Introduction: Digital technology for a better world?

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In 2014, an American TV series, *Silicon Valley*, waxed ironic about the entrepreneurial practices of the Californian startups in digital technology that, not content with defining a corporate strategy and developing a flagship product, were looking for a sense of "mission", an ambition to, simply put, make the world a better place.¹ Beyond the irony of the growing megalomania of some of the "founding fathers" in the Valley, this aspiration to use digital technology for a common good has been, and still is being, promoted, at least as a corporate value for recruiting dedicated talents. This ambition has recently shifted toward the idea of having a "social impact", as contests have been launched, like the one by Techstars,² to assess the social impact of a firm's business activities.

While the idea of creating and developing a firm with a business that serves the common good is attractive, why has it become a "must" to emphasize it? Are we to see this as a marketing strategy for gaining distinction? Or as a necessary change in response to wage-earners who want to work for a firm "with meaning"? Or as a sincere shift in corporate goals from making profit towards contributing to well-being? Or as a growing demand for firms to do more to cope with pressing social, economic or climate-related issues?

This showcased determination to make the word better (long professed by Google, for instance) is being brought under question. On the one hand, doubt has been cast on it to the point that Jessica Powell, a former director of public relations at Google, publically exhorted Silicon Valley entrepreneurs to "end the self-delusion" that they are making the world better and to "fess up to the reality we are creating".³ On the other hand, even if this determination is sincere, digital technology has its own share of delusions, effects and consequences that, though not necessarily negative for society, are at least questionable.

This debate about digital technology's impact on society is not new, but it has intensified in recent years. Countless is the number of publications, conferences and speeches that present this technology as a vector of economic development and of social and cultural progress in behalf of the largest number of people. For sure, digital technology bears considerable possibilities. Thanks to Internet connections at a moderate cost, anyone can have access to a nearly infinite store of knowledge and know-how, and can dialog without difficulty or additional charges with billions of human beings, irrespective (or nearly so) of their location on the planet. Thanks to a few clicks, most consumer products and, in particular, cultural goods will be delivered at home within a few days, or even on the same day. Digital tools have also led to new forms of work, production and economic exchanges, as they increase global productivity and speed up transactions.

¹ This article has been translated from French by Noal Mellott (Omaha Beach, France). All websites have been consulted in August 2019. ² Techstars is an American venture fund and startup accelerator. About the contest, see

http://communities.techstars.com/usa/south-bay/startup-weekend/13837.

³ In a public letter of October 2018, see:

https://www.dailymail.co.uk/news/article-6245847/Former-Google-boss-urges-tech-giants-end-delusion-making-world-better-place.html

Besides producing unequivocal socioeconomic and cultural benefits, digital technology is a new, efficient medium for keeping the promises of the French Republic for "freedom", "equality" and "fraternity". But is this for sure? Delving into this question, this release of *Digital Issues* sheds slight on the sometimes complex debates that have arisen around it. As we shall see, a technological discourse soon turns out to be inadequate for describing and analyzing this technology's actual impact within society.

Democratized uses and forms of inequality

Doubts arise when a deeper analysis is made of how the new technology is being put to use. Despite a more democratic access to the Internet (now tending to be universal), many forms of inequality can be observed in the uses of digital technology. Each is a cause and a consequence of social, cultural and economic inequality. This democratization has barely altered patterns of sociability. The family environment is still the key to the use of tools (devices, software, etc.) for effectively and efficiently tapping the nearly infinite quantity of contents available on line.

With 30 million articles in more than 280 languages, Wikipedia is the fifth most consulted website in the world: 500 million visitors per month. Its for-free access is anonymous and fast; and the size of the knowledge base it hosts is unequaled. Yet another example: massive online courses (MOOCs) allow anyone to take courses, some of them for free, with major experts, whether cooking lessons from a master chef or lectures about the latest advances in nuclear physics or artificial intelligence. Even if, as Dominique Pasquier has stated, the thirst for learning is present in lower-income households, who do not lack the energy to try to acquire digital skills and know-how, those who profit the most are, in fact, professionals with a higher education, who have already been initiated to the subject being taught.

The Internet broadens access to culture (literature, music, films) by letting anyone who is connected to have access to contents that used to be reserved to city-dwellers and the higher educated. The National Library of France (BnF) has, as Laurence Engel has pointed out, undertaken massive efforts for nearly two decades now to digitize its collections and activities. Content creators on Dailymotion are, as Colas Courjal has described, using the new technology, coupled with human creativity, to design new tools and formats for producing and diffusing knowledge and culture. Nonetheless, these new possibilities have apparently neither substantially enhanced the cultural practices of individuals nor fundamentally diversified the public, two points made by Aymeric des Esseintes with regard to the culture and entertainment industry.

The availability of contents on line, in particular for free, is obviously a necessary condition for them to be appropriated by the largest number of people possible; but it is not at all a sufficient condition. Social factors, habits, self-censorship... soon come into play and shape behavior patterns. To understand the lines of fracture running through the uses of digital technology, we should not, Sylvie October has warned, accept simplistic generational analyses that set the old at odds with the young, who are much too hastily dubbed "digital natives" or "millennials", when not labeled with other names. The reality of digital inequality is much more complex, as Samuel Coavoux has shown in the case of video gaming. Despite an unquestionable "feminization" of video gamers over the past twenty years, gender-related differences survive. They stem from differences in sociability patterns during adolescence and from the association of video games with masculine culture. These differences, which cannot be merely set down to a person's gender, have long-term effects and form a barrier keeping women from participating in video games. The democratization of uses of the Internet has also borne the promise of a simplification of ordinary administrative or professional formalities. The situation is, once again, neither black nor white. Although the search for jobs on line is now well advanced, Laurent Cytermann has stated that the question remains standing of whether or not this actually helps people find work. Several signals suggest increasing inequality, as, for example, the sway of the global digital giants increases in the coming years. More broadly, although the digitization of administrative paperwork (tax declaration, contacts with the Social Security administration, etc.) yields obvious gains of efficiency and rapidity to citizens, Côme Berbain has not overlooked the concomitant negative effects, such as the closing of physical offices and feelings of abandonment. Digital technology should, above all, lead us to reconsider the conduct of public policies thanks, in particular, to exchanges of "data of general interest" between the public and private spheres, and to experiments with new methods for public policy-making.

Digital technology, news, empowerment

These new ways of drafting and executing public policies underlie the rise of CivicTechs, entrepreneurs who have proclaimed that they can respond to the strong demand for a more vital, real, everyday democracy by, in particular, using digital technology to "place citizens once again at the heart of democracy". Supposedly recovered thanks to digital technology, this freedom of action — empowerment — is the subject of study of Capacity, a research program.⁴ The government set the example when, in 2015, Axelle Lemaire launched an online public "consultation" on a bill of law to which 90 modifications would be made thanks to the suggestions made by citizens from all horizons. Although this process's positive aspects are undeniable, since it strongly contributed to the law being accepted and encouraged citizens to take interest in drafting it, this initiative has not set an example. For one thing, the persons involved were not very representative of the population; and for another, the government ultimately kept a firm grasp on the bill's guidelines. This consultation was a co-construction but, in no case, a co-decision.

Digital platforms are proliferating that carry news, whether from the usual sources (newspapers, radio, television) or not (the social networks and the new, exclusively digital news websites). The intrusion of these newcomers has multiplied the channels for, and volume of, the news now available to anyone. Although this apparent plurality could be a sign that the news has become more reliable and diverse, the picture is beclouded by the circulation of fake news. These platforms have amplified disinformation, as have too the capîtalistically concentrated (at least in France) mainstream media. For citizens, this complex phenomenon is a serious issue: 83% of Europeans think that fake news threatens democracy. Paolo Cesarini has argued for a European code of self-discipline to make those who produce and disseminate news items responsible. According to Élodie Martinez, platforms such as WhatsApp have already adopted restrictions in Latin America (by, for example, limiting the number of destinations of a message); and news producers, such as AFP, have intensified their fact-checking activities in several languages. Much is yet to be done to fight against fake news, but the need to educate viewers to be critical of sources is a mainstay in this combat.

⁴ Program funded by the ANR. *Cf.* https://www.marsouin.org/IMG/pdf/anr_capacity_synthese_decembre_2018.pdf.

Measures for regulating contents are being demanded of platforms in matters related to the news and to intellectual property rights (so that posts of pirated contents, audio or video, be taken down). Though often said to be purely technical, these measures very often represent, for Lionel Maurel, one more step toward restraints on personal freedoms. Given the complexity and costs of implementing them, they risk — paradoxically — playing into the hands of the big, established tech firms. They might compromise the chances for re-decentralizing the Internet through newcomers, who are smaller but more diverse. Whereas these new measures claim to have the goal of empowering everyone, their limitations (deliberate or not) and the temptation of surveillance might eventually make individuals feel (and rightly so) ever more powerless.

Social relations and fraternity

Digital technology is perceived, and being used, as a means for integrating minorities. Under Article 105 of the Digital Republic Act, everyone in France should theoretically be able to communicate on line with users who have poor eyesight, hearing problems or aphasia. This act guarantees to the latter an access to the Internet with an offer of a round-the-clock service of simultaneous translation (written and visual) of messages (incoming and outgoing) without supplementary charges. SINGA is, according to Alice Barbe, using digital technology to help refugees communicate, look for work, find housing even though this technology also, paradoxically, perpetuates negative perceptions of them (in particular when sensationalistic contents go viral).

Digital technology enables us to communicate at any time with persons who are close, life companions and friends, while offering, too, the occasion to make new acquaintances, virtual or even real, and thus enlarge our social circles. We can meet partners whom we otherwise would not have met. This entails creating an online identity. On dating websites, meetings soon move from being virtual on screen to a physical encounter in real life, as Nathalie Nadaud-Albertini has described. However these digital tools do not seem to have modified the finality of the search, which remains in line with the individual's mores.

Given this dynamic process for creating social circles in a virtual world, we might think that digital technology makes individuals meet more often and, therefore, reinforces their feelings of belonging to a social group. Researchers at the University of Pennsylvania have, however, shown that feelings of isolation are positively correlated with the time spent in front of a screen.⁵ Worse yet, according to a group of health professionals,⁶ behavioral disorders have cropped up in the younger generations as they mimick their parents' behavior. Since parents often talk with their eyes glued on a smartphone screen, young children are developing attention disorders and not learning the basics of social interactions, such as the simple fact of looking at the person to whom one is talking.

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 $https://www.lemonde.fr/big-browser/article/2017/03/09/plus-on-utilise-les-reseaux-sociaux-plus-on-se-sent-seul_5092241_4832693.html_{6}$

https://www.lemonde.fr/sciences/article/2017/05/31/la-surexposition-des-jeunes-enfants-aux-ecrans-est-un-enjeu-majeur-de-sante-publi que_5136297_1650684.html

How to cope with overexposure to screens? According to Annie Blandin, regulations might be of little help in the short run. For one thing, it is necessary to diminish the economic might of the firms at the source of the contents diffused over the Internet. The breakup of AT&T in another era might be a model to follow. For another, it is necessary to identify the relevant, effective metrics for enforcing regulations. Initiatives such as the Center for Humane Technology, created by former employees or founders of Silicon Valley startups, have made concrete recommendations for designing more social utility into digital devices and software. To regulate practices, this utility is to be by design a part of mobile telephones, computers or mobile applications. However these initiatives have difficulty obtaining recognition, and their generalization in a regulatory form is not evident. For this reason, it is necessary to develop the individual user's awareness of, and education in, the new technology. For Jean-Francois Céci, an "ecological digital culture" must be fostered and shared. We must learn how to "make" silence in the midst of the ceaseless online noise that we impose on ourselves. Not only our mental availability but also the time for everyday life and, therefore, for actual experiences is finite, a constant that it is more than ever necessary to consciously reclaim.

As a means of pooling, or of swaying or even of manipulating, the Internet allows both for decentralized sharing and for efficient surveillance. It provides the means for acting fast and effectively but with the risk of promoting the idea that it can, by itself, settle questions related to democracy. It opens new possibilities for social interactions but with the risk of imprisoning individuals in an abusive, addictive consumption of anything digital. The ideal of sharing knowledge and information — as symbolized in the early years by freeware licenses and the defense of the Internet as a commons — has collided with the principles of private property. Rival projects that cannot always be made compatible have, since the start of the digital era, fostered ambivalence and spurred tensions. Designing and building a better world with help from digital technology is not a postulate but a challenge to be taken up.