse at objectivity. The second condition—always of a technical nature—is the transmission, the overcoming of the ephemeral word to the permanence of discourse. Written expression that participates in the objectification also becomes the vector of the transmission, in time and space. Individual memory is transformed into collective memory and texts that can be stored could be at any time reactivated. Thus even before conceiving a history of knowledge the technics penetrate the epistemic environment because through writing it permeates the very conditions of constitution of knowledge. But the idea of percolation of the technics in the epistemic environment is not yet at this level. This movement already joins a discourse belonging to the history.

Thus, behind the idea of percolation certainly transpires the idea of penetration but especially the simultaneous idea of transformation of the environment in which it operates. *Techné*, by percolating the *épistémè*, fundamentally transforms it and this transformation is accomplished in a digitalization of the discourse following two channels: one formed by the knowledge construction method, the other by the mediation increasingly pregnant of the instrument as a means of access to knowledge. Both movements, far from being independent, support each other in the current development of humanities and social sciences. Furthermore, the percolation movement of *techné* into the *épistémè* increases in humanities and social sciences the idea of scientific progress (with all that implies in terms of advantages or disadvantages for the condition of human beings from scientific advances in e.g. information technology). In its reports with the technics, the digitalized *logos* carries the imprint of the language with all that belongs to its systemic and ideological structuration. It is also open to analysis by the grid imposed by the writing that programs it in terms of knowledge. But in addition, algorithmizing the knowledge, it imposes us models in a discursive order. The digitalization of texts, the digitalization of images, the digitalization of voices are algorithms of the discourses whose results have a horrible name that became a noble title of the restriction of freedom even in the strongest democracies: databases. For example, to access the academic position of professors and researchers, commissions, committees, and juries have counted the achievements of the applicants and check the databases in bearing their publications. But I do not know how the numbers may reflect knowledge. However, I know I have some difficulties in accepting to trade my name for a number. When the *logos* becomes a number, the humanity may become also a number. The role of humanities and social sciences is now

to ensure that our world does not become a prison or a universal concentration camp.

## **2. The digitalization of the reality**

The technical phenomenon in its historical sense attaches to human communities, and from this meeting is born the conceptual unity of the societal. If we consider that the epistemic environment is completely immersed in the indoor environment, the construction of this societal unity necessarily includes the interpenetration of the technique by epistemic and of the epistemic by the technique. Only under the conditions of this ontological interpenetration, all knowledge, that is, any representation of the truth to which it invites us, is “true” knowledge and it is what we call “*épistémè*”. The implied issue here is not only that of what we (human beings) are also, and perhaps above all, through us, what the world we live in is. It seems clear, as much as necessary (because it seems difficult to understand one without the other), not only to ask ourselves about ourselves but also to question the world, the universe in which we live. We can not isolate the background of human endeavor, of the being of human, of what human being is in an environment that he generates and which generates him. We are faced the inner exigency to know and learn as a *épistémè* and under the form of the outside world, the former being included in the last, the first proceeding of the second, being immanent. Finally, this supposes, of the subject’s point of view, a fairly good representation of the world of objects with which we have a relationship as necessary as constant. Science, of Greek thought (mainly Plato) to nowadays, identifies with the truth and it is nothing other than the unveiling, the revelation of being. This supposes and implies that possessing

science is possessing the truth that it gives meaning to things, and puts order in what surrounds us.<sup>3</sup>

However, we are situated here in an issue in which our conception of epistemè can not appear *in abstracto*, released from any contingency, that is, independently of the societal world of which it is the product and that it tends itself if not to produce, at least to influence. It takes its meaning, its significance, because of its specific nature, which it is shown as immersed in the scientific communities. This environment is made itself of sociality, religiosity, cultural and ideological predominance, characteristics of a moment in history, similar to the principle of inclusion, such as composite moment (or constituent) of a given that it exceeds, as subsumed, thought as a unit within a larger whole. But this idea of épistémè, as I developed here in relation to the problem of knowledge and science does not end with a vision that we call “socio-human”. Indeed, the épistémè certainly refers to the science (from an etymological point of view), ie the construction of an ideal world. But the world is also the product of accurate knowledge, *real* truths that ensure compliance of thought with the sensitive, and as such also covers the world of hard sciences, as we usually call sciences such as physics or mathematics. This extension is to work in a transdisciplinary epistemic construction, which the consequences of solving problems by calculation (by algorithms) in the empirical field of humanities and social sciences could surprise. The illustration provided by the technocracy is not only eloquent but also fruitful. Indeed, the digitalization of reality legitimizes *technocracy*, substituting, for example, *democracy* as an expression of the power of people, ie the express word of the masses becomes power because it *is said*. Technocracy can not then help democracy (or perfect the instruments permitting the popular expression), it can only weaken or even destroy it. This conclusion is not moral, it can only be the result of the percolation

of technique within the epistemic environment. The pervasive role of digitalization in the relations between humans tendentially replaces the language, and technique, through the computer, inexorably replaces the *vox populi*. The digitalization of the reality can only stifle or alienate the *vox populi* to generate another mediation between humans and therefore restructure social relations. This percolation of technique, within a pre-established social order based on the spoken language and therefore on the “state power” fundamentally transforms the human relations and this all the more so that the computer and its environment tend to become almost universal mediator in our societies. As such we observe the very idea of democracy, the expression of a people of a political choice through a vote, a set of *voices*, or the growing role of surveys in order to identify these choices, even guide them. Will we not be asked one day why, given the effectiveness (at least that the media intends to give it) of survey techniques, keep a poll which only corroborates the results of the surveys? Political power would then gradually be the expression of computers and statistical models they contain.

You may be noticed, the place I attach to “to know” exceeds the framework of a closed universe as accurate, precise and abstract it could be. The idea of science refers undoubtedly to the principle of truth, *true knowledge*, but it seems to me that it reveals a limited sense in which it is necessary to go beyond the rigid frames. So I give the term *épistémè* a more open meaning: more than a method, more than a state of knowledge at a given time, *épistémè* seems to express a process, a continuous movement in which knowledge, itself made of recognized idealities, questions not only about itself, about the ways that produce it but also about the world and society in which it emerges about the social, economic religious, etc. environment in which it is born and develops in a historical period and not in another. The idea of *épistémè*,

therefore, includes all the knowledge and science in their self-constitution and in the interactions that articulate and forge them during its development in history. These interactions refer to the technical components to be defined in the terms and contents.

Continue by a strict causal relationship that science is an extension of the society that produces it tends to remove from the *épistémè* its claim to universality, its quest for *the* truth. In fact, the identification of an epistemic environment immediately bases on the exclusion of two caricatured positions on the status of science. My remarks will deliberately lie halfway between absolute relativism and naive positivism that is between a perfect dilution of scientific inquiry in the concerns of a scientific community whatsoever and a total impermeability of the epistemic field with respect to the context in which it develops. In both cases, we end up with an outright denial of the history of science, because it is fully merged with the history of a scientific community or it is completely extracted from a historical process.

The scientific «development», what we call in a more nuanced way the epistemic construct, does not participate from a “spontaneous generation” born in some exceptional brains. IT must have wanted (or denied) by a community that desires it (or ignore it) and has the means (or not) of its emergence: the cultural, religious, social and economic environment is a determinant factor in this process.

Just as “Syracuse does not explain Archimedes”, there is no causal relationship could explain the emergence of a science; we can just identify a “bath”, an environment where knowledge springs.

In the relative relations that the “epistemic environment” and “technical environment” have woven into their respective constructed, scientific and cultural communities through which they emerged to play a leading role. So while the digitalization of reality covers and contains the truth, scientific communities and academic society open themselves. The embodiment of this vital

need of opening, the “open” phenomenon comes in many different forms: *OpenOffice*, *OpenDocument*, *Open Journal Systems*, *Open Monograph Press*, *Open Conference Systems* (a complete Web presence for scholarly conferences), *Open Harvester Systems* (an indexing system for OJS, OCS and other online resources), *Open Research Center*, *Open Classroom*, etc.

In short, the digitalization of reality has not in line of sight humanities and social sciences, but the shapes of our institutions (church, State, etc.), which means before we were enslaved to another way of thinking reality.

### **3. The digitalization of the scientific experience**

The digitalization of scientific experience (which includes experimentation, of course, but is not limited solely and strictly to what is called “experimental methods”) marks in the humanities and social sciences the postmodern moment of their historic transition from a dual conception (at least) of human activity which put back to back *techné* and *épistémè*, towards a unity derived from the organic fusion of science and technique through the applied sciences and technology. This means in particular that the movement that led to modern and postmodern experimental science tends, on the way to *praxis*, to melt *épistémè* and *technè*. Only explicit references and attentive reminders behind this process (hence behind the history of science) would be likely to clarify the conditions of this fusion; but these references tend to fade more and more to the considerable success of digitalization of the experience as a way of knowledge. The fusion becomes even confusion on the consequences, or some of them, of a *techno–epistemic* science, a science which tends to deny its origins.

For now, I would give you the measure of the heuristic of my presentation starting from an illustration may be less vague and general than the only notion of science induced. The stars in the sky have represented since the dawn of time an enigma, placing human beings facing the inaccessible, the immeasurable, confronting him to an interrogation able to stimulate his desires of knowledge. Thus, the idea of astrology is conceived as a technicised form of the sky contemplation. The contemplation of a starry sky is a theoretical posture of the mankind facing the universe, it ends on its interrogation about the influence of the position of the stars on his destiny. Astrology as technique becomes a means to decipher the message of the stars; the latter being located as an intermediary between mankind and design inaccessible powers. *The starry sky is assimilated to a page of handwriting.* In contrast, cosmology as epistemic construct considers the study of the stars and its movements as an object of knowledge that encompasses astrological stories: “The cosmological conceptions, even those we consider as scientific, were only very rarely—almost never and even— independent of the notions which are not considered as scientific one, that philosophical magical and religious notions. Even for a Ptolemy, Copernicus, and even Newton, theory of the cosmos was not independent of these other (*considered as nonscientific*) notions.”<sup>4</sup>

But what I want to emphasize by this example is the clear historical trend of *techné* to percolate *épistémè*, especially in this case in which the astrology plays the role of Trojan horse allowing *techné* penetrating cosmology: “[The Babylonians ] have formed catalogs, noting day by day the positions of the planets; if you do it carefully for a few centuries, you’ll end up, ultimately, to have catalogs that will reveal the frequency of planetary movements that it will give you the opportunity to provide, for each day of the year, the position of stars and planets which you’ll find when

you look at the Sky. Which is very important for the Babylonians because of the forecast positions of these planets depends, through astrology, the forecast the events that will happen on earth.<sup>5</sup> The divination Art, in fact, is issued from an *a priori* theoretical conception of the mankind in the world that uses the stars to open to the future; this will to control the destiny relies on a number of *techniques* allowing observe<sup>6</sup> and memorize the various configurations of the sky.

In a symmetrical manner, starting from *theoria* in the contemplative sense, the interrogation about the place of human being on earth and the interrogation about the earth in the universe, has produced many epistemic constructs. Thus, for the Greeks, the idea of Cosmos explicitly refers to a metaphysical joining an *épistémè*, as a construction giving access to knowledge, to a contemplative form (*theoria*) which connects the human being and the world. The epistemic character of cosmology leads to both a human detachment from the object of his questioning and a research of an order, a harmony that is hiding behind the movement of the stars<sup>7</sup>. At this moment in history, the *techné* and *épistémè* validating the role of the place of passage of *theoria* on the border separated them, paving the way for their fusion will lead to epistemic constructions eminently based on the assumption of a natural order represented by a particular geometric movement. The observed motion of the planets (the solar system) must be in accordance (from Plato) with regular movements (non-violent) and circular movements (thus natural by nature). Then, regularity and circularity refer to the perpetual and eternal movement that seems to describe the Cosmos, or at least, the apparent movement of its stars. Leaving the strictly contemplative aspect, so pure *theoria*, the Greeks gradually revealed differences or even contradictions of trajectory in the circular reading of planetary movement. This is a process where the

gradual abandonment of pure *theoria* made a place increasingly important to the methodical observation (where the work of the ancient Babylonians are reintegrated) in searching of an hidden order that only the geometry is able to reveal.

The digitalization of scientific experience in humanities and social sciences is based on this principle. Mathematics acquired today by digitalization a highly privileged status within humanities and social sciences, since they are considered part of the order of nature and “Let *no one* unversed in geometry *enter here*” was written above the tympanum of the Plato’s Academy. So the convergence of the movements issued by algorithms and observations is realized in the digitalized epistemic construct of humanities and social sciences.

Thus, the digitalization of the experience now enables humanities and social sciences researchers to go beyond mere sense-perception and observe aspects that natural intelligence of the researcher without the artificial intelligence of the computer could not reach. But digitalization also represents for the researcher the instrument to get out of his contemplative state of mind, and desacralize the nature and master it. This entry in the *praxis*, through digitalization, will mark now durably the orientation of humanities and social sciences that will consider disinterested knowledge not as a goal (in which *theoria* and *épistémè* will be satisfied in their dialogue, bringing metaphysics to its highest degree of knowledge) but as a mean of action, or even domination over nature.

As an example, I will take here the practices of processing, analysis, transmission and sharing of data. The illustrations are numerous. I will present here one of them which appeared to me significant: the Sphinx software. Certainly, there are many examples. But to illustrate, here is how appears the percolation of the technique within the epistemic environment in terms of

digitalizing humanities and social sciences considering only the Sphinx software: managing responsive design (Smartphone, tablet or PC, Sphinx automatically adapts its questionnaires and their content to the size of the users' screens), multi-channel deployment (send-outs by e-mails with management of follow-up contacts, responses via panelist relays, website embedding or face-to-face data input on offline tablets), managing panels (set up a consumer or client panel to streamline the decision-making processes or test new products or concepts), quanti-quali analysis (because the real gems of a survey often lie deep in responders' spontaneous verbatims, Sphinx provides text analytics functions to extract the essence of data and fully mine the contents of the open-ended questions), shared reporting platforms (the studies field is continually progressing and more and more targeted at real-time data management. For this reason, Sphinx enables implementation of sharing-based applications and conveying of condensed or detailed indicators, completely secure and directly online), statistics and decision-making assistance, etc (see more details at [http://www.lesphinx-developpement.fr/wp-content/uploads/2015/02/PLAQUETTE\\_LOGICIELS.pdf](http://www.lesphinx-developpement.fr/wp-content/uploads/2015/02/PLAQUETTE_LOGICIELS.pdf)).

## **Conclusions**

In conclusion, I would like simply note that we do not have to fear the disappearance of the humanities and social sciences and with it the loss of human dignity (ie scholar dignity) against the development of technology. Percolation of technology within the epistemic environment has reconfigured the research experience so much that soon the technology will necessarily be human and social in order to progress. Research centers as:

- ✦ Centre for Digital Philosophy located in the Department of Philosophy at the University of Western Ontario ;
- ✦ Digital History Research Centre (DHRC) at the University of Hertfordshire is the UK's first center devoted exclusively to digital history. (<http://www.herts.ac.uk/digital-history>);
- ✦ Digital Literacy Centre dans le Department of Language and Literacy Education at University of British Columbia, Vancouver, (<http://dlc.lled.educ.ubc.ca/>);
- ✦ Research Centre for Digital Theology, St John's College, Durham University (<https://www.dur.ac.uk/codec/>) Exploring interfaces between the Bible, digital & contemporary culture.

are eloquent illustrations.

The digitalization as a mean of observation firstly and of measurement secondly marks a historical moment in the percolation of the technique within the epistemic environment: this is the historical moment of the discursive and practical *confusion* between technical and epistemic. We are far from the days of dialogue between *techné* and *épistémè*. We also exceeded the time of the *fusion* between *techné* and *épistémè*. We live the moment when by the digitalization of humanities and social sciences we validate truths through the experimentation of the confusion between *techné* and *episteme* (Bratosin, 2016). In other words, the digitalization as a mean of advancing knowledge in humanities and social sciences marks fundamentally and decisively the gradual abandonment of the contemplative attitude in favor of the attitude of domination of being. It is therefore not surprising to see the digitalization occupy an increasingly important role in the in the humanities and social sciences domains through

the representations of the myth of the programmed death of the social sciences and became one of most current policy management tools of the research and a very popular instrument of the management in academic administrations.

### NOTES

<sup>1</sup> Foucault, M., *L'archéologie du savoir*, (Paris: Gallimard, 1969), 61–62.

<sup>2</sup> *Ibid.*, 67.

<sup>3</sup> Koyré, A., *Introduction à la lecture de Platon*, (Paris: Gallimard, 1991) – Col. Essais, 78: «This being, this reality [...] is not the messy heap of sensitive objects as the vulgar being (and the sophist) calls with this name. The vulgar being, mobile, unstable and passenger, is not – or barely—of the order of being; it is, and it is not, at once, and this is precisely why it is not, and can not be the object of science, but at most of the opinion. No, the being we have in mind, it is the being with stable and unchanging essence, which our soul has contemplated once, or more accurately, of which he is the idea, vision which it has in its souvenirs [...] now.»

<sup>4</sup> Koyré A., *Etudes d'histoire de la pensée scientifique*, (Paris: Gallimard, 1973),—collection Tel—Les étapes de la cosmologie scientifique (communication presented May 31, 1948, at « Quatorzième Semaine de Synthèse. »), 87.

<sup>5</sup> Koyré A., *op. cit.*, 88–89.

<sup>6</sup> This term take a special place in the author's text, and we fully support his remark when he precise: «I underline the word 'observable', for it is certain that the first meaning of the famous formula, *swzein ta jainomena*, means precisely: explain the phenomena, save them, ie reveal the underlying reality, reveal, under the apparent disorder of the immediately given, a real unity, orderly and intelligible. It is not only, as a positivistic misinterpretation teach us, a question of connecting them by means of a calculation, in order to achieve the forecast: it

is true to discover a deeper reality who provide the explanation», in Koyré, A. *op. cit.*, 89.

<sup>7</sup> Koyré, A. *op. cit.*, (1973), 88.

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