Digitized and Digitalized Humanities: Words and Identity

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Abstract

English. This paper analyses two closely related but different concepts, *digitization* and *digitalization*, first discussed in an encyclopedia article by Brennen and Kreiss in 2016. Digital Humanities mainly uses the first term, whereas business and economics tend to use the second to praise the process of the digitalization of society. But *digitalization* was coined as a critical concept in 1971 by Wachal and is sometimes used in post-colonial studies. Consequently, humanist scholars are invited to avoid the "path of least resistance" when using *digitalization*, and to explore its critical potential. The paper concludes by considering the effect of the digitalization perspective and by expressing author's point of view on the issue.

Italiano. Questo articolo analizza due concetti correlati ma differenti fra loro, "digitization" e "digitalization", discussi la prima volta in una voce di enciclopedia da Brennen e Kreiss nel 2016. Nelle scienze umane digitali si utilizza sostanzialmente il primo termine, mentre in economia si tende a utilizzare il secondo per sottolineare il processo di digitalizzazione della società. Ma il termine "digitalization" era stato creato nel 1971 da Wachal come un concetto critico, ed era stato utilizzato in alcuni studi sul post-colonialismo. Di conseguenza, gli studiosi nelle scienze umane sono invitati a evitare di utilizzare "digitalization" in modo triviale, e ad esplorare il suo potenziale critico. L'articolo termina con alcune considerazioni sugli effetti della prospettiva della digitalizzazione, presentando il punto di vista dell'autore.

1 Introduction: Words and Identity in Digital Humanities

As the 2020 AIUCD conference topic underlines, the identity and definition of the Humanities that has met the computing world, is in constant reshaping (Ciotti, 2019)[1]. The English language has acknowledged the important turn from *humanities computing* to *digital humanities* at the beginning of the 21st century (Kirschenbaum, 2010), whereas French-speaking scholarship is wrestling between *humanités numériques* (Berra, 2012; Doueihi, 2014) and *humanités digitales* (LeDeuff, 2016; Cormerais–Gilbert, 2016; Clivaz, 2019). Moreover, new words are often tested to express the intensity of what is at stake: if Jones has chosen the term "eversion" for describing the present state of the digital turn (Jones, 2016), the French thinker Bernard Stiegler focuses on "disruption" (Stiegler, 2016). German and Hebrew link digital humanities naming with the vocabulary of spirit/mind, whereas the outmoded word *humanités* has come back in French through the naming of the *humanités numériques*, recalling the presence of the body (Clivaz, 2017).

Inscribed in this linguistic effervescence, a phenomenon has so far not drawn the attention of the humanist scholarship: the difference between *digitization* and *digitalization*, or between *digitized* and *digitalized* Humanities. The present paper will explore, as far as possible, the emergence of this dualistic vocabulary, inside and outside of digital humanities scholarship, looking for its meanings and implications. It represents only a first overview about the scare definitions and occasional uses of "digitalization", even if the debate between digitization and digitalization can sometimes inform implicitly the discourse, as we will see in Section 4 (Smithies, 2017). Section 2 will first comment similarity and difference between both words, looking for "digitalization" definitions, and its uses. Section 3 discusses in detail the only definition article we have so far debating these two concepts. Section 4 considers more broadly the digitalization perspective and presents the author's point of view on the issue, including its articulation to the AIUCD 2020 topic.

2 Looking for "digitalization" definition and uses

English native speakers would surely ask first if there is really a difference between "digitization" and "digitalization." "Digitalization" does not benefit from its own entry in Wikipedia or in the *Collins Dictionary*

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online.[2] However, the *Oxford English Dictionary* (OED) dates the first use of digitalization as equivalent to digitization in 1959,[3] whereas the medical sense appeared in 1876.[4] OED presents also *digitalization* as meaning "the adoption or increase in use of digital or computer technology by an organization, industry, country, etc."[5] In the Wikipedia entry "digital transformation", a similar definition is given for "digitalization": "unlike digitization, *digitalization* is the 'organizational process' or 'business process' of the technologically-induced change within industries, organizations, markets and branches."[6] A most decisive shift in the sense of a difference between the two words can be seen in the *International Encyclopedia of Communication Theory and Philosophy*, which published an entry on "Digitalization" by J. Scott Brennen and Daniel Kreiss in 2016. They argue in favour of a distinction from "digitization" (Brennen–Kreiss, 2016). This publication is in itself a quite clear signal, according to our cultural and scholarly habits, that "digitalization" exists with its own meanings, since it has been defined in an encyclopedia. As far as I have been able to determine, it is the only article trying to define both concepts and is discussed in detail in Section 3.

As we see, references to digitalization's definition are quite scare. So far, there it is not even possible to do a systematic overview of its theoretical background based in the scholarly literature because it is not discussed, with the exception of the Brennen–Kreiss article. But if we look at its uses, some aspects clearly emerge. "Digitalization" is mainly used in the business and economical world, and very infrequently in digital humanities. For example, according to Jari Collin in a 2015 Finnish volume of collected essays, digitalization refers to the understanding of "the dualistic role of IT in order to make right strategic decisions on IT priorities and on the budget for the coming years. IT should not be seen only as a cost center function anymore!" (Collin, 2015, 30). Digitalization seems to be "one of the major trends changing society and business. Digitalization causes changes for companies due to the adoption of digital technologies in the organization or in the operation environment" (Parvianien et al., 2017, 63).

According to Mäenpää and Korhonen, "from the retail business point of view, the 'digitalization of the consumer' is of essence. People are increasingly able to use digital services and are even beginning to expect them. To a certain extent, this is a generational issue. The younger generations, such as Millennials, are growing up with digitalization and are eagerly in the forefront of adopting new technology and its affordances" (Mäenpää–Korhonen, 2015, 90). In 2018, Toni Ryynäen and Torsti Hyyryläinen, members of the *Helsinki Institute of Sustainability Science* at the *Faculty of Agriculture and Forestry*, published an article seeking to fill the gap between the digitalization process and digital humanities, by focusing on the concern for "new forms of e-commerce, changing consumer roles and the digital virtual consumption" (Ryynäen – Hyyryläinen, 2018, 1). In this process, the role of digital humanities is described in a way that is quite hard to recognize for DHers, at least for those not involved in digital social sciences: "A challenge for digital humanities research is how to outline the most interesting phenomena from the endless pool of consumption activities and practices. Another challenge is how to define a combination of accessible datasets needed for solving the chosen research tasks" (Ryynäen – Hyyryläinen, 2018, 1).

In light of such clear descriptions of what "digitalization" means for business and economy, digital humanities scholarship demonstrates a deafening silence about this notion. The 2004 and 2016 editions of the reference work *Companion to Digital Humanities* do not mention the word. In the established series *Debates in the Digital Humanities*, one finds one occurrence in the five volumes, under the pen of Domenico Fiormonte (2016). As a third example, the collected essays *Text and Genre in Reconstruction: Effects of Digitalization on Ideas, Behaviours, Products and Institutions*, edited by Willard McCarty (2010), can only surprise the reader: indeed, "digitalization" stands in the title, but the word is then totally absent from the volume. When questioned about this discrepancy, McCarty answered that the publisher had requested to have this word in the title. This request has led to a damaging side effect in terms of Google searches: if one searches for "digitalization" and "digital humanities", one gets several book titles that do not contain no mention of this word other than a reference to *Text and Genre*'s title. It is also the case in my 2019 book *Ecritures digitales*.

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[2] Entry "digitization" in Wikipedia: https://en.wikipedia.org/wiki/Digitization; entry "digitalize" in the *Collins Dictionary* online: https://www.collinsdictionary.com/dictionary/english/digitalize. All hyperlinks have been last checked on 30/11/19.

[3] Entry "digitalization n.2", *OED*, https://www.oed.com/view/Entry/242061

[4] Entry "digitalization n.1", *OED*, https://www.oed.com/view/Entry/52616: "the administration of digitalis or any of its constituent cardiac glycosides to a person or animal, esp. in such a way as to achieve and maintain optimum blood levels of the drug. Also: the physiological condition resulting from this".

[5] Entry "digitalization n.2" in the *Oxford English Dictionary* online: https://www.oed.com/view/Entry/24206

[6] Entry "digital transformation" in Wikipedia: https://en.wikipedia.org/wiki/Digital_transformation#Digitization_(of_information)

Digital writing, digital Scriptures: the unique occurrence of "digitalization" occurs in my reference to McCarty's collected essays (Clivaz, 2019).

One can sometimes meet infrequent uses of digitalization in digital humanities, such as a 2013 article by Amelia Sanz. She uses the word to describe Google Books and the Hathi Trust's effect on Spanish literature: "Digital Libraries as Google Books or Hathi Trust include numerous works belonging to our study period among its *digitalized* collections in US universities, because most of these forgotten authors make part of the Spanish diaspora after the Civil War (1936-39) and during the subsequent dictatorship (1939-1975). In fact, European copyright legislation has made Google *digitalize* only works prior to 1870 in Spain, and, unfortunately for Spanish researchers, those works appear to be in 'limited access' due to the existing diffusion/circulation rights, but available in 'full text' mode for researchers located in the US" (Sanz, 2013, n.p.). The two italicized words are the unique occurrences of *digitalization* vocabulary in an article focused on the effects of digitization. When asked about her use of these two words, Sanz answered that it was probably a misuse of language, since she is not a native English speaker.

Usually in digital humanities scholarship, one speaks about "Humanities digitized" (Shaw, 2012)[7], and the mutation to the digital sphere is seen as a pre-step before the processes of interpretation.[8] Uses of digitalization and cognate terms remain rare, like Domenico Fiormonte, who is also a non-native English speaker and the only one to use *digitalization* in the series *Debates in Digital Humanities*: "In the last ten years, the extended colonization, both material and symbolical, of digital technologies has completely overwhelmed the research and educational world. Digitalization has become not only a vogue or an imperative, but a normality. In this sort of 'gold rush', the digital humanities perhaps have been losing their original openness and revolutionary potential" (Fiormonte, 2016, n.p.). Fiormonte compares digitalization to a colonization process: if there is some consciousness of the digitalization vocabulary in humanities, it can be indeed found in research about cultural diversity and colonialism, such as in a 2007 article by Maja van der Velden, "Invisibility and the Ethics of the Digitalization: Designing so as not to Hurt Others."

Van der Velden studies "the designs of Indymedia, an Internet-based alternative media network, and TAMI, an Aboriginal database, [...] informed by the confrontations over different ways of knowing" (2007, 81). She points to the fact that, "if we understand knowledge not as a commodity but as a process of knowing, something produced socially, we must ask about the nature of digitalization itself. As the Aboriginal elders say, 'Things are not real without their story'" (2007, 82). She documents in this way two examples of non-Western digital projects, in which the diversity of the source codes and standards has led to recurrent negotiations: "the confrontations over issues of privacy and control resulted in different ways of organizing access and information management" (2007, 89). Van der Velden's article allows one to understand, from a humanist point of view, what is at stake in the concept of *digitalization*, a perspective that the next section develops. But it should be underlined that, even in this article pointing to cultural and digital control issues, *digitalization* is not discussed as such. The apparent lack of awareness about this binomial vocabulary and its implication for DH scholarly literature appears to be a real blind spot that section 4 considers.

3 Claiming a Critical Use of *Digitalization* in Humanities

In their overview article, Brennen and Kreiss give a general definition of "digitalization" similar to the one presented in Section 2: "We [...] define digitization as the material process of converting analog streams of information into digital bits. In contrast, we refer to digitalization as the way many domains of social life are restructured around digital communication and media infrastructures" (Brennen–Kreiss, 2016, 1). They usefully remind us that "digitization is a process that has both symbolic and material dimensions" (2016, 2), and that "analog and digital media, [...] all forms of mediation necessarily interpret the world" (2016, 3). The authors also consider that "the first contemporary use of the term 'digitalization' in conjunction with computerization appeared in a 1971 essay first published in the North American Review. In it, Robert Wachal discusses the social implications of the 'digitalization of society' in the context of considering objections to, and the potential for, computer-assisted humanities research. From this beginning, writing about digitalization has grown into a massive literature" (2016, 5). The reference to Wachal's article is a very interesting one, and it deserves more attention than the co-authors devote to it. Moreover, they omit any reference to Maja van der Velden's article or to similar approaches in Brennen and Kreiss's article. The "winners" of their digitalization

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[7] One can also see uses of *digitalization* in the humanities in archaeology, notably in conjunction with 3D discussion (Ercek –Viviers –Warzée, 2009).

[8] See Earhart – Taylor (2016): "Our *White Violence, Black Resistance* project merges foundational digital humanities approaches with issues of social justice by engaging students and the community in digitizing and interpreting historical moments of racial conflicts."

definition are scholars from the vein of Manuel Castells, who argues that "technology is society, and society cannot be understood or represented without its technological tools" (Brennen–Kreiss, 2016, 5).

To get a deeper understanding of the critical potential of *digitalization*, it is worth reading Wachal's 1971 article. He uses *digitalization* in just one sentence: "The humanist's fears are not entirely without foundation, and in any case, as a humane man he naturally fears the digitalization of the society. He doesn't like to be computed. He doesn't want to be randomly fingered by a credit card company computer" (1971, 30). The entire article is an ironic confrontation between the habits of a humanist scholar and what a programmer and a computer could do for humanities. As a computer programmer teacher himself, Wachal remembers the term coined by Theodor Nelson, "cybercrud": "putting things over on people [by] saying using computers. When you consider that this includes everything from intimidation ('Because we are using automatic computers, it is necessary to assign common expiration dates to all subscriptions') to mal implementation ('You're going to have to shorten your name - it doesn't fit in to the computer'), it may be that cybercrud is one of the most important activities of the computer field" (1971, 30). In other words, computer scholars have a clear awareness about their world, as Nelson and Wachal after him demonstrate. After this *captatio benevolentiae*, Wachal raises what is for him the main issue with the humanist point of view on computing: "Dare we hope that the day has come when humanists will begin asking some new questions?" (1971, 33), referring also to artificial intelligence (1971, 31). His "personal view", as announced in the article title, is an open call that is still worth humanist scholars' attention.

The complex elements of the discussion of the digitization/digitized *vs* digitalization/digitalized divide indicates that it is surely time for DHers to pay attention to this binomial expression, so successfully deployed in business or economy that a publisher can get it in a title of collected essays that does not contain the word *digitalization* at all. It is time to form an understanding of *digitalization* that still denounces "cybercrud" when needed, or helps us to pay attention to "the confrontations over issues of privacy and control resulted in different ways of organizing access and information management" (van der Velden, 2007, 89). To express it in an electronic vocabulary, Brennen and Kreiss present a "path of least resistance" to the definition of digitalization, according to the path describing the third potential state of an electronic circuit (open, closed, or not working), because electricity follows the "path of least resistance."[9] But it is a core skill of the humanities to renounce the paths of least resistance and to wrestle with words, concepts, and realities. In that perspective, the last Section will develop some tracks to further the debate.

4 The effect of the "digitalization" perspective

The binomial expression "digitization" *versus* "digitalization" enters in the international debate through the English language. Such a distinction does not exist in French, Italian, or German, for example. But the inquiry of this article demonstrates that it this concept is worthy of exploration in an effort to grasp what is at stake in an explicit way in the English language. It represents surely one further argument in favor of a multilingual approach to digital epistemology, like the one developed in *Digital writing, digital Scriptures* (Clivaz, 2019).

I firstly underline how striking it is that even in the few occurrences where humanist scholars consciously use the term "digitalization" (van der Velden, Fiormonte), it is not discussed *per se*: a blind point exists in the scholarly discussion apart of Brennen and Kreiss's article. After all, the first use of "digitalization" in relation to the computer sphere was by a programmer (Wachal, 1971), but nowadays its use in critical discussion is mainly found under the pen of scholars outside of humanities who make claims about the "essence" of "the 'digitalization of the consumer'" (Mäenpää–Korhonen, 2015, 90; quoted in Section 2). In light of this consumerist perspective, DH scholars are generally confident in the traditional critical impact of their methodologies and knowledge. Alan Liu, for example, writes that "the digital humanities serve as a shadow play for a future form of the humanities that wishes to include what contemporary society values about the digital without losing its soul to other domains of knowledge work that have gone digital to stake their claim to that society" (2013, 410). In the same line, the HERA 2017 call hopes that the humanities, when digitized, will be able "to deepen the theoretical and empirical cultural understanding of public spaces in a European context."[10]

But it could secondly be argued that the blind point of the absent discussion about digitization/digitalization demonstrates an overconfidence of the digital humanities in its capacity to not lose the soul of the humanities in digital networks. Other voices are indeed more sensitive to the limitations imposed on humanities research

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[9] See "Path of Leaf Resistance", *Wikipedia*, https://en.m.wikipedia.org/wiki/Path_of_least_resistance
[10] See "HERA Public Spaces", 31.08.17, http://heranet.info/2017/08/31/hera-launches-its-fourth-joint-research-programme-public-spaces/

by digital constraints, as we have seen with Maja van der Velden: even if she uses the word "digitalization" without discussing it, her article clearly points to digital control issues in the practice of building a database or a virtual research environment. From a more general and theoretical point of view, James Smithies strongly underlines in his book *The Digital Humanities and the Digital Modern* the same issues, even if the word *digitalization* is totally absent in it. He suggests that "our digital infrastructure […] has grown opaque and has extended into areas well outside scholarly or even governmental control" (2017, 11). His discourse becomes overtly political when he affirms the existence of a "point of entanglement between the humanities and neoliberalism, implicating digital humanists and their critics in equal measure" (2017, 218).

We are probably reaching here the main root of the silence about the digitization/digitalization challenge in DH debates: this binomial expression points to the political dimension of the digital revolution in humanities, to its economic and institutional implications, something that we prefer to let aside, consciously or unconsciously. This fear is also described by Wachal: "The humanist's fears are not entirely without foundation, and in any case, as a humane man he naturally fears the digitalization of the society" (1971, 30; quoted in Section 3). Listening to Wachal, and almost fifty years later to Smithies, can begin to lead us beyond the "path of leaf resistance" of Brennen and Kreiss. We should consider digitalization rather as the top of a mountain: it can be reached only through the *via ferrata* of the debates about cultural and multilingual diversity, about multiple source codes and standards, a multiplicity that preserves, at the end, diversity in human-computing knowledge productions.

Moreover, we are probably reaching right now the start of the DH awareness of this linguistic debate. As I end this article, I have opened the debate in the list Humanist Discussion Group and Simon Tanner has signaled his interest in the point, referring to Brennen and Kreiss' definition: "I have found the difference to be significant enough to seek to define it for my current book and in the past it has been a source of confusion or conflation that has not been helpful. I make it very clear to our students in the Masters of Digital Humanities or the MA Digital Asset and Media Management that they should not use the interchangeably" (Tanner, 2019).

Third, since the binomial expression digitization/digitalization is a vehicle for its own impact and meaning within the DH epistemology, is it possible to tie these concepts to the general challenge raised by the AIUCD 2020 call for papers? Notably, this discussion raises the following questions: "is it still necessary to talk about (and make) a distinction between 'traditional' humanists and 'digital' humanists? Is the term 'Digital Humanities' still appropriate or should it be replaced with 'Computational Humanities' or 'Humanities Computing'? Is the computational dimension of the research projects typically presented at AIUCD conferences that methodologically distinctive?"[11] At the root of these problems stands of course an important debate in Italian speaking DH, present in the name itself of the national DH organization, the AIUCD. This name mentions "Humanities Computing" (*informatica umanistica*) and "digital culture" (*cultura digitale*): *AIUCD - Associazione per l'Informatica Umanistica e la Cultura Digitale*.[12] But beyond this specific Italian perspective, the importance of collaboration between DHers and other humanist scholars concerns all of us.

The dialectic between *Humanities Computing* and *Digital Humanities* will in all cases remain in the historical memory of the DH development. But I am personally not convinced that a "step back" in the form of a return to *Humanities Computing*, motivated by a desire to keep all the humanists together under the banner of the *informatica umanistica*, is viable. Why? When the *Harvard Magazine* published in 2012 one of its first articles about the digital humanities, it was entitled "Humanities Digitized" (Shaw, 2012). It has always been meaningful for me to think in that direction. As I have argued elsewhere in detail, we could "begin to speak about the *digitized humanities*, or simply about *humanities* again, instead of *digital humanities*. Such an evolution might occur, if one looks at the evolution of the expression 'digital computer' which was in common usage during the fifties, but it has been now replaced by the single latter word 'computer' (Williams, 1984, 310; Dennhardt, 2016). When humanities finally become almost entirely digitized, perhaps it is safe to bet that we will once again speak simply about *humanities* in English or about *humanités* in French, thus making this outmoded word again meaningful through the process of cultural digitization" (Clivaz, 2019, 85–86).

According to this perspective, the debate between "humanities digitized" or "humanities digitalized", with all its cultural, economic, material, institutional and political dimensions, could signal a third step after *Humanities Computing* and *Digital Humanities*. This third step would stand at the crossroads where all humanists could meet up again, in an academic world definitively digitized, but hopefully not totally digitalized. It is up to all of us to decide if, in the third millennium, Humanities will be digitized or digitalized.

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[11]See "Convegno annuale dell'Associazione per l'Informatica Umanistica e la Cultura Digitale. Call for papers", https://aiucd2020.unicatt.it/aiucd-call-for-papers-1683.
[12] See AIUCD, www.aiucd.it.

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