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# *Which digital smartness for which well-being? Reflexion on the challenging question of digital media.*

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Digital technology affects all the individual as well as collective spheres of our lives. Its environmental impact keeps growing. It transforms the way we live together. We are shaping a so-called "progress-driven" society in which "smartness" is often misunderstood for "sustainability". This confusion greatly encouraged by the believers in "technological solutionism" must be cleared up to be able to address the relation between digital media and well-being. We feel the following elements are crucial and well worth discussing.

The development of digital media mostly accounts for the growth of digital technology in our societies. Today, a few-month-old baby has already often come across a smart phone. Once he/she is used to it, the smartphone will become the medium through which he will consume media information, almost in continuum and probably until he dies. With an average of 2H30[1] spent on online social media, inhabitants either in « developed » or « developing » countries, get most of their world information through short digital notifications, whether from subscriptions to professional content creators' accounts, from online forums or peer-to-peer social media. These new information vehicles which, over the last twenty years, have toppled "classical" media and the "pub discussions" of previous generations are therefore now to be considered as a crucial factor in shaping public opinion and contributing to the construct of young people's personality and identity. The effectiveness of these networked worlds in disseminating and making an incredible amount of information available to the largest number, much more than can be ingested, may result in "a destruction of all the forms of knowledge (know-how to live, know-how to do, know-how to think)" [2] . Even if one settles for the idea that information is to be merely consumed and no longer used to think, it is necessary to remember that it rarely stops at the smartphone. It will rather be used as a speed accelerator to almost immediately send forth the piece of information to online networks with a variety of additions (commentaries, likes …). That is how technology-made globalisation, which could be a contribution serving individuals, is being snatched by the pace imposed by the information flow. It is quite obvious that pace has eclipsed contents and immediacy reflection. It is not so much its global character which should be questioned as the fact that this available globalised information does not serve the society by "multiplying viewpoints, recording a greater number of biological varieties, taking into consideration a greater number of beings, cultures, phenomena, organisms and people" [3] . Quite the opposite, what we see happening is a dragged-down

[1] https://datareportal.com/reports/digital-2019-global-digital-overview
[2] Bernard Stiegler (2015) « Sortir de l'Anthropocène ». Eurozine, https://www.eurozine.com/sortir-de-lanthropocene/
[3] Bruno Latour (2017) « Où atterrir ? comment s'orienter en politique ». La découverte (Ed), Paris. 156p.

globalisation, what Bruno Latour calls a "globalisation-minus", whose normative impact impoverishes knowledge, our cognitive development[4], and, in the long term, our well-being worldwide. In light of those observations, there are two alternatives: either the information flow should be slowed down to fit in with individual and social needs, or tools for resisting this "globalisation-minus" should be figured out. This is the only way to make our societies durable. It should be clear that, in the current state of the world shaped by the communication speed imposed by technology, the concepts of globalisation and development are mutually exclusive for the very simple reason that the great majority of individuals are excluded. How many people go further than "liking", commenting or only transferring a piece of news? How many start discussing it? Who with by the way?
Let us now briefly deal with digital media from three entry points: individuals in this networked world, the question of slowing down, the environmental impact.

The unbridled development of digital technology in all sectors of the society has produced a non-stop avalanche of data over the last twenty years. The characteristic of these data is that we did work hard to make them mostly interoperable. This informational society we are building is becoming a world of global networks, which completely changes the paradigm and the categories under which we think our world[5]. Where does each and every one of us stand in this global networked whole? Whoever has already worked on the network theory and the practical analysis of large networks knows that the global impact of any local action is a complex phenomenon. The accumulation of more or less synchronised local actions and the network repercussion (or of any other primary unit) on individuals who make up the network, produce phenomena of emergence and of bifurcation which make any forecast very difficult. In short, unless you have a particular position in the network (hub, high centrality node …), and you know you have, nobody can figure out the effect she/he will perform by being active in these networks. This characteristic at once sweeps aside the idea that networked informational societies are more inclusive. Unless you think that most of mankind is in because they are watching what is passing by (thus signing the end of mankind), the only hope is that any individual action (tweet, post, or simple like or redirection) added to others would create an impact on a wider scale through a multiplying process. But, there is no automatic processing from local to global in such complex systems and the belief in an almost direct link from each individual up to the largely indefinite « top of the ladder » would ignore the GAFAM's carefully hidden secret of algorithms steering the whole. Today, this "informational society" provides "hubs", based on advanced technologies, which are in a position to regulate information. According to Yann LeCun[6], we do not know exactly how deep learning algorithms work: "*[…] it's not a big problem. It is most satisfying to have an explanation and humans feel better if an artificial intelligence system provides some explanation. But, in the end, what one really wants is a perfectly reliable system"*. Isn't this alarming considering that understanding is probably one of the characteristics of humans? On the contrary, shouldn't the aptitude of digital media to transport information open the way to greater transparency for a more durable society? By filtering the information each person receives, "Internet algorithms" operate like a magnifying glass and may led people to

[4] Inès Leonarduzzi (2021) Réparer le futur. Du numérique à l'écologie. L'Observatoire (Eds). 222p.
[5] Manuel Castells (1996) The Rise of the Network Society. Malden, MA: Blackwell. 656p.
[6] Responsable de la recherche en intelligence artificielle de Facebook,
https://www.lesechos.fr/2017/05/le-talon-dachille-de-lintelligence-artificielle-168099

believe that "we are so many to think the same way and that, if we are that many, it means we can't be wrong"[7]. How can a society be durable if each one is being "helped" to construct one's own reality? Is such society capable of sharing a collective project? It is urgent to act fast because, as every « online » individual contributes to reinforce these widespread networkings, the pace at which they are transforming the society is exponential.

It is therefore worth considering the idea of slowing down when the question of individual well-being is raised in an ever-accelerating society. Speeding up is associated with modernity[8] and opposing it means opposing progress (just like choosing « local » rather than "global" is mostly interpreted as regressive). This increasingly fast pace is mostly due to the digital media which constantly invade our information sphere to the point of saturation. Can it be resisted? Actually, I am afraid not, because, once technologies have been installed, both criticism and the option of reversibility are difficult to express and rejected as resistance to progress[9], or even to the very idea of innovation, one of the drivers of capitalism[10]. And yet, the question is not to oppose innovation, or to slow down the adoption of new digital technologies, but to devise them in such a way as to preserve one's own autonomous usage and to keep reversibility an open alternative. The Silicon Valley's "technological solutionism" [11] , according to which digital technologies will solve all problems worldwide, also applies to the world of digital media: *this app will solve the problem!* By addressing the effects of the problems instead of their causes, technological solutionism transforms the technological pharmakon into a no turning back rush regardless of the danger of leaving us without any process for understanding. Although criticism of technological solutionism is growing among citizens, the idea of slowing down does not seem to be conceivable to most of our "élites". However, it is clear that slowing down could be a solution to the preservation of our capacity to create knowledge. The alternative mainstream answer to slowing down is the creation of more and more efficient decision-making tools. Artificial intelligence's concern for digital media updating is a paradigmatic example of the approach. Computers being much faster than humans, we have entrusted the responsibility of our decisions to algorithms and data. In a France Info interview, 8 may 2018, Alain Connes said: "*What strikes me most is that Évariste Galois was capable of understanding without calculating. As I see it, we are going to swap the 'understanding without doing' against the 'doing without understanding' "* . We can only ensure our durability if we master the pace we are contributing to implement.
When dealing with the relation between « smartness » and "sustainability", you are bound to address the question of environmental and climate emergency. Every time a smartphone, tablet or laptop is used to make a query or receive a notification, it involves a number of computer servers in air-conditioned buildings, Wi-Fi or wired connections which contribute to digital pollution. For every smartphone engineered, we further use up the already critical resources of rare earth elements. In 2019, the world digital footprint was about 4% of primary energy consumption and as many greenhouse gas

[7] Entretien avec Julien Giry, 04/06/2021, https://cnnumerique.fr/le-complotisme-est-un-processus-social-entretien-avec-julien-giry
[8] Rosa, Hartmut Rosa (2013). Accélération. Une critique sociale du temps. *Paris, La Découverte (Eds). 474p.*
[9] Jarrige F, 2014, Technocritiques. Une histoire des résistances au progrès technique, Paris, La Découverte.
[10] cf. Les travaux de Joseph Schumpeter.
[11] Evgeny Morozov (2014) To Save Everything, Click Here: The Folly of Technological Solutionism. *PublicAffairs (Eds). 432p*.

emissions and the constant trajectory scenarios display an increase of twice as much every 10 years[12]. Without any regulation, a rebound effect of the 5G deployment is to be expected as its high speed access will encourage data and telecommunication consumption and therefore reduce the 5G- related energy efficiency gains as compared to the 4G. And yet, individual and collective environmental awareness is growing, thus developing tense oppositions. It is clearly shown in the growth of environmentally-committed digital activism (for instance, tweets mentioning nature and biodiversity have increased by 65 % between 2016 and 2020 on Twitter[13]), and in the development of citizen mobilization. These positive tensions reveal that digital footprint has become a major challenge to our collective and individual smartness: shall we be able to overcome these oppositions? We can, of course, find easy comfort in the idea that a digital and paperless society is more energy-saving, therefore has less impact on both climate and planet. This is the no turning back proposal of "technological solutionism". The least we can do, over the short term, is to come to terms with the necessary implementation of generalised digital frugality. This will imply a significant change in our digital practices, particularly our frantic use of digital media. To this end, we need some support, including technological support, as enforcing restrictions on smartphone use, for example, is often seen as reducing individual or even collective well-being. Digital producers are experts to engineer tools which change our habits, but what is now needed is changing our habits towards more efficient tools for less usage: what a challenge! Therefore, political regulation should also bring about these necessary changes.

How to conclude? "Technological solutionism" is a dangerous hypothesis engaging the future of mankind. The way our digital media are being developed does not fit in with the very concept of a learning, inclusive and autonomous society. To ensure that digital technology can be a contribution to global well-being, it is definitely urgent to radically change our usage habits as well as the tools developed to allow for some technological reversibility. To do so, it is crucial to increase citizen participation.

**Challenge 1: Digital media for more inclusive networked societies**

Scientific lock 1: help individuals to find their place in a global networked digital world

Scientific lock 2: establish the conditions required for citizen participation in the construction of our digital media

Scientific lock 3: keep control over technological acceleration and establish the necessary conditions to guarantee technical reversibility at individual and societal levels.

**Challenge 2: Minimize tension between digital media and environmental emergency**

Scientific lock 1: develop economic models of digital frugality

Scientific lock 2: set up scenarios for transforming our digital habits and assessing their individual and social impacts

Scientific lock 3: devise models to predict rebound effects triggered by large-scale technological innovations

[12] https://bit.ly/EENM2020 et https://theshiftproject.org/wp-content/uploads/2021/03/Note-danalyse_Numerique-et-5G_30-mars-2021.pdf

[13] https://www.wwf.fr/vous-informer/actualites/un-reveil-ecologique-sempare-de-la-planete

Scientific lock 4: figure out lean environmental-impacting solutions.

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