

Manual Labour, Intellectual Labour and Digital (Academic) Labour

A Critical Enquiry of the Practice/Theory Debate in the Digital Humanities

Christophe Magis

Université Paris 8-Cemti, Paris, France, christophe.magis@univ-paris8.fr,
<https://cemicritic.eu/christophe-magis>

Abstract: Although it has not been much considered as such, the digital humanities movement (or at least the most theoretically informed parts of it) offers a critique “from within” the recent mutation of the higher education and research systems. This paper offers an analysis, from a Critical Theory perspective, of a key element of this critique: the theory vs. practice debate, which, in the digital humanities, is translated into the famous “hack” vs. “yack” motto, where DHers usually call for the pre-eminence of the former over the latter. I show how this debate aims to criticise the social situation of employment in academia in the digital age and can further be interpreted with the *culture industry* theoretical concept, as a continuance of the domination of the intellectual labour (i.e. yack in this case) over manual labour (hack). I argue that, pushing this debate to its very dialectical limit, one realises that the two terms are not in opposition anymore: the actual theory as well as the actual practice are below their very critical concepts in the current situation of academic labour. Therefore, I call for a reconfiguration of this debate, aiming at the rediscovering of an actual theory in the academic production, as well as a rediscovering of a *praxis*, the latter being outside of the scientific realm and rules: it is *political*.

Keywords: Critical Theory, Digital Humanities, Culture Industry, Theory/Praxis, Digital Labour

Acknowledgement: An earlier version of this article has been presented at the “Théorie critique et humanités numériques” conference, held at the University of Liège (Belgium), in November 2016. The author would like to express his gratitude to the participants and organisers of this conference as well as to his colleagues Fabien Granjon and Benoît Lelong at the Université Paris 8, France.

“Theory is already practice. And practice presupposes theory. Today, everything is supposed to be practice and at the same time, there is no concept of practice.”

Theodor W. Adorno and Max Horkheimer, *Towards a New Manifesto*.

The last fifteen years have seen the rise of a new category within the humanities: that of *digital humanities* (DH) (Schreibman, Siemens and Unsworth 2004). Stemming from previous categories such as *humanities computing* – which described a new movement of reflexivity about the increasingly prevalent use of computer-based techniques and tools within the humanities – this new formula intended to question the new ways of practicing and producing knowledge in the contemporary social and human sciences and accompanied the creation of new departments, laboratories, conferences, books,

and so on (Granjon and Magis 2015).¹ Several writers, such as Richard Grusin (2013), have rightly stated how this proliferation could also be (and has been) used to intensify the marketisation of knowledge in academia (speeding up the movement of dissemination of the information and communication technologies [ICT] within the universities, or giving some new phony appeal to older departments by the magic of renaming them “digital”). Nevertheless, and in spite of the fact that the notion of digital humanities can hardly be seen as forming a coherent and homogeneous epistemological movement (Alvarado 2012; Terras 2011), it can though be assessed that a growing part of the “*digital humanists*” engage in some critical considerations of the preeminent role that the digital has come to take in the processes of forming, validating and using knowledge in the contemporary societies (Berry 2012; Jones 2014; Svensson 2016) as well as the subsequent mutations of the academic labour’s conditions.² Thus, in a systematic analysis of the corpus, Fabien Granjon and I recently pointed out how some theories and practices within the field of digital humanities could be considered as re-interpreting some key features of the critique in social sciences, from the perspective of questioning technology in academia (Granjon and Magis 2016). Even if most *DHers* (i.e. self-identified practitioners of the digital humanities) usually do not claim it this way – sometimes even using traditional Marxist critique, or critical theories as repellent (Hayles 2012; Pannapacker 2012) – it can however be affirmed that, from their general technology-related framework, a growing part of these approaches (self-)labelled “digital humanities” critically and reflexively analyse the mutations of the educational systems and sectors from within.

In the present article, which stems from this analysis of the DH corpus, I will focus on a specific feature of the digital humanities’ reflexion, namely that of the theory vs. practice debate. Analysing the specific features of this debate in the field, and especially the emphasis put on practice (through the experience of “hacking”), I will point out how it can in fact be reflexively related to a critique of division of labour in academia in the digital age, should one consider it seriously (1). Thus, I shall outline a critical reading of the terms of this debate susceptible to bringing new light on their broken dialectical relationship under the current conditions and mutations of the culture industry, considered as an unidimensional drive within academic thought (2). We will thus see how, under these conditions, the “hacking”, has become what its very practice aims to criticise (3). Therefore, I will call for a radicalisation of both the concepts of theory and practice in the DH field and, from that, in the entirety of critical humanities in the digital age. From this perspective, academic labour should aim at an academic concept of theory and a political concept of practice (4).

1. “Hack” vs. “Yack”: Towards a (Techno-)Pragmatic Critique of the Traditional Division of Labour in Academia

One of the most important trends in digital humanities can be grasped through the “hack” vs. “yack” debate. Of course, whether in the DH field or not, and be it from a critical perspective or not, every “reasonable” scholar would easily argue that theory

¹ Even if the instability of the notion makes it difficult to quantify, the DH field has been quantitatively investigated in a 2011 study produced by the UCL center for Digital Humanities. It revealed the existence of 114 centres for digital humanities at this date, spread out in 24 countries (especially of the North). More figures: <http://www.ucl.ac.uk/infostudies/melissa-terras/DigitalHumanitiesInfographic.pdf>

² Especially since the “critical” turn in the DH corpus, around 2015 onwards, that has been given much attention by French scholars (see Citton 2015; Bigot, Gruson-Daniel and Valluy 2016).

and digital praxis “should inform each other” (Schmidt 2011). I shall deal with this “reasonable” rhetoric in the last section of this article, but in the most epistemologically informed developments of the digital humanities the balance between theory and praxis has generally been in favour of the latter. Immersed in a “hacker ethic” (Himanen 2001) or “hacker imagination” (Broca 2016), the digital humanities have called for a pre-eminence of the *making* (coding, pirating, data-mining) over the theoretical spiel; a call crystallised in the famous motto of the THATCamp conference: “more hack; less yack!” (Murray-John 2011).

In the digital humanities, the programme such a slogan sketches is that of a pragmatic reflexion that must not be limited to the sole risk of a “great divide” between positivist empiricism and idealist theoreticism – against which some digital humanists have warned (Fitzpatrick 2011). Rather, the promoted “hack” invites to pay attention to two major facts:

- Firstly, that the digital is a set of practices which computer-based technologies contributed to form. Put otherwise, that the digital does not exist outside of what people do with it, and especially in their professional and academic practices;
- Secondly, that in the whole field of social sciences and humanities research, most digital-related tasks are often assumed by under-considered technical staff or by technically inclined and qualified individuals working outside the realm of the university or at its peripheries.

On the one hand, the recent history of the humanities as well as of social sciences shows how, until the last decade, “the labour-intensive and profoundly human domains of teaching and research have been notoriously absent from the technological makeovers that have characterized the private sector and even government” (Alvarado 2011, 47). And although “things are different now” (47), this situation has led to specific hierarchies amongst departments, between the traditional scholars and what Milad Doueihy (2011) calls the “accidental digiticians”, some colleagues that, being just a little more inclined to use the computational technologies at work, finally had to get more and more specialised as the others left them to deal with the necessary everyday management of mundane technical issues. Indeed, the imagination upon which the traditional figure of the humanities researcher is built is that of a “pure” and solitary spirit (McCarty 2005, 12), necessarily kept away from most of the down-to-earth trivial duties, and so it seems to be a mandatory position amongst distinguished scholars to appear almost completely technically unskilled. And alongside these duties, most of the digital realisations carried out by digital humanists usually simply “do not count” for tenures or promotions (Scheinfeldt 2008; Schreibman, Mandell and Olsen 2011). As Anne Burdick, Johanna Drucker, Peter Lunenfeld, Todd Presner and Jeffrey Schnapp put it in their famous book *Digital Humanities: In the History of Institutionalisation of Knowledge Production*, “the process of ‘how’ became separated from the content of ‘what’” and commitment to the latter “characterized by criticism, hermeneutics, and close reading, almost exclusively undertaken by a single author who works to articulate a highly defined problem in a specific discipline” (Burdick et al. 2012, 76), has become the only seriously recognised academic value.

On the other hand, this “more hack” appeal is also related to the “*alternative academics*” (“#alt-ac”) movement, which is very active within the field of digital humanities and promotes these professions which “often demand doctoral-level training in the hu-

manities but generally do not offer tenure-track positions” (Nowvskie 2011, 180). Although, again not really being a formalised and coherent movement within the DH field, the “alt-acs” have come to join and resonate with other struggling movements within international academia.³ Therefore, it embraces the latter’s main lines of action: critique of the worldwide downsizing of tenure-track faculty positions and, above all, of the disdain with which most precarious researchers are considered in the universities, in terms of recognition of their work, low level of pay, massive delays in payment – all caused by the recurrent use of casual short-term contracts or even zero-hour contracts to employ the majority of the academic working force.⁴ Here again, most complaints reveal how this contractisation has led to a double-class university employment: on the one side, tenured faculties see their teaching hours paid, as well as their teaching preparation and correction times, their research work and their administrative duties (that they try to limit); on the other side, the non-tenured “young” doctors, PhD students and “adjunct professors” are paid on the teaching hour, and must use their “leisure time” to conduct research projects. And, most of the time, they cannot, busy as they are using this “leisure time” to try and find another contract to simply survive, never knowing if they are going to still be part of any university faculty the next semester.⁵ Thus, a despicable class struggle is also starting to exist between the two sides, as most of the former end up being the formal recruiters of the latter, sometimes asking them for help with tasks that are not due in their contracts (especially administrative or technical duties) or to continue working even after a contract has ended. As many newspaper articles that have come to address this issue have revealed, interviewing some of those precarious academics, they most of the time have no real choice to refuse as it would simply lead to the end of any academic career they could hope for.⁶ Consequently, at a time when most of the teaching or researching workers in the universities are not granted a tenured position, and amongst those who do, a hierarchy still exist between the “pure thinkers” and the others whose thinking is seen as flecked

³ Movements such as the #NationalAdjunctWalkoutDay in the United States in Feb. 2015, the #precariousPSA within the Ontario Confederation of University Faculty Association that held conferences on the theme of precariousness within academia, cf. <http://ocufa.on.ca/conferences/confronting-precarious-academic-work/>, or the Collectif des Travailleur•e•s Précaires de l’Enseignement Supérieur et de la Recherche, in France <http://precairesesr.fr/> In the United Kingdom, the University and College Union has organised a lecturer’s strike in May 2016 to draw attention on the casual contracts and pay gaps within the university workers, cf. <https://www.theguardian.com/education/2016/may/25/uk-university-lecturers-strike-over-pay>

⁴ See for instance <https://www.theguardian.com/higher-education-network/2016/may/26/students-your-lecturers-are-on-strike-because-they-are-struggling-to-survive> ; <https://www.theguardian.com/us-news/2017/sep/28/adjunct-professors-homeless-sex-work-academia-poverty> ; http://www.lemonde.fr/idees/article/2016/06/16/la-precarisation-de-l-enseignement-superieur-et-de-la-recherche-nous-asphyxie_4952106_3232.html ; http://www.lemonde.fr/education/article/2014/12/11/nouvelle-obilisation-dans-l-enseignement-superieur-et-la-recherche_4538800_1473685.html and http://www.lemonde.fr/enseignement-superieur/article/2012/11/26/a-l-universite-50000-precaires-bon-marche-et-corveables-a-merci_1795940_1473692.html (the latter in French).

⁵ “You don’t know from one semester to the next whether you’re going to be hired for the next semester, and if the courses don’t fill, then it could be cut at the last minute” (interview extract with an “adjunct professor at various times over the last 30 years”), http://gothamist.com/2015/04/16/fight_for_15_march_nyc.php

⁶ See for example: http://www.lemonde.fr/idees/article/2016/06/16/la-precarisation-de-l-enseignement-superieur-et-de-la-recherche-nous-asphyxie_4952106_3232.html (in French).

by their own technical skills, the “hack vs. yack” debate actually draws attention to the fact that the “computational” societies (Berry 2014) are still societies where the domination is distributed according to the recognition *in one’s work* of his abilities of theoretical or conceptual elaboration. Hence, it should primarily be considered as a triple call for recognition:

- Firstly, recognition that the technical practice, especially within one’s academic profession but also that of so-called “technical” staffs, is also informed by theory as the digital has come to reshape the ways humanities and social sciences are done;
- Secondly, recognition that the scientific theory in these domains should seriously consider this very fact and inform its reflection with practical digital knowledge;
- Therefore, recognition that “developing a form of digital literacy can be seen as a process that goes hand in hand with developing critical literacy” (Adema 2012).

Indeed, for many DHers, the historical character of many works and productions in the humanities must be criticised, and scholars as well as students should be aware of its current position in the “power structures and relations that shape knowledge” (Adema 2012). In this respect, some critical digital humanities’ specialists have argued that new uses of the digital technologies in the processes of producing academic work can help create new forms of resistance to address the problems of power relations that are also embodied in the usual academic practices. Hence their call for a general change in the rules that govern what is considered valid work, usually under the “hacking academy” watchword (Cohen and Scheinfeldt 2011); a change that could also renew the place and role academia should take within societies and the ways of disseminating knowledge⁷ (Burdick et al. 2012; McPherson 2009). Through this “hacking” practice within academia, it is therefore even said that “the spread of DH is ‘remaking the power dynamics of faculty, students, and alternative academics’” (Pannapacker 2013). DHers have thus built their theoretical frameworks on many critical references stemming from American pragmatism – see Gold 2012; Reber and Brossaud 2013 – as well as “French theory” or cultural studies authors – see Berry 2012; Hayles 2012; Jones 2014; McCarty 2005 – whose aim is to exacerbate these individual *powers of acting*. Some DH scholars even compare, in this regard, the rise of digital humanities with earlier rises in critical thought and institutions such as the Birmingham School or the Yale Deconstruction (Kirschenbaum 2012; 2014), even though others, drawing on the same critical references, have stated that the question of race (Cong-Huyen 2013; McPherson 2012) or gender relations still needs to be addressed in the field.

These post-Marxist or post-structuralist references usually tend towards a theoretical pragmatism that also lies in both the famous “more hack; less yack!” and “hacking academy” catchphrases: this is where these mottos enter the debate between theory and practice. The digital being merely a set of practices, it is through practical experimentations that the theories should arise: even though the definitions of the concept of “hacking” may vary throughout the DH corpus, this seems to be at least the general point of agreement. Not unlike other movements that emerged with and around the

⁷ On this very matter, the debates concerning Open Science and Open Access are regularly treated within the digital humanities corpus (cf. Granjon & Magis 2015; McGrail 2017) as well as the necessity of switching to free or Open source software (cf. Kulawik 2016; Lane 2016).

digital tools (Wikipedia, Pirate parties, etc.), the digital humanities encourage a specific kind of “bottom-up” pragmatism, “largely ‘inspired’ by the technological *scripts* which they draw upon” (Granjon 2015, 219-20 [trans. CM]). Thus “experimentation”, alongside other ethical values such as “collaboration” and “openness”, becomes a key element of the DH curriculum (Spiro 2012; Scheinfeldt 2010). And practices facilitated by the digital, such as “remix” (Kuhn and Callahan 2012; Adema 2012) and data-mining (Manovich 2012; Hayles 2012), are celebrated in a concomitant general call for understanding coding as a literacy (Vee 2013; Berry 2012; Digital Humanities Manifesto 2009; Galloway 2004). Finally, this technological pragmatism transfers most of the digital values of its ethos, such as experimentation and collaboration, to the digital tools from which it draws them. Thus, it highlights the necessity of a certain virtuosity in the manipulation of these tools⁸ emphasising especially the novelty of certain practices they permit, such as working on colossal corpuses: “the greatest hope for renewing our shared theoretical traditions in humanities research, and perhaps the only possible route, is to use massive stores of data digitally” (Schmidt 2011). Therefore, one can sometimes in the DH field perceive an “obsession with quantification” that resembles other parts of digital media research (Fuchs 2017) with an penchant for digital “big data” analyses. This “hands on” pragmatic philosophy is seen as producing knowledge through practice, no matter who is engaged in these production processes, compared to the sometimes-mystifying blathering that has brought some authorised intellectuals to dominant positions within academia. “Hacking” is simultaneously a metaphor for a change within the institution and a pragmatic bottom-up tool for starting to work towards this change.

Taken seriously (which is rarely done, even sometimes amongst DHers), this critique calls for a primacy of the act of *making* within its broader critique of a division of labour that has brought a domination of the “yack”-workers in universities. I would like to read this call within the philosophical history of theory and practice. Here, the Critical Theory approach can be of great use, especially in relation to the concept of *culture industry*. Hence we will then see that shifting the critical point of view in the current social conditions, “hack” and “yack” can in fact be considered two sides of the same medal.

2. Culture Industry and the Division of Manual and Intellectual Labour

In media, culture or communication studies, the famous work *Dialectic of Enlightenment* by Theodor Adorno and Max Horkheimer (2002) is usually considered mainly for its central chapter on “Culture Industry: Enlightenment as Mass Deception”. The chapter is generally read separately and mistaken for a (consequently imprecise) general socio-economic study of the cultural production of the 1940s (Magis 2016). Although of major relevance concerning the political economy of communications, it seems that most of these socio-economic attempts of understanding tend to reduce one of the book’s most important theses. What is at stake here is precisely that the history of domination can be read as a history of the division of manual and intellectual labour, but that, in the name of equality, the intellectual labour (containing the arts as well as philosophy) has lost most of its critical drive. These two correlated propositions can help in analysing the current situation of academia that is outlined by the “hack vs. yack” debate in the digital humanities.

Following in this regard the critical epistemological propositions of their colleague Alfred Sohn-Rethel (1978), Adorno and Horkheimer point out that the modern subject

⁸ Virtuosity sometimes seen as an *aesthetics* (see Coleman 2013; Berry 2014).

has been constituted through a separation of the dominant's hands from the most difficult manual tasks. The myth of Odysseus is founding in this respect; especially when sailing past the Sirens' habitat. By means of his cunning trick, Odysseus establishes himself as subject and master and, consequently, as passive recipient of contemplative pleasures:

He knows only two possibilities of escape. One he prescribes to his comrades. He plugs their ears with wax and orders them to row with all their might. Anyone who wishes to survive must not listen to the temptation of the irrecoverable, and is unable to listen only if he is unable to hear. Society has always made sure that this was the case. Workers must look ahead with alert concentration and ignore anything which lies to one side. The urge toward distraction must be grimly sublimated in redoubled exertions. Thus the workers are made practical. The other possibility Odysseus chooses for himself, the landowner, who has others to work for him. He listens, but does so while bound helplessly to the mast, and the stronger the allurements grow the more tightly he has himself bound, just as later the bourgeois denied themselves happiness the closer it drew to them with the increase in their own power. (Horkheimer and Adorno 2002, 26)

This historical scission between aesthetical pleasure and manual labour is then correlated to the domination of the master over the slave or the servant, and goes on for the rest of the history of domination. As well as artistic contemplation, philosophy as an activity is also rooted in this original separation and bears the domination in its very gesture. Thus, the intellectual abilities of the theoretician have been hypostatized within theory itself, as Horkheimer puts it in an essay written around the same time as the *Dialectic of Enlightenment*:

The human intellect, which has biological and social origins, is not an absolute entity, isolated and independent. It has been declared to be so only as a result of the social division of labor, in order to justify the latter on the basis of man's natural constitution. The leading functions of production—commanding, planning, organizing—were contrasted as pure intellect to the manual functions of production as lower, impurer form of work, the labor of slaves. It is not by accident that the so-called Platonic psychology, in which the intellect was for the first time contrasted with other human 'faculties,' particularly with the instinctual life, was conceived on the pattern of the division of powers in a rigidly hierarchic state. (Horkheimer 1947, 54)

Marx and Engels already had this division of labour in mind when theorising about the *German Ideology*. Criticising their Young Hegelian colleagues that had come to philosophically assume a definitive separation of forms of consciousness from the social

being of individuals, Marx and Engels link this separation as it appears to the philosophers with their own social situation in the division of labour, and especially of manual and intellectual labour. As “[f]rom this moment onwards consciousness can really flatter itself that it is something other than consciousness of existing practice, that it really represents something without representing something real; from now on consciousness is in a position to emancipate itself from the world and to proceed to the formation of ‘pure’ theory, theology, philosophy, morality, etc.” (Marx and Engels 1998, 50).

All things considered, we could here compare the Marxian critique with the critique of the “yack” within the digital humanities. And Adorno and Horkheimer draw on these conclusions as well, although they also dialectically consider the fact that this domination is what allowed a constitution of the transcendental mind. In fact, the very gesture of philosophy, though being the privilege of those who mustn’t work for their own subsistence, should be a privilege aiming at its own abolition as a privilege. In the intent to conceptualise in abstraction, intellectual labour negates the arduousness of the concrete manual labour and brings about the urge for a reconciliation, by pushing over its very contradiction with manual labour, while it can also plan the conditions of this reconciliation. The transcendental meditation of the “pure” spirit is nothing else than the individual’s intellectual attempt to escape the most alienating heaviness of manual labour, therefore considering the latter as its contradictory alien in an intellectual synthesis (Adorno 1998, 22). Adorno finds traces of this thought in the mature Marx: “In the moment of planning – the result of which, he hoped, would be production for use by the living rather than for profit, and thus, in a sense, a restitution of immediacy – in that planning he preserved the alien thing; in his design for a realization of what philosophy had only thought, at first, he preserved its mediation” (Adorno 1973, 192). Through dialectical thinking, that especially considered the category of negation, the intellectual labour should criticise its own existence, thus bearing within itself the whole possible collective emancipation through a synthesis of its contradiction with manual labour. Then, although it never fully reached its own aim, this gesture could never be called “yack”, or be compared to what the digital humanities criticise with the “yacking” term.

This is where the central chapter of the *Dialectic of Enlightenment* proves useful. At an industrial age where the commodity logic has taken over most activities of the social life, the concept of culture industry should be understood as the movement which reduces the mind’s ambitions to the triviality of the always-identical. Offered (in exchange of hard cash) as “cultural leisure” in the media as well as “cultural training” in universities, it never escapes the individuality of manual labour, rendering its pretention to be something else futile and ridiculous. It is in fact through the culture industry movement that the theoretical thinking can become this rhetoric flannel that the very term “yack” aims to criticize. And this movement is carried on by positivism and its “pragmatic intelligence” that has come to replace “meditation” within the intellectual labour.

[Freedom for contemplation] was always a privilege of certain groups, which automatically built up an ideology hypostatizing their privilege as a human virtue; thus it served actual ideological purposes, glorifying those exempt from manual labor. Hence the distrust aroused by the group. In our era the intellectual is, indeed, not exempt from the pressure that the economy exerts upon him to satisfy the ever-changing demands of reality. Consequently, meditation, which looked to eternity, is superseded by pragmatic intelligence, which looks to the next moment. Instead of losing

its character as a privilege, speculative thought is altogether liquidated – and this can hardly be called progress. (Horkheimer 1947, 103)

One could easily notice this paradox: industrial capitalist societies are intellectual-knowledge-based. The individuals of these societies are generally well-educated: be it in the European Union, United States, Canada or Japan, the large majority of a generation has attended higher education and almost half of a generation graduated. The data produced by the OECD for 2014 show how 41,6 % of the 25–34-year-olds of the OECD countries have completed tertiary education and the figures climb up to 44,7 % for France, 45,7 % for the United States, 49, 2 % for the United Kingdom and even 57,7 % for Canada and 58,8 % for Japan.⁹ How come, in this case, does a more rational organisation of society still seem utopian? The Critical theorists' answer would be that the intellectual gesture has been shifted: while the intellectual sectors were taken over by industry – and education became a strategic source of profit and control within the entire cultural production – the very act of thinking has been limited to identifying and applying procedures, transforming it into a mere reflection of the industrial machinery. “[I]deas have been radically functionalized” (Horkheimer 1947, 22). The work of Herbert Marcuse on the *One-Dimensional Man* also criticises this shift, analysing it for instance through Wittgenstein's concepts: “Thinking (or at least its expression) is not only pressed into the straitjacket of common usage, but also enjoined not to ask and seek solutions beyond those that are already there. ‘The problems are solved, not by giving new information, but by arranging what we have always known’¹⁰” (Marcuse 1991, 182).

Through this shift, in philosophical thinking, in social sciences as well as in others intellectual and cultural sectors, one sees “the growth of the industrial apparatus and of its all-embracing control over all spheres of life” (Marcuse 2004) that rendered thought powerless. Intellectual labour, personified in the professions of managers, experts or consultants, has been emptied of the original social interest of a thought liberated from physical labour. Its new goal is to positively record what is already there, most of the time through the application of mathematical logics which permits an “intellectual economy” (Horkheimer 1947, 23) – and dispense a true act of thinking: “Complicated logical operations are carried out without actual performance of all the intellectual acts upon which the mathematical and logical symbols are based” (23). Then, through this culture industry process, intellectual labour can become true “yack”, where the “intellectual” is merely located in the *social positions* of its practitioners. Culture industry limits the possibility of genuine intellectual labour, but does not stop the social domination the latter operates. In this perspective, it can be said that theory has historically become “yack” with the pregnancy and penetration of the economic and instrumental logics within academia that has turned thought into a mere sector of the culture industry. Is it then possible, on the other hand, to engage in a true act of “hack”?

3. What Concept for a Practice within the Digital *Kulturindustrie*?

Following the main works of the Frankfurt School, one realises how the western societies have reached a point where the division of manual and intellectual labour has no *raison d'être* outside of domination. And if, on the one side, the need for hard physical

⁹ See <https://data.oecd.org/eduatt/population-with-tertiary-education.htm>

¹⁰ Wittgenstein, *Philosophical Investigations*, 47. (Reference in the cited extract).

labour is now prescribed by the needs of social control rather than by scarcity (Marcuse 1998), also on the other side the “intellectual” planning tasks have increased but merely deal with the application of procedures that are external to the production process instead of aiming at their own liberated self-production. This last shift forms what can be called “bureaucracy”: the reduction of intellectual actions to a complex body of tasks offering simplified standardised procedures, which is not at all at odds with the movement of capitalism – although it has been used to mock the soviet countries during the 1960s and 1970s (Graeber 2015). Indeed, Max Weber (1968) has shown the link between the bureaucratic organisation and the complete realisation of the logic of capitalism. As we have seen, bureaucracy is transposed in the social sciences and philosophy by positivism, and the latter draws on the mathematical reasoning and abstract formalisation of reason itself. Through this reasoning, capitalist society reproduces itself in science: “mathematical formalism, whose medium, number, is the most abstract form of the immediate, arrests thought at mere immediacy. The actual is validated, knowledge confines itself to repeating it, thought makes itself mere tautology. The more completely the machinery of thought subjugates existence, the more blindly it is satisfied with reproducing it” (Horkheimer and Adorno 2002, 20).

Yet the digital exacerbates this penetration of the mathematical reasoning over society as well as consequent bureaucratisation. As some representatives of the critical current in digital humanities state, the “computational” rationality of the digital is of the same kind than the abstract instrumental rationality that culminates in positivism after having dominated the whole bourgeois sciences and philosophy. “Digitalisation is *abstractisation*: it extracts a small amount of ‘relevant’ characteristics from something concrete and continuous in order to (reductively) summarise it in calculation, while neglecting myriad other characteristics just as real but considered ‘irrelevant’” (Citton 2015, 49 [trans. CM]). The mathematical rationality, the aim of which is the final equivalence of any qualitative data, is the very basis of digital form: “the use of computational systems creates a highly computationally mediated lifeworld which raises challenging questions that Horkheimer envisioned already in 1947 when he talked about the prevalence of science as the arbiter of knowledge and truth” (Berry 2014, 47). Indeed, the digital systems “are also built of computational logics which are themselves materializations of assumptions, values and norms, often taken for granted, by the designers and programmers of the systems (e.g. gender, race, class, etc.)” (40). Those unquestioned computational logics draw on the mathematical reasoning in pursuit of the same “intellectual economy” as in positive scientific thought. It even renews a myth of universal logical understanding as “the history of computation is imbued with grand visions of a unified theory on the basis of mathematics” (Rieder and Röhle 2012, 78).

Then, beyond its mere slogan aspect, the fact that DHers call for “more hack!” aims to address this matter and question the unquestioned, by the means of what is unquestioned:

[W]e need to develop methods, metaphors, concepts and theories in relation to this software and code to enable us to think through and about these systems, as they will increasingly have important critical and political consequences. That is why being able to read these code-based protocols is an important starting point (Berry 2014, 40).

It is necessary indeed to encourage such practices. But more understanding of the rules of the computational languages does not equal their subversion. Also, this invitation sometimes reveals a strange nostalgia for a simpler artisan life that would however take place in the digital age. Many works in digital humanities exhort their readers to develop “code craftsmanship” following in this regard the pleas of many digital celebrating events such as “Maker Faires” and “Hackatons” (Svensson 2016). This at times techno-romanticism does not assure a final reflexivity on the protocols themselves. Quite the opposite: although learning code can lead to “*protocol teardowns* [...] for seeing the limits of reading code by breaking code” (Berry 2014, 40), it is also a learning of the mathematical logic embedded in the scripts. Hence, it finally leads to an incorporation of the latter’s instrumental reason as it hopes that a certain virtuosity in it is the starting point of a wider critique. But should the optimism of the more enthusiastic hackers-DHers be tempered or not on this last point, the whole argument appears stuck in quite a utilitarian vision, so much so that “the distinctive methodologies of digital humanities are typically represented in comfortably industrial terms” (Cecire 2011). It may not be a renewed critical practice that could count as a contradiction for the rhetoric flannel that “theory” has become, as much as the learning of the core script of society’s instrumental reason. Yet was this not industrial instrumental reason, its implacable positivist logic, its inexorable dissemination and its bureaucratic consequences that nipped the possibility of a critical thought in the first place? In the computational societies, the possible “hack” has merely become what the term “yack” aims to criticise: in each case, it is a learning and an application of external procedures, a restriction of the possibilities of both the thought and the making to manipulating logics that have been conceptualised elsewhere, for reasons of intellectual economy. Thus the difference between the two finally resides in the theoretical or practical consciousness as well again as the *recognised* social position of the subject as for both, the manipulation of the mathematical reasoning is a manipulation of an abstract-form that “owes no debt to manual labour” (Sohn-Rethel 1978, 36): be it “hacking” or “yacking”, both are privileged actions that are kept away from the hardest physical productive tasks.

Furthermore, one should consider that these computational logics have accompanied the expansion of the service sector in the economies of the North, along with their own technological imaginations that the general techno-pragmatic call of the digital humanities aims to critique as well, especially since 2015 through a workshop called “Minimal Computing”, within the field.¹¹ Some notions such as “*cyberspace*” (Jones 2014; Mosco, 2005), “*information society*”, “*post-industrial society*” (Fuchs 2014) or “*creative industries*” stem from these imaginations and have proliferated with the reorientations of the production base of the countries of the North towards the culture, information and knowledge economies after the oil shocks from the end of the 1970s onwards that resulted in the growth of computerisation and the rise of ICTs as well as of the massive development of the higher education and research sectors.

As many works in political economy of communications have shown, these reorientations and the increasing development of the digital technologies have been at the centre of a global redistribution of the division of labour. The unskilled or low-skilled labour is located in the developing countries whereas the skilled management, research and development tasks are located in the “First World” (Mosco 2009; Sussman and Lent 1998). And this international division of labour is also still shaped as a general division between head and hand: the unskilled or low-skilled tasks been essentially

¹¹ <http://go-dh.github.io/mincomp/about/>

extraction of minerals (the raw materials in the production of ICTs) or assembling (Fuchs and Sandoval 2014). In its so-called “post-industrial” era, capitalism is still based on the high exploitation of different kinds of labour, the most physical manual types being concentrated in the countries at the peripheries, in the form of “the highly exploited bloody Taylorist work and slave work [...] producing hardware and extracting ‘conflict minerals’” (Fuchs 2014, 130). This also means that, in the current culture industry, “hack” and “yack” which are merely the same both count as parts of the skilled management and R&D tasks whose very existence rests upon the fact that the hardest physical productive tasks of the global economy are carried out elsewhere.¹² Furthermore, they are both based on the same instrumental logic that renders them critically powerless while it increases exploitation and control upon the enslaved work of individuals in the Third World. In fact, in its current state, capitalism needs intellectual debates about “hack” and “yack” concerning ICTs, as mediated by ICTs, and as the blood of the African mine workers to produce these ICTs. Genuine intellectual labour should be aiming towards the ending of this situation.

4. Aiming Below the “Theory vs. Practice” Debate: The Political Role of Academic Labour

As we see, the “hack vs. yack” debate in the digital humanities reveals genuine critical questions about the field of academic critical thought in general, should one take it seriously – what any reader ought to do given the widely documented critical turn in the field around 2015 onwards. This debate cannot be limited to the sole technical matter: it is an actual critique of the situation of academia embodied in a more general question of the relations between academic theory and practice. And finally, as the situation of theory itself proves that it merely is an abstract tool of domination, while the prevalence to give to the “hack” technical practice over the theory also shows limits, a synthesis appears necessary. However, explored through a critical-theoretical framework, a resolution might not be this debate’s most interesting stake. And it may be the biggest trap in which some thinkers tend to fall, when calling for the constitution of a “critical praxis” (Adema 2012) that would articulate digital literacy and theoretical knowledge (Fitzpatrick 2011; Schmidt 2011), *beyond* what appears to be an outmoded debate of “hack” over “yack”: “[t]he dichotomy between the manual realm of making and the mental realm of thinking was always misleading. Today, the old theory/praxis debates no longer resonate” (Digital Humanities Manifesto, 2009). Because, here as for the rest of the critical academic field, the plea for this articulation should analyse the situation of both theory and practice to see what can be expected from their reunion. If the digital enables a technical articulation of informatics, of audio-visual media as well as of the telecommunications with the equivalent treatment of data, it does not facilitate a “convergence” of theory and praxis outside of a mere capitulation to the general instrumental logic that the critical theoretical work of the humanities aims to hold back. And when the Digital Humanities Manifesto (2009) states that “[k]nowledge assumes multiple forms; it inhabits the interstices and criss-crossings between words, sounds, smells, maps, diagrams, installations, environments, data repositories, tables, and objects. Physical fabrication, digital design, the styling of elegant, effective prose; the juxtaposing of images; the montage of movements; the orchestration of sound: they are all *making*”, it assumes that the categories of theory and practice have both

¹² It is therefore not insignificant that most of the growth of the DH field has taken place in the countries of the North, as we have seen. (See <http://www.ucl.ac.uk/infostudies/melissa-ter-ras/DigitalHumanitiesInfographic.pdf>)

merely lost their very concept in the current society of globalised culture industry. Notably, here, although this “*making*” opens an enthusiastic world of cultural-technical possibilities in which lettered technicians can engage to renew the practices of the humanities, it doesn’t mean a synthesis of theory and practice – and besides, of manual and intellectual labour – but rather a continuation of the culture industry domination logic through technical virtuosity.

Therefore, it may be *below* the debate rather than beyond it that a critique in the DH field should aim, in a two-fold movement:

- Keeping the possibility for a true theoretical critical work which tries to reflexively criticise itself as “intellectual labour” as well as criticising the digital practices that inform its own critique. This counts for theory;
- Drawing the practical consequences of this academic critique *on a political level*. This only can be considered praxis.

If another radical experience can be, it is located in the voluntarily maintained tension between theory and practice. It is this assumed tension which never forgets that the labour of theory is wrested from the hardest productive tasks and that, as a privilege, it negates the actual social logic and its most subjugating tendencies – even though academics are not the ones who suffer these the most. This maintained tension should render obvious that the current bureaucratised “intellectual labour” produced in the universities is way below its own concept in the humanities. Hence, “[t]echnological engagement and critical work need to be brought together, and doing so requires allowing digitally inflected exploration and experimentation. We also need a conceptual foundation for humanities infrastructure that is not just built on science and engineering models but makes deep sense from the point of view of humanities-based questions and activities” (Svensson 2016). But it should not be forgotten that this whole part can only aim towards a *theory* that deserves to be called so.

From then on, it should invite tenured academics as well as precarious faculties to politically engage in social movements for a change in working conditions. These political movements should identify the bureaucratic logic of the “yack” with the movement of capitalism that also exploits and kills manual labour, be it extracting labour in Western Africa, assembling labour in South-Eastern Asia as well as the low-skilled work in the societies of the North – in short, experience that “everything is false as long as the world is as it is” (Adorno and Horkheimer 2011, 69). I finally agree with Benjamin Schmidt that the “[w]ork in digital humanities should always begin with a grounding in a theory from humanistic traditions” to avoid reproducing “a problematic social world” (Schmidt 2011). Yet it must be added that trying to avoid this problematic reproduction can’t stop at this grounding in a theory: it must inform and be followed by a *political praxis*, as the critique of the problematic social world and of its socialised economy is *always* political, although the political critique can be facilitated by an adequate use of the current digital techniques. The critical DHers should consider that the “hack vs. yack” debate is in fact only one side of the tension between theory and praxis: the one that calls for a true theory – be it in tension with other areas of social life that have historically been dominated by the intellectual workers. And this tension shouldn’t aim towards a synthesis – as “syntheses” has for long been the word used to acclaim the victory of capital in the theoretical field – but rather towards its own implosion, by political means.

In the highly consensus-seeking times that we currently live in the universities (as in many other areas of social life), it seems that every debate must end with the emergence of a “reasonable” posture which caricatures the two debating positions to highlight the necessity of a “middle way” that rhetorically appears as the only tenable position. Consequently, when confronted to a position rhetorically materialised in a sentence starting with the word “beyond”, one should keep oneself on his toes! For this is usually where the sought consensus is going to come from. And a rapid glimpse at most of the epistemological debates in media and communication studies will reveal how our theoretical epoch is a time of “beyonds”.¹³ But most of the time, these positions that are self-proclaimedly “beyond” any debate rarely draw on an actual integration of the debate in question: there’s generally no dialectical *aufhebung* to be found there, but a rather postmodernist parody of it that leads thoughts nowhere else than to this urge for consensus. And finally, to the idea that fundamental antagonisms are inexistent within contemporary societies. Therefore, it might sometimes be useful to “come back from the beyond” to realise that a dialectical integration cannot be operated; that a debate should exist with its own specific tension, following in this respect the famous phrase of Adorno, according to which “the whole is the untrue” (Adorno 2005, 50). And it is certainly the case with the eternal debate of theory vs. practice, especially considering its formulation within digital humanities. In fact, the specific form this debate takes in the digital humanities does quite reveal the situation and the possibilities of the theoretical as well as the practical elaborations in the current northern societies – particularly within the academic field. There is no middle way to find between “hack” and “yack” because, under the current social conditions, there is no real tension between these two. Put otherwise, the middle way already exists and that is the actual logic of capitalism in the global culture industry – the same neoliberal middle way that once predicted that digital capitalism should be the reunion of “both the Marxist and the neoliberal utopias” (Levy 2002, 172 [trans. CM]). Thus, in a general academic ethos that has incorporated this very logic and urges scholars never to seek truth outside the borders of their scholarly field, the apparent necessary reunion of theory and practice may not be anything else than the mixing of a mere parody of both. Humanists or social scientists, should they call themselves “digital” or not, must then never forget that their engagement in intellectual labour should be aimed at the production of a (critical) theory. And they should not be ashamed to push this concept of theory beyond the limits of what the current academic rules would admit. The scientific injunction to be theoretic-practical can be a mere consensual ploy, whose link with the logic of culture industrialisation is traceable, aimed at reducing the most critical consequences of a genuine theoretical work. For the latter, the actual *theory* is one that is not afraid of speculative thought, even if it must be informed by the current digital practice. It is an act of intellectual labour that one must never forget is, as such, a privilege that should thus be at least directed at fulfilling its very concept of theory. But under the current conditions, the actual *praxis* to engage this intellectual labour with is out of the academic realm and out of the technical realm: it should be political.

¹³ Indeed, the examples are numerous: beyond political economy vs. cultural studies; beyond philosophy vs. social sciences approaches; beyond culture vs. commerce, etc.

References

- Adema, Janneke. 2012. Practice What You Preach. Engaging in Humanities Research through Critical Praxis. Accessed February 20, 2017. <https://openreflections.wordpress.com/2012/01/30/practice-what-you-preach-engaging-in-humanities-research-through-critical-praxis/>
- Adorno, Theodor W. 2005. *Minima Moralia*. London: Verso.
- Adorno, Theodor W. 1998. *Hegel: Three Studies*. Cambridge, MA: MIT Press.
- Adorno, Theodor W. 1973. *Negative Dialectics*. New York, NY: Continuum.
- Adorno, Theodor W., and Max Horkheimer. 2011. *Towards a New Manifesto*. London: Verso.
- Alvarado, Rafael C. 2012. 'The Digital Humanities Situation'. In *Debates in the Digital Humanities*, edited by Matthew K. Gold, 50-55. Minneapolis, MN: University of Minnesota Press.
- Alvarado, Rafael C. 2011. The Effective Humanist: On Not Misrecognizing the Work of Digital Scholars. In *#Alt-Academy: 01. Alternative Academic Careers for Humanities Scholars*. Media Commons.
- Berry, David M. 2014. *Critical Theory and the Digital*. New-York, NY: Bloomsbury.
- Berry, David M., ed. 2012. *Understanding Digital Humanities*. London: Palgrave MacMillian.
- Broca, Sébastien. 2016. Épistémologie du code et imaginaire des « SHS 2.0 ». *Variations. Revue internationale de théorie critique*, no. 19. Accessed 24 January 2018. <http://variations.revues.org/701>
- Burdick, Anne, Johanna Drucker, Peter Lunenfeld, Todd Presner, and Jeffrey Schnapp. 2012. *Digital Humanities*. Mit Press.
- Cecire, Natalia. 2011. Introduction: Theory and the Virtues of Digital Humanities Journal of Digital Humanities. *Journal of Digital Humanities* 1 (1). Accessed February 20, 2017. <http://journalofdigitalhumanities.org/1-1/introduction-theory-and-the-virtues-of-digital-humanities-by-natalia-cecire/>
- Citton, Yves. 2015. Subjectivations computationnelles à l'erre numérique. *Multitudes* 62 (1): 45-64.
- Cohen, Dan, and Tom Scheinfeldt, eds. 2011. *Hacking The Academy. A Book Crowdsourced in One Week*. Ann Arbor, MI: University of Michigan.
- Coleman, E. Gabriella. 2013. *Coding Freedom. The Ethics and Aesthetics of Hacking*. Princeton, NJ: Princeton University Press.
- Cong-Huyen, Anne. 2013. Race in DH – Transformative Asian/American Digital Humanities. Accessed February 20, 2017. <https://anitaconchita.wordpress.com/2013/09/24/cesa2013-race-in-dh-transformative-asianamerican-digital-humanities/>
- Doueïhi, Milad. 2011. *Digital Cultures*. Cambridge, MA: Harvard University Press.
- Fitzpatrick, Kathleen. 2011. 'The Humanities, Done Digitally'. *The Chronicle of Higher Education*. Accessed February 20, 2017. <http://www.chronicle.com/article/The-Humanities-Done-Digitally/127382/>
- Fuchs, Christian. 2017. From Digital Positivism and Administrative Big Data Analytics Towards Critical Digital and Social Media Research! *European Journal of Communication* 32 (1): 37-49.
- Fuchs, Christian. 2014. *Digital Labour and Karl Marx*. London: Routledge.
- Fuchs, Christian, and Marisol Sandoval. 2014. Digital Workers of the World Unite! A Framework for Critically Theorising and Analysing Digital Labour. *tripleC: Communication, Capitalism & Critique* 12 (2): 486-563.
- Galloway, Alexander. 2004. *Protocol: How Control Exists After Decentralization*. Cambridge, MA: MIT Press.
- Gold, Matthew K., ed. 2012. *Debates in the Digital Humanities*. Minneapolis, MN: University of Minnesota Press.
- Graeber, David. 2015. *The Utopia of Rules*. Brooklyn, NY: Melville House Publishing.

- Granjon, Fabien. 2015. Du pragmatisme et des technologies numériques. *Hermès, La Revue* n° 73 (3): 219-24.
- Granjon, Fabien, and Christophe Magis. 2016. Critique et Humanités Numériques. Pour Une Approche Matérialiste de l'Immatériel. *Variations*, no. 19. Accessed 24 January 2018. <https://variations.revues.org/pdf/748>
- Granjon, Fabien, and Christophe Magis. 2015. Vers Une "Nouvelle Anthropologie" Critique? Jalons Pour Une Épistémologie Matérialiste Des Humanités Numériques. *Journal Des Anthropologues*, no. 142-143: 281-303.
- Grusin, Richard. 2013. 'The Dark Side of the Digital Humanities – Part 2'. *Thinking C21*.
- Hayles, N. Katherine. 2012. 'How We Think: Transforming Power and Digital Technologies'. In *Understanding Digital Humanities*, edited by David M. Berry, 42-66. London: Palgrave MacMillian.
- Hesmondhalgh, David. 2007. *The Cultural Industries*. London: Sage.
- Himanen, Pekka. 2001. *The Hacker Ethic and the Spirit of the Information Age*. New-York, NY: Ransom House.
- Horkheimer, Max. 1947. *Eclipse of Reason*. New York, NY: Oxford University Press.
- Horkheimer, Max, and Theodor W. Adorno. 2002/1944. *Dialectic of Enlightenment*. Stanford, CA: Stanford University Press.
- Jones, Steve E. 2014. *The Emergence of the Digital Humanities*. New-York, NY: Routledge.
- Kuhn, Virginia, and Vicki Callahan. 2012. Nomadic Archives: Remix and the Drift to Praxis. In *Digital Humanities Pedagogy. Practices, Principles and Politics*, edited by Brett D. Hirsch. Cambridge: OpenBook Publishers.
- Kulawik, Bernd. 2016. Why and how to avoid complex non-free software in Digital Humanities projects. *Information Services and Use* 36: 203-210.
- Lane, Richard J. 2016. Revisiting Open Source Software Development Models for Community-Based Digital Humanities Research Generation. *Scholarly and Research Communication*, 7 (2).
- Levy, Pierre. 2002. *Cyberdémocratie*. Paris: Odile Jacob.
- Magis, Christophe. 2016. Économie Politique de la Communication et Théorie Critique des Médias. Épistémologie d'un Héritage Théorique Critique.' *Réseaux* 34 (199): 43-70.
- Manovich, Lev. 2012. Trending: The Promise and the Challenges of Big Social Data. In *Debates in the Digital Humanities*, edited by Matthew K. Gold. Minneapolis, MN: University of Minnesota Press.
- Marcuse, Herbert. 2004. *Collected Papers of Herbert Marcuse, Vol. 1: Technology, War and Fascism*. Edited by Douglas Kellner. London: Routledge.
- Marcuse, Herbert. 1998/1955. *Eros and Civilization. A Philosophical Inquiry into Freud*. New York, NY: Routledge.
- Marcuse, Herbert. 1991/1964. *One-Dimensional Man*. London: Routledge.
- Marx, Karl, and Friedrich Engels. 1998/1845. *The German Ideology*. Amherst, NY: Prometheus.
- McCarty, Willard. 2005. *Humanities Computing*. Basingstoke, Hampshire: Palgrave MacMillian.
- McGrail, Anne B. 2017. Open Source in Open Access Environments: Choices and Necessities, *Minimal Computing*. Accessed 24 January 2018. <http://go-dh.github.io/min-comp/thoughts/2017/02/17/mcgrail-choices/>
- McPherson, Tara. 2012. 'Why Are the Digital Humanities so White? Or Thinking the Histories of Race and Computation'. In *Debates in the Digital Humanities*, edited by Matthew K. Gold, 139-60. Minneapolis, MN: University of Minnesota Press.
- McPherson, Tara. 2009. 'Introduction: Media Studies and the Digital Humanities'. *Cinema Journal* 48 (2): 119-23.
- Mosco, Vincent. 2009. *The Political Economy of Communication*. Thousand Oaks, CA: Sage.

- Murray-John, Patrick. 2011. Theory, Digital Humanities, and Noticing. *Journal of Digital Humanities* 1 (1). Accessed 24 January 2018. <http://journalofdigitalhumanities.org/1-1/theory-digital-humanities-and-noticing-by-patrick-murray-john/>
- Nowwiskie, Bethany. 2011. Where Credit Is Due: Preconditions for the Evaluation of Collaborative Digital Scholarship. *Profession* 13: 169-81.
- Pannapacker, William. 2012. "No DH, No Interview". *Chronicles of Higher Education*, <http://www.chronicle.com/article/No-DH-No-Interview/132959>
- Pannapacker, William. 2013. "Hacking" and "Yacking" About the Digital Humanities. *Chronicles of Higher Education* 60 (1). Accessed 24 January 2018. <http://www.chronicle.com/article/HackingYacking-About/141311>
- Reber, Bernard, and Claire Brossaud. 2013. Conclusion. In *Digital Cognitive Technologies: Epistemology and the Knowledge Economy*, 389-96. Hoboken, NJ: John Wiley & Sons.
- Rieder, Bernhard, and Theo Röhle. 2012. Digital Methods: Five Challenges. In *Understanding Digital Humanities*, edited by David M. Berry. London: Palgrave MacMillian.
- Scheinfeldt, Tom. 2010. Why Digital Humanities Is "Nice". *Found History*. Accessed February 20, 2017. <http://foundhistory.org/2010/05/why-digital-humanities-is-nice/>
- Scheinfeldt, Tom. 2008. Making It Count: Toward a Third Way. *Found History*. Accessed February 20, 2017. <https://foundhistory.org/2008/10/making-it-count-toward-a-third-way/>
- Schmidt, Benjamin M. 2011. 'Theory First'. *Journal of Digital Humanities* 1 (1). Accessed February 20, 2017. <http://journalofdigitalhumanities.org/1-1/theory-first-by-ben-schmidt/>
- Schreibman, Susan, Laura Mandell, and Stephen Olsen. 2011. Evaluating Digital Scholarship. Introduction. *Profession* 79: 123-201.
- Schreibman, Susan, Ray Siemens, and John Unsworth, eds. 2004. *A Companion to Digital Humanities*. Oxford: Blackwell.
- Sohn-Rethel, Alfred. 1978. *Intellectual and Manual Labour. A Critique of Epistemology*. Atlantic Highlands, NJ: Humanities Press.
- Spiro, Lisa. 2012. Opening up Digital Humanities Education. In *Digital Humanities Pedagogy. Practices, Principles and Politics*, edited by Brett D. Hirsch. Cambridge: OpenBook Publishers.
- Sussman, Gerald, and John A. Lent, eds. 1998. *Global Productions: Labor in the Making of the 'Information Society'*. Thousand Oaks, CA: Sage.
- Svensson, Patrik. 2016. *Big Digital Humanities: Imagining a Meeting Place for the Humanities and the Digital*. Ann Arbor, MI: University of Michigan Press.
- Terras, Melissa. 2011. Peering Inside the Big Tent: Digital Humanities and the Crisis of Inclusion. *Melissa Terras' Blog*. Accessed February 20, 2017. <http://melissaterras.blogspot.com/2011/07/peering-inside-big-tent-digital.html>
- Vee, Annette. 2013. Understanding Computer Programming as a Literacy. *Literacy in Composition Studies* 1 (2): 42-64.
- Weber, Max. 1968. *Economy and Society: An Outline of Interpretive Sociology*. Berkeley, CA: University of California Press.

About the Author

Christophe Magis

Christophe Magis is Lecturer (Maître de conférences) of Communication and Media Studies at Université Paris 8 (France) and a member of the Cemti Laboratory. His research focuses on the critical political economy of the cultural and communication industries and the epistemology of critical theories in communication studies.