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Digital Autoethnography & Connected Intelligence: Two Qualitative Practice-Based Teaching Methods for the Digital Humanities

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Abstract

In higher education we witness a unique conjuncture: on the one hand, students who attend academic courses are the first generation to have fully grown in a digitalized world; on the other hand, teachers, while having grown and studied in a still largely analogue world, have witnessed the evolution of today's techno-society since its infancy. By connecting the field of the Digital Humanities with education, this article discusses the conception, design and results of two practice-based teaching experiences which were aimed at exploring the tensions embedded in our daily use of digital technologies, as well as in today's techno-society as a whole. The first one is a "digital autoethnography" developed at the City University of Hong Kong; the second one refers to the course "Anthropology of Communication" – co-delivered at Politecnico of Milan – which adopted a "connected intelligence" approach to urge students to reflect on tomorrow's techno-society in a collaborative way. While the first experience was chiefly a self-reflexive study on the impact of social media on the individual, the second one mapped the main criticalities of techno-society as a whole, according to seven macro-themes, and asked students to elaborate possible solutions. Both courses considered students as active learners/users, insofar as they at the forefront of today digital revolution, but also the subjects most in need of critical tools to face it.

Oggi, nell'università, assistiamo a una congiuntura unica: da un lato, gli studenti che frequentano i corsi accademici sono la prima generazione ad essere completamente cresciuta in un mondo digitalizzato; dall'altro lato, i docenti, pur essendo cresciuti e aver studiato in un mondo ancora in gran parte analogico, hanno assistito all'evoluzione della tecno-società odierna sin dalla sua infanzia. Promuovendo un dialogo tra le Digital Humanities e la didattica (accademica), questo articolo discute la concezione, progettazione e i risultati di due esperienze di insegnamento practice-based mirate a esplorare le tensioni implicite nel nostro uso quotidiano delle tecnologie digitali, nonché nella tecno-società odierna nel suo insieme. La

prima esperienza è una "autoetnografia digitale" sviluppata presso la City University di Hong Kong; la seconda è collegata al corso "Anthropology of Communication" – tenuto al Politecnico di Milano – nella quale abbiamo adottato l'approccio dell'"intelligenza connessa" per stimolare gli studenti a riflettere collaborativamente sulla tecno-società di domani. Mentre la prima esperienza è stata principalmente uno studio autoriflessivo sull'impatto dei social media sull'individuo, la seconda ha mappato le principali criticità della nostra tecno-società, a partire da sette macro-temi, al fine di elaborare possibili soluzioni. Entrambi i corsi considerano gli studenti come utenti attivi, giacché sono in prima linea nell'uso delle nuove tecnologie, ma sono anche coloro che necessitano maggiormente di un solido bagaglio critico per usarle/svilupparle al meglio.

Introduction

This paper explores, through a qualitative approach, the field of the Digital Humanities – or better, its "outer ring", as Fabio Ciotti put it during his keynote lecture at the 2019 AUCID conference – in connection with education and teaching practices. Notably, it does so by maintaining a critical standpoint (in the broad sense of the term) towards the impact that digital technologies are having on today's teachers and students. To be sure, here "digital technologies" loosely refers to both Web services – such as apps, platforms, social networks (SNSs) – as well as hardware devices, especially mobile phones. At the same time, it is, above all, higher education to be at the centre of the present discussion, although it would certainly be useful to promote a debate intersecting teaching, learning and digital technologies which spreads across all levels of education. As one last addendum, it is necessary to specify that the focus of this article is not on the (impact of the) use of digital technologies within a teaching-learning context. On this topic, literature is already consistent, involving all levels of education, as well as a variety of subjects ([32]; [5]; [25]; [18]). By contrast, this article makes digital technologies the subject of attention, highlighting the importance of developing new digital tech literacies, able to bring to the surface how digital technologies affect the individual and our daily life.

A practice-based orientation towards the teaching of new digital tech literacies – of which we are increasingly in need, given where society is heading – is outlined. Concrete examples concerning two courses developed by the author, in conjunction with colleagues in Italy and abroad, will be provided. Firstly, the discussion will dwell upon the design and pedagogical goals of these courses; secondly, the research insights coming from these experiences will be presented; lastly, future developments and research lines will be sketched. As a side note, it is important to stress that, although these two courses are reviewed together, their projectuality and objectives are different; as a consequence, their results, as we will see, cannot be comparable.

Crucial Times in Higher Education

If we take as a starting point for the present discussion the mass diffusion of the Web in the mid-1990s (alongside that of mobile phones, although initially they were not smartphones yet), we realize that by now the generation of digital natives born out of that milieu has reached the stage of undergraduate or postgraduate education. This means that these students have grown up, at least since their first cycle in schools, in an increasingly digitalized world, and certainly one in which digital technologies have had a progressively radical impact on daily life. Education, however, has often been reactive, rather than proactive, towards this paradigmatic shift: most of the times, digital technologies have been implemented in curricula of primary and secondary schools as "mere" tools of support to otherwise unchanged teaching practices, rather than as technologies with unique features to be exploited ([11]). It is only over the last five-ten years that this power relation has been rebalanced, with technology gradually taking the lead in a process of reconceptualization of teaching practices ([29]).

This rebalancing, after all, has become a necessity by now, insofar as digital natives represent the pulling force of digital technology's (r)evolution. In fact, they are both the main target (as consumers) of tech companies and services as well as the main producers of digital content, providing an epitomizing example of what is meant by the term "produsers" (see, among others, [20]; [44]). According to recent statistics ([30]), people aged between 18 and 29 years old are those using smartphones the most – 96% – while the percentage decreases to 79% for 50 to 64 year-old people. Concerning social media, surveys ([31]) show that users from 18 to 29 years old are the most active. If we look at Facebook and Instagram – two of the most popular social media platforms – we see that the percentage is respectively at 79% and 67%; at the same time, these two data drop to 68% and 23% in the users population aged 50-64. On a similar note, it is interesting to remark that user-generated content (UGC) is mainly produced by Millennials, who contribute to over the 70% of all UGC found online ([40]).

In contrast to this picture, today's teachers and scholars are still, by and large, members of earlier generations, i.e. generations that, to various degrees, have transited from an analogue to a digital society. In Italy, for instance, the average age of tenure-track professors is 59; the age of associated professors is 52, while researchers are on average 47 years old ([43]). This means that academics were largely born and educated within a radically different socio-technological framework from the one we live in today; most importantly, the underpinning pedagogical vision of this framework privileged written words over moving images, syntagmatic step-by-step approaches to knowledge over paradigmatic hypertextual ones, and individual reading and memorization over interactional learning practices ([9]; [16]). Under these conditions, teachers represent a cornerstone within today's education system for motives that go well beyond mere pedagogical issues and point, rather, to their generational bridging role within the class. Indeed, teachers literally keep one foot in an epoch that predates the digital revolution, while the other foot is now solidly grounded on today's technologized society, which they have seen growing since its birth and of which they can pinpoint, for this very reason, both potentialities and shortcomings. In other words, today's teachers are the public owners of a "knowledge heritage"

about technology that is unique – due to demographical circumstances – and which is now crucial to pass on to younger generations, in order for them to become aware of the roots and evolution of that technological shift which, to their eyes, appears as nothing more than a *conditio de facto*.

The reason for reinstating what is maybe obvious, although sometimes overlooked – i.e. the encounter in class of two generations that have radically different approaches towards digital technologies – is crucial for highlighting the potential fruitfulness that can spring out of the synergy between today's teachers and students in university. To be sure, this fruitfulness also comes with a responsibility, i.e. the need – now more than ever – to rethink teaching and learning as really interactive and mutually beneficial processes for all actors involved. Students are certainly the subjects who more easily enter in contact and familiarize with (new) digital technologies, precisely because these are conceived for them in the first place. And yet, students largely lack – as one of the two teaching experiences discussed below will show – the tools for critically engaging with and using these technologies. Teachers, by contrast, can help students to both put things into perspective – e.g. to investigate the archaeology of new media – and develop practical and critical skills for de-commoditizing technology and make a wiser use of it. At the same time, it is through constant dialogue with the students that teachers can remain abreast of technological innovation, which, for its very nature, tend to reach older generations only when it has already consolidated. In other words, the class becomes a space of negotiation for fruitfully engaging with what Ragnedda ([33]) has called "second digital divide", meaning by that the needed competences and skills for an effective use of technology (rather than the mere access, which is described as "first digital divide"). Above all, it is important to stress that the class remains the privileged environment where this encounter and exchange can mature at best. This is so because it is only through the collective sharing of the same teaching-learning horizon that knowledge transfer can occur most productively. On this point, studies ([25]) show that blended courses – i.e. courses that combine in-class and distant, technologically-mediated learning – are those leading to the best results for students; and yet, it is only when the in-class component is in the equation that we witness, in fact, an effective knowledge transfer in the long run. The risk with distant learning courses fully conceived as mediated by technology – which is a consequence of the evolution of digital platforms – is to witness what Van Dijck, Poell and de Waal ([45]) call "learnification", that is, the fragmentation and parcelling of the learning process into self-contained units, which eventually miss to entice an effective acquisition. Building on Stephen Krashen's ([22]) distinction between "learning" and "acquisition", it could be said that this process of fragmentation and parcelling tend to be apprehended on a superficial level, rather than acquired in depth, precisely because technology still functions as a barrier or, at best, as a form of mediation of the learning process, to which a shared collective dimension has been subtracted. Here, the distinction made by German philosopher Walter Benjamin ([2]) between two different kinds of experience – "Erfahrung" and "Erlebnis" – might be of help to clarify the point. According to Benjamin, "Erfahrung" is a collective, qualitative experience that leads to forms of shared reflection, knowledge, and understanding across individuals, while "Erlebnis" is a kind of immediate experience that is focused on the moment and is lived through momentarily by the single subject. According to Benjamin, the passing from oral storytelling to written storytelling and further down to the

technologized information conveyed by mass media has produced a decay of "Erfahrung" in favour of a blossoming of parcelled and individually lived experiences as Erlebnisse. The latest occurrence along this line – although Benjamin could not foresee that – might well be considered the kind of information and socialising practices fuelled by today's digital technologies.

Such premises are crucial to pave the way to the present discussion. In fact, they highlight the need, at all levels of education, to foster collaboratively shaped (teacher-students) new digital tech literacies which consider digital devices not only as tools, but as the subject of a critical reflection to be performed also, but not exclusively, through them, in the context of a broader discussion concerning the individual, technology and society as a whole. In this respect, digital tech literacies are framed within the fields of philosophy of technology (e.g. [14]), critical media studies ([20]) and digital cultures ([39]) and their coming to being has to be regarded more as a synergetic ongoing praxis involving all actors, than as a set of guidelines for the understanding of what technology can do for education and pedagogical purposes.

Digital Autoethnography & Connected Intelligence

The theoretical-critical premises outlined above were at the core of two practice-based teaching experiences aimed at exploring, in innovative ways, the tensions embedded in our daily use of social networks and in today's techno-society. Overall, the shared common goal of these experiences was to enhance students *and* teachers awareness about the impact that digital technologies can have on the single individual, as well as on society in its entirety, thus stressing the relevance that digital tech literacies play (and will increasingly play) for all actors involved in the fostering of tomorrow's society, from scholars to students to professionals. In order to do so, such technologies were put at the centre of two academic courses and approached, at once, as subjects and objects of a critical reflection connecting both teachers and students. In this way, the teaching-learning experience really allowed for the emergence of collaboratively built digital tech literacies. As we will see, this approach led, in one case, to reshape students' attitude towards social media use; and, in the other case, to the design of projects meant to concretely tackle the tensions implied by today's technologization of society. The following section is dedicated to the description of the conception and design of both experiences, after which a discussion on their results will follow. This will lead to stress strengths and weaknesses of both experiences as potentially replicable courses aimed at fostering digital tech literacies at university level.

Digital Autoethnography

The first experience was a course in new digital literacies – titled "Facebook and Autobiography" – that was delivered at the City University of Hong Kong in the fall semester of 2016 by myself together with prof. Roberto Simanowski. The goal of the course was to

explore the practices of self-representation on social networks (i.e. Facebook and Instagram[1]) and assess how these differ from traditional forms of written self-representation, such as traditional diaries. Most importantly, we aimed to do so by putting the students enrolled in the course at the centre of the analysis and the learning experience so that they could capitalise on it in terms of critical insights about technological subjugation.

Overall, 38 students were involved. Methodologically speaking, beyond the delivery of typical lectures focused on autobiographic writing across old and new media (e.g. [15]; [21]; [27]; [38]), we elaborated a "digital autoethnography", defined as the study of "the discourses that emerge at the intersection of online/offline and the offline context through which the online worlds are entered" ([36]). In fact, the digital autoethnography consisted of a double-sided analysis. On the one hand, as researchers, we entered Facebook and Instagram via the creation of profiles that students befriended, on a voluntary basis, in order for us to monitor their activities over a period of five weeks; on the other hand, we instructed our participants to self-reflect upon their SNSs use through a number of assignments, whose assessment was part of the final evaluation for the course. The assignments were designed, together with three other colleagues from Germany, during a workshop held at the University of Wuppertal in July 2016 (thus prior to the beginning of the semester).

To begin with, students were asked to answer a first round of questions aimed at providing us with a general understanding of their use of Facebook. Questions were: a) "Why do you use Facebook?"; b) "To what extent would you say that your profile reflect yourself?"; c) "What is a diary for you?"; d) "Does Facebook work as a diary for you? (Why or why not)"; e) "What do you look up on Facebook?" Students had to write down the answers and they could elaborate on them as freely as they wished.

Secondly, they had to parse all of their Facebook posts over five weeks and tag them by using a set of previously elaborated tags. We developed four categories of tags which respectively referred to a) the type of posts' content; b) the authorial stance responsible for the posts and its relation to the user's self-representation; c) the mood of the posts; d) if/how posts had a time-related connotation or interrelation with other posts on the user's Timeline. Specifically, the first category was inspired by Roman Jakobson's ([19]) communication functions. Participants were instructed that posts would have a "referential function" whenever the Facebook's user, or one of his/her friends, geolocated themselves or tagged other friends; posts (and comments) bore an "emotive function" when they overtly expressed the user's emotion or state of mind; posts (and comments) had a "phatic function" when they were meant to simply keep in contact with friends (this function comprised emoticons, bare expressions of agreement/disagreement, likes and similar reactions). The second category of tags moved along the Self-Other axis: we asked participants, on the one hand, to identify if they had published the post themselves ("self-authored"), or if this activity had been outsourced ("other-authored", further disentangled as "shared by user", "shared by other friends", or "frictionless sharing" by external apps); on the other hand, we wanted to know whether the content of the post directly referred

1 Initially, our focus was solely on Facebook, as this is the most widely used social network. Then, through in-class debates, we realized the necessity to also include Instagram into the picture, as this social network is increasingly popular especially among young adults.

to the user ("self-related") or to a different topic/issue ("other-related", such as news, commercials, entertaining content, etc.). The third category addressed the mood of the posts: "euphoric" (positive content), "dysphoric" (negative content), or "neutral". Under the fourth category fell those tags that dealt with time. In fact, we were interested in exploring if/how posts connected to each other along one's Timeline, as well as in those occurrences where a single post contained a "small story" within itself. From here we defined three tags: "temporal", which signalled the centrality of time (either as a single moment or a duration) with respect to the action/event described in one or several posts (e.g. journeys, anniversaries, timeframe of the semester, etc.); "hermeneutic", in which posts (or comments) displayed an effective process of understanding among users (it is the case of posts and comments that contain questions and answers); "cause-effect", when posts on the Timeline were linked by a clear cause-effect relation (e.g. when a post is published as a critique or in support of precedent posts or comments). Since, in practice, these tags overlap and can be co-present, we instructed students that each post could well be labelled with more than one tag belonging to the same category.

Thirdly, alongside the tagging of the posts – which we also observed and captured with screenshots – we asked the participants to keep a written diary in which they jotted down, on a weekly basis, reflections about their SNSs diet and all their activities on Facebook and Instagram, from posting, to sharing and liking, to commenting. The goal, in this regard, was to let participants digest their daily SNSs use and prompt a "distanced" reflection – via the traditional act of writing – which could trigger a retrospective assessment of the users' SNSs activities.

Lastly, because the befriending of our avatars was on a voluntary basis, a distinction was made. Those students who did befriend our avatars – thus allowing us to closely monitor their activity – had to answer at the end of the five weeks a second round of questions that were tailored on their specific Timelines and aimed at understanding the underpinning reasons of their SNSs posting. The students who opted for taking part in the experience but not revealing their own profiles to us were required to write a final essay which reflected upon the whole experience of having kept a written diary alongside their daily SNSs use. Eventually, two groups were constituted: group A (16 students) submitted a diary, the tagging, and a final essay. Group B (22 students) – those who befriended us – submitted a diary, the tagging, and answered a second round of questions at the end of the five-week survey period.

By comparing the insights derived from our monitoring of SNSs and the assignments of the students it was possible to better understand how participants represent themselves on SNSs (indeed, a fragmented representation across different media platforms, as we will see) and, most importantly, to sharpen the students' awareness concerning their online self-projection, which is, in fact, an almost unperceived drowning, rather than a conscious and controlled exposure. In this respect, the experience did bring to the surface the embedded tensions involved in the technological subjugation to which individuals are exposed when using SNSs.

Connected Intelligence

The second teaching experience refers to the course "Anthropology of Communication" which I co-delivered during the 2018 fall semester together with prof. Derrick de Kerckhove at Politecnico of Milan. By addressing seven macro-themes – ethics, education, ecology, politics, economy, urbanism, and technology – the aim of the course was to map the status of today's techno-society and provide students with new critical insights and tools for consciously reflecting upon its evolution for eventually elaborating possible alternatives. In order to do so, the 54 students enrolled in the course (curriculum in "Design of Communication") were put at the centre of the learning experience, being aware that they are, indeed, the pulling force of today's techno-society and the designers of tomorrow's. In fact, the overreaching goal of the course was to make students conceive and design a technologically sustainable village, intended as a community space – of the dimension of a neighbourhood or a small city – in which technology was at once tool and framework of the citizens' daily life, on the wave of Martin Heidegger's ([17]) well known idea that technology is instrumental to the individual but always, inevitably, also "enframing" him/her. By "technologically sustainable" we meant a village in which technologically delivered services were free to access, fair in their algorithmic functioning (i.e. unbiased, see discourses on algorithmic and data justice: e.g. [10]; [26]; [42]; [34]) and respectful of privacy (e.g. private data ownership, or also the possibility of withdrawing from the use of technology, without losing access to services and rights; see discussion on the ethical boundaries of the digitalized society, e.g. [14]; [13]). More concretely, the course was inspired by the then recent news[2] of Google's goal to plan and build a fully smart neighbourhood in an area of the city of Toronto. Given the corporate-driven conditions behind Google's project – which led to harsh critiques from various actors both within and outside of the project[3] – our course also came to have a meta-political relevance, especially with regard to the repurposing of technology as a public utility. Hence, while we, as teachers, provided students with recent evidence of what has been called "surveillance capitalism" ([46]), the project aimed – at a broader level – to confront students with the need to rethink the relation between technology, individuals and collectivity, renewing the debate on what it means to acquire (and put to use) tech competences.

Methodologically, apart from traditional lectures focused on various topics revolving around critical data studies ([6]), digital cultures ([7]; [12]; [39]), transhumanism ([37]) and digital methods (Rogers 2013), as teachers we provided the conceptual framework of the course, which took the form of a wiki cloud of 54 keywords (Figure 1) that helped students navigate today's techno-society (examples of keywords are: "participatory democracy", "datacracy", "digital twins", "deep learning", "smart city", "social credit", "transparency", "net neutrality", "big data", "algorithmethics"). For each keyword a short definition was given, together with a couple of references for further exploring the concept, as well as links to its most closely related keywords. Beyond this initial setting, we relied upon a "connected intelligence" approach for the development of the course, which meant to leave students autonomously manage their

2 https://www.citylab.com/solutions/2019/06/alphabet-sidewalk-labs-toronto-quayside-smartcity-google/592453/

3 https://www.bbc.com/news/technology-47815344

research work (albeit supervised). Such approach was articulated on three different and interconnected levels. Initially, we asked students to pick one keyword and research upon it by expanding its definition and the reference list. In so doing, each student became an expert of his/her own keyword. Subsequently, students gathered in groups of three to four (coordinated by us in order to avoid the formation of too big groups) depending on the similarities among the owned keywords and the researches conducted individually. As part of this second stage we asked students, in groups, to deliver weekly in-class presentations that highlighted the interrelation across the three/four keywords, according to one of the seven macro-themes identified at the beginning of the course. So, for instance, we had the students focusing on "big data", "algorithm" and "blockchain" working together under the macro-theme of technology insofar as their individual researches led them to explore the technical/operative side of the keywords. Thirdly, over the last three weeks of the course, students clustered in seven bigger groups composed of six to nine members, always following the affiliation of their keywords to one of the macro-themes. This enlarged grouping allowed a cross-fertilization of ideas based upon the research conducted up to that stage. In fact, the principle at the basis of the "connected intelligence" approach – differently from Pierre Lévy's ([23]) idea of "intelligence collective" – is to favour innovation through collaboration and sharing. As a matter of fact, "connected intelligence" is neither "owned" by the single individuals, nor it is simply the sum of the link connecting them, rather; it is the outcome/surplus that derives from such rhizomatous connectivity ([8]). Eventually, the objective for each macro-group was to elaborate a project that either outlined the conception of a product or service that addressed one key issue of the afferent macro-theme – e.g. the unwilling circulation of private data on digital platforms, tackled by the technology group – or defined a manual of good practices for the design/use of technology (as it was the case with the ethics macro-group, whose work remained inevitably on a more conceptual level). In so doing, not only students became more aware of the criticalities of technological innovation, but also learnt to think collaboratively in view of possible solutions for making tomorrow's techno-society (more) sustainable.

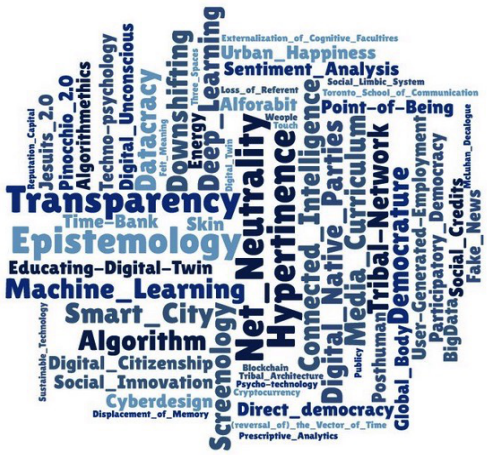

Figure 1: The wiki cloud of keywords. The font size was randomly assigned.

Results

In the following section the main findings of the teaching experiences are presented and discussed in light of the debate on the use of digital technologies in/for today's techno-society, as well as in connection with an assessment of the achieved results for the enhancement of digital tech literacies and tech-related awareness in both students and teachers. In the last part of the article the main limitations of these experiences and possible future developments will be addressed.

Digital Autoethnography

The teaching experience in Hong Kong provided valuable insights in two respects (see also [4]): 1) how young adults choose and use SNSs for self-representation; 2) the (often surreptitious) impact that SNSs have on users' cognitive and social self-perception.

Concerning the first point, in her work on small life stories on Facebook, Ruth Page ([28]: 410) notes that, despite the fact that updates are "self-contained units rather than the bricks of an ongoing narrative", it is still possible for readers to "fill the gaps" between statuses and reconstruct small stories about the user. By contrast, we highlighted an increasing difficulty in identifying a coherent self-representation of the user on Facebook. One main explanation for our diverging conclusion has likely to do with the renewed medial and technological affordances of the platform. When Page conducted her study, Facebook had not yet introduced the Timeline; now, as also noted by McNeill ([24]) a few years later, the platform has completely changed its design and, consequently, the use its users make of it. First of all, we witnessed a rather limited frequency of posting. We reported a total of 378 posts, which means an average of 17.1 posts/user over five weeks, i.e. a bare 3.4 posts/user per week (in line with the tendency of young adults to shift towards the use of Instagram and also Snapchat). Moreover, of these posts the majority (8.1 posts/user) were tagged as "phatic", thus reasserting the primary function of "keeping in contact" rather than providing insightful information about one's own life (6.8 posts/user were tagged as "referential", 5.2 as "time-related", and 4.8 posts/user as "emotive"). The phatic dimension of Facebook's communication appears more vividly in relation to comments: out of a total of 678 comments reported, 420 simply consisted of emoticons or phatic expressions. Secondly, we noted the tendency to post or share content that was "other-related" and "other-authored" – such as news, entertaining videos, or advertisements – rather than "self-related" and "self-authored", that is, produced by the users and directly pertaining to their lives. In fact, taken individually, the tag "posted by user" is the one that recurs slightly more often than the other two: 6.5 posts/user against 5.5 ("shared by others") and 4.8 ("shared by user"). And yet, as soon as we add up all posts that are not authored by the Timeline's owner ("shared by user" and "shared by others") they amount to almost two thirds of the total. This means that, for the greatest part, the Timelines of our participants are already an outsourced projection of them; one that produces a sort of depersonification of their representation and perception (it is in this respect that Franco Berardi ([3]: 21) warns against the reduction, brought about by technology, of the uniqueness of the subject to "a set of components, or a format"). In fact, the gradual withdrawal of users from

Facebook – which is considered, more radically than Instagram and Snapchat, as a public space rather than a diary, according to the majority (31) of our participants – is, at once, cause and effect of the platform's shift from being user-focused to functioning as a news-aggregator (with all the related issues concerning the control of fake news and publishers' copyrights). This finding can be also derived from the replies of our students to the first round of questions. In particular, to the question "What do you look up on Facebook?" 85% of the students (32) responded, "news," among whom twenty-six coupled "news" with "entertaining stuff," highlighting the extent to which "hard news" and "entertaining content" are perceived as overlapping.

Moreover, from the participants' essays and replies to the second round of questions we realized that for our students Facebook constitutes just one platform of a more conspicuous SNSs diet. Overall, our participants claimed to post on Facebook only very relevant life events or episodes of public interest, delegating the bulk of social interactions to other SNSs, namely Instagram and Snapchat. More precisely, Snapchat is where users tend to be more authentic and unreflexive, Facebook is where they choose to present a strongly and positively crafted self, and Instagram works as an in-between semi-private form of photographic diary. These are the words of a student: "I use Snapchat almost on a daily basis whereas my Instagram posts depends on when I go out […] so I would post at least once or twice every week in Instagram, whereas I have almost stopped using Facebook". This means that, across the three platforms, there is a quantitative narrowing down as well as qualitative discrepancies concerning what is being posted. Hence, if we are to look for coherent self-representations, we need to conceive of a comprehensive approach to SNSs in that "to fill the gaps," has become a matter of collation among different platforms.

Concerning the impact that SNSs have on users' cognitive and social self-perception, by collating our monitoring of the posting with the participants' diaries, we realized that users: 1) often share materials and reply to comments uncritically (i.e. without really checking the content of the posts shared or commented on); 2) forget by and large what they have liked/shared after a few days. These phenomena are symptomatic of broader tensions affecting the relation between users and social media. An example of the first kind can be found in the video, shared by a female participant, in which a woman jokingly pretends to be against public breastfeeding. The irony of the video is quite evident in that the woman's supposed puritanism is contrasted with images showing the fetishization of the female body, which goes well beyond the exposure of breasts. What is significant is that one of the user's friends did not perceive at all the irony of the video and commented disappointedly on the post. When asked to elaborate on that, the student said: "I suppose my friend didn't reflect enough when watching the video and concluded that the woman in the video was serious". It seems, then, that not only did the user's friend not interpret the "hidden" ironic meaning of the video, but she also felt the urge to intervene, without much consideration.

On the other hand, an example showing the process of forgetfulness triggered by social media is particularly acute with regard to liking. In fact, such act remained largely untracked by the majority of participants in their written diaries. Prompted by our question, one student

reported that "out of my expectations, when checking my activity log I discovered that I liked an overwhelming number of 639 posts in five weeks!" The main problem is that, while users tend to quickly forget what they liked, it is not so for the platform, which tracks and remembers everything they do on it. More broadly, the technology's erosion – through the unreflexive actions it promotes – of the (human) ability to remember, opens the way to what Benjamin ([1]) defined precisely as an "impoverishment of experience" (as "Erfahrung") brought about by technology: as soon as users are led, by technology itself, to act mechanically, their acts are deprived of a shared value and turned into solipsistic "Erlebnis" (in this regard, Bernard Stiegler ([41]: 78) talks of a "mercantile production" of memory).

The experience in Hong Kong allowed us (as teachers/researchers) as well as the students (as the main actors of the experience) to bring these tendencies to the surface, in order to become fully aware of them via direct experience. The most relevant result was achieved when such consciousness triggered a counter-action in the way of using SNSs. We were glad, for instance, to witness one student discussing how the keeping of a written diary affected his reflection about potential upcoming posts: "I can't deny that keeping a written diary affected my posting: I became more aware of things or moments around me and I wondered whether I would really like to share them with others." Another participant confessed: "over the five weeks of logs, I changed some of my views toward my use of Facebook and other SNSs. I have always thought that I kept a very low profile on social media. However, after this self-tracking, I found that I don't keep at all a low profile." These testimonies definitely attest to the synergies between the online and offline realms and the distanced (more aware) self-perception that the autoethnography triggered with regard to online modes of self-representation.

Connected Intelligence

The teaching experience in Milan led to the elaboration of seven macro-projects (thematically clustered), which were presented and discussed in class during the last week of the semester. What is most interesting to remark is the interconnection among the various projects, as a result of the "connected intelligence" approach adopted during the whole course. This is particularly evident in the final project of the technology group. Being this group focused on the "stuff" itself – i.e. technology – that traversed also all the other macro-groups, its members decided to conceive a tech space on which the other projects might converge. More specifically, the technology group designed a mockup platform, named Village Technology Service (VTS), which addressed the issue of data security and data privacy, by allowing citizens/users to re-appropriate their own data created through multiple interactions with digital services and devices. In the words of the students, the platform "compiles the history of all our data transactions, allowing each citizen to easily manage her own data". In so doing, this project came to be connected in particular to the ethics and education macro-groups, although politics and ecology groups were also involved. Concerning the ethics project, the group drafted a chart discussing the pros and cons of a more transparent society, based upon the open circulation and access of data made public either necessarily by services and companies, or voluntarily by users/citizens. By offering a critique of China's top-down social credit system, the group advanced a collective assessment of services through publicly relevant data, leading to forms of

rewards and/or disincentives for both services and users (so that social responsibility is double-sided). Concerning education, the group focused its attention on the ethical and practical implications of the emergence of digital twins,[4] that is, the datafied doppelganger of the individual, made up of the collection of all its (so far dispersed) data. In their own words, the group explored what it means to have "a digital twin serving the individual as a personal assistant and a digital face in society" and how to think of and frame its coming into being (i.e. through which data and under which conditions of liability). As for the politics group, their project elaborated on the concept of "epistemocracy", i.e. the idea that processes of democratic/participative decision-making, especially on local matters, should be based upon the acquisition of prior knowledge. To advance this idea the group designed an e-governance online service for promoting the direct participation, collaboration and voting of citizens on a number of proposals. In the cases envisioned by the group, before voting online, citizens are required to pass a test focused on the debated proposal and meant to assess the citizen/user knowledge of its key tenets (and s/he can only try the test twice).

Subsequently, we have two projects that offer concrete examples for a more sustainable circular economy based on e-services. The ecology group conceived the mockup of an app called "Veg-eat-ables" for launching fair practices in the production and consumption of local food. In this spirit, vegetables are grown in collectively managed gardens – at the level of streets or neighbourhoods (see also the urbanism group) – its consumption is meant for self-subsistence and, if needed, the app put in contact members of different neighbourhoods for the recirculation of leftovers (which can be given in exchange for other small social services, see economy group). The app also contains a section with information on how to preserve food, limit packaging, and recycle organic and inorganic waste. Strictly connected with the ecology group is the economy group, which came up with a platform for the sharing of (voluntary) services based on the logics of time banking. Time banking is, indeed, a grassroots way of trading – close to bargain – where the currency is actually time. The economy group, then, collaborated closely with the ecology group for implementing a sustainable model intersecting the working hours in the collectively managed gardens with the possibility of receiving food (or getting lower utility bills, see also urbanism group) by cumulating a "time capital" for the provided social work. Last, the project of the urbanism group addressed three layers – building, mapping and mobility – which were deeply interwoven and eventually described via few renderings at micro level (e.g. single houses and streets), meso level (e.g. neighbourhoods, social spaces, natural areas) and macro level (the whole village). To link the three layers was an environmentally sustainable mobility plan, which also included tech connectivity and free WiFi. More in detail, the group planned house building using both renewable materials and 3D printing, as well as designing them to be energetically sustainable (reducing, if not zeroing, utility bills); the topographical organisation of the village included modularly-planned streets and neighbourhoods hosting canals, green areas, public spaces and buildings, as well as info points describing the overall conception of the village; mobility was based on pedestrian zones, bike sharing and electric car sharing fuelled by renewable energies (obtained by allotting communal areas for solar panels and windmills).

4 https://cmte.ieee.org/futuredirections/2019/07/07/digital-twins-where-we-are-where-we-go-vii/

Overall, the projects presented different levels of accuracy and depth. And yet, they all did rely upon existing technologies for their conception, design and implementation of the proposed solutions, thus stressing the importance of creating synergies across sometimes distant areas (such as politics and technology, or economy and ecology) in innovative, tech-based ways. Most importantly, by building upon their practical skills as designers, students demonstrated to be able to cut through the critical discourses surrounding digital technologies and techno-society, in order to pragmatically address (if not solve) some of the most relevant issues connected to them.

Limitations and Further Developments

The experience in Hong Kong brought to all actors involved a more "distanced" perception of the use of SNSs (and how these, in turn, impact surreptitiously on the user's life). This is certainly significant in light of the goal to foster critical awareness as far as our daily social media diet is concerned. However, given the small cohort of participants and its socio-demographic uniformity (all Asian students between 18 and 22 years old), the findings would require further testing to be confirmed. No doubt, the research would greatly benefit from the replication of the digital autoethnography in a different cultural context (e.g. Europe) and with the involvement of a larger and more varied group of participants. The experience in Milan, on its part, represented a very proactive approach towards the status of today's techno-society, the unveiling of its shortcomings and potentialities and the reflection upon possible more sustainable directions it can take. In fact, students had the chance to not only discuss cutting edge issues related to the pervasiveness of technology in our society, but also be at forefront of innovative solutions to be conceived and implemented collaboratively. And yet, the breadth of the macro-themes likely constituted a major limitation to the students' effective elaboration of their final projects, especially given the short span of time they had. In this respect, the possibility of linking this course to a second one, either in the same semester or in a subsequent one, might represent a viable option leading to finalize sounder projects. This would also be enhanced by connecting students in DH with peers studying computer sciences: the collaboration would certainly favour the conception of more feasible projects, possibly ready to be presented and implemented at municipality level.

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