Data Disruption:

Promises and Perils for the Governance of Culture and the Internet of Citizens

Divina Frau-Meigs

Sorbonne Nouvelle University

UNESCO chair "savoir devenir in sustainable digital development"

The Internet of Things is about giving everyday objects the power to regulate our behaviour. It comes clad in an adjective that is also a metaphor for more than intelligence "smart": smart phone, smart watch, smart fridge, … smart everything. Soon smart museums? Smart paintings? Smart heritage? Morozov calls it the "smartification"[1] of everyday life, I call it the "datafication" of everything —the suffix "-tion" in both cases insists on the current state of mesmerisation by numbers and the calculated control it affords— in the cyberist era that no longer holds a strong relation to modernist or post-modernist landmarks.[2] But the results are the same: primary data connected to metadata with algorithms that yield information about people, most of which they haven't agreed to and that can be used by anonymous third parties for whatever purposes. Presented as "optimisation", it is hard to resist: more security, more safety, less energy-loss, less inefficiency… but is the optimisation of efficiency the goal of culture? Doesn't *smart*, as a verb, also refer to a source of sharp pain?

The current situation in the world, dependent on digital corporations, points to big data and the Internet of Things as a new approach to governance, what Tim O'Reilly calls "algorithmic regulation"[3] where the feedback produced by sensors and captors orients political and cultural choices, sometimes more powerfully than laws drafted by policy-makers and regulators. The system learns by itself and improves itself by examining the behaviour of many users and adjusting to it. But this is done "in real time", as Google data often says, "à chaud", on the spur of the event, without consultation of the people, without a proper Internet of Citizens. So is "algorithmic regulation" the new horizon for culture? And if so, what does it mean for citizens? For the Internet of Citizens?[4]

The risk is to let this kind of regulation transcend the politics of culture, in a vision that is technocratic and seemingly without ideology. Once more the risk of the so-called "neutrality of technology" appears, when history has shown that technology is not neutral and is instrumental to market and state purposes. Both entities, state and market alike, tend to

---

[1]Evgeny Morozov, "The rise of data and the death of politics", *The Observer*, Sunday 20 July 2014; see also *Technology*, *Solutionism*, *and the Urge to Fix Problems that Don't Exist*, Allen Lane, 2013.

[2] Divina Frau-Meigs, *Media Matters in the cultural contradictions of the information society. Towards a human-rights based governance*, Council of Europe Publishing, 2011.

[3] Tim O'Reilly, "Open Data and Algorithmic Regulation", chapter 22, *Beyond Transparency*, Brett Goldstein and Lauren Dyson (eds), Code for America, 2013 http://beyondtransparency.org/chapters/part-5/open-data-and-algorithmic-regulation/

[4] Council of Europe, Committee of Ministers to Member States, Recommendation CM/Rec(2016)2 on the Internet of Citizens, Feb 2016.

maintain the polarities about online vs. offline, about stable vs. disruptive. They don't want a third party to challenge their clasp on society and still haven't recognised culture as a pillar of sustainable development,[5] that can provide a different answer to overcome the opposition between stability and disruption, a term that is not devoid of political and economical connotations that have consequences for culture.

I. Data disruption and algorithmic regulation

"Disruption" is actually a business concept framed by advertising executive Jean-Marie Dru, as early as 1992, and deposited in more than 30 countries, including the USA, Russia, Japan and the EU. Dru sets disruption in contra-distinction to incremental views on innovation (optimising what already exists), to promote rupture from conventions and cultural biases, to foster creativity and to differentiate the product from its competitors, ending with a new vision of the brand.[6] He suggests 15 types of disruption, among which partnerships, added services, business models … and data. In this business context, data sustains disruption by "nudging"[7], prompting the user to modify his/her behaviour. Such nudging is most visible in the health sector at the moment (apps about heart beats, sensors about blood counts…) but all sectors are bound to be affected, including culture.

In the neo-liberal context of the hands-off digital economy, the consequences for culture of nudging are disruptive indeed: put the responsibility on the individual by promoting commercial self-monitoring devices; remove regulation by public services and let the market sort out outcomes by reputation. This leads to disruptive corporate creations such as Uber and AirBnb that upset an organisation of labour reluctant to embrace the digital revolution. In the world of art and culture, the equivalent entities are Bright, Spotify and Netflix, among others. They bypass pre-digital markets, cultural patronage and aids by the state, de facto leaving the artists to their own means. Governments have proved unable to harness the financial manna of such cyber-entities, allowing the creation of mega-corporations that don't pay taxes in the proportionate amount of their use of public utilities and infrastructures in most of the countries where they are established, as evidenced by the recent struggle between the Irish government and Apple (14.5 billion dollars of unpaid taxes since 2003). To governments struggling with reduced resources — especially for culture, an adjustment variable in many countries' budgets — datafication may first appear as an advantage without even calling for the dismantlement of the policies protecting culture. But once all the public and collective benefits are removed, what is left? How is it possible for cultural workers to extract value and sustenance from content production?

Today's cultural worker and art producer is much more like a service provider than a creative artist and the IP rights profit only the platforms and intermediaries that possess and manage them. Resorting to crowdsourcing is part of the solution but the framework of state policies is still required for a minimum of protection and promotion of art, be it digital or not. Today's cultural producers, among which artists, have to deal with engineering, social software, etc.

---

[5] Declaration on the Inclusion of Culture in Sustainable Development Goals, 2014 http://www.culture2015goal.net/index.php/home/declaration

[6] Jean-Marie Dru, *Disruption*, Village Mondial, 1997; see also *New: 15 approches disruptives de l'innovation*, Pearson, 2016. For a slightly different approach, see Clayton Christensen, *Innovator's Dilemma*, Harvard Business School Press, 1997.

[7] Richard H. Thaler and Cass R. Sunstein, *Nudge*: *Improving Decisions about Health, Wealth, and Happiness*, Yale UP, 2008.

Many artists do web design for a living and practice art as a freelance activity on the side. They are drowned in the many applications that enable young people seemingly to innovate and create, when in fact they produce by template, as amateurs. Smartification does not make for aesthetics, but for entertainment. It does not have a cultural agenda and celebrating technology for its own sake does not yield ground-breaking and emotionally-grasping masterpieces and artworks. The risk of seeing the fablab replace the atelier needs to be addressed, and not just seen as a celebration of the democratisation of both art and science.

The world of music, often the litmus test in technological innovation, is a case in point. An app like Shazam exemplifies the promises and perils of datafication. Shazam is interesting because it shows the way with music, between proprietary and non-proprietary standards. By patenting its algorithm for music identification, it makes it hard for alternative open algorithms to emerge, turning music recognition into a market and giving this corporation a de facto monopoly by capturing part of the online audience. At the same time, Shazam also allows insights into the aggregated tastes of millions of listeners that might escape elitist experts or commercial top ten charts, as seen in the Shazam "Hall of Fame" archives, year by year. Similar apps like Firefly by Amazon, Google Sound Search and Bing Music identification point the way to how the big corporations invade culture and try to create a "filter bubble"[8] as noted by Eli Pariser: the users' tastes are tracked and turned into data that provide feedback that reinforces those tastes and try to maintain them in one cultural "portal" where they are offered complementary services, as with iTunes or Amazon, for instance.

If art is to remain a sort of resistance to any kind of establishment, it cannot stay within a market driven techno-agenda or within a naïve political vacuum. The technical apparatus has always been part of new art forms for artists as they encountered new social and economic reasons to embed their message. Artists need to return to the context of today to help make sense of today's realities, re-start the dialogue with people's desires and fears, point to ways of reshaping our relation to smartification, critically. The real challenge is to help humans balance the polarised trends of control and empowerment as new media invade citizen privacy and intimacy with digital devices that are no longer presented and perceived as alien and alienating. The celebration of freedom of expression comes with calls for security and securitisation that provide the people behind the tracking platforms unprecedented power by algorithmic regulation. Art and culture are about questioning the source and legitimacy of that power. The glorification of the geek as designer (so evident with cyber-entrepreneurs such as Steve Jobs, Mark Zuckerberg, Bill Gates…) should not erase the image of the artist as thought-provoker.

At the moment, only dystopian fantasy seems to provide a critical reading of technology gone awry and of disruption leading to chaos. The stories told therein are all about post-technological disaster societies plunged in terror, exile, starvation, migration, as exemplified in *Hunger Games* (Suzanne Collins, 2008-10) or *Divergent* (Veronica Roth, 2011-13)… They provide a dense visual culture recombined with a rather radical discourse on the politics of power and control to which individuals have to yield, or against which they need to rebel… And of course this cyberculture is being recuperated and produced by Hollywood turned Hollyweb and its transmedia strategies (from books to movies and video games…).

[8] Eli Pariser, *The filter bubble: what the internet is hiding from you*, Viking, 2011.

II. Data disruption in the face of human disruptions

But data disruption can also be seen as a positive dimension of culture and discarding it could hinder the full use of data for creativity, for empowerment and for giving voice to the underpowered. Art can also be part of engagement and empowerment for people, now as much as ever, and data art does not escape the rule. Nathalie Miebach uses data in her project "Recording and Translating Climate Change" to create sculptures and musical scores.[9] Yann Toma (*Human Energy/Eiffel Tower* event) drew attention to climate change by illuminating the Eiffel Tower with people's energy. Pierre Esteve (*FLOWERS 2.0*) recycled plastic flowers and equipped them with captors that vary light with the presence of passers-by.

Such artists point to the fact that disruption happens also in real life and much of culture in the XXIst century is going to be defined by real people issues, especially their migration (due to war or weather), as a litmus test to democracy whose values are being challenged by refugee crises, shifting borders, rising walls and asylum-seeking homeless migrants. They show that culture can address the challenges of dealing with disjointed spaces and diasporic societies, from which state and market are tempted to disengage. Real inclusion today spans from neighbours next door to neighbours abroad and online. Culture can be a lifeline of solidarity to resist the apparent unavoidability of smartification.

Beyond artists, data also helps mobilisation around art and culture for inter-cultural dialogue. For instance, bablbooks, — originally a publisher of paper books in bilingual edition — has created an app devised by young people that uses crowdsourcing to help translate children's books, with the final review being done by professional translators. The idea is that parents and teachers submit their own translations, while professional translators ensure that the combined result of all the submissions is truly colloquial and representative of how native speakers would express it. Books translated in Tagalog are top of the list, reflecting the cultural expectations and needs of this cultural group while enlarging the presence of the Filipino language on the web.[10]

Virtual Migrants is a collective that calls for attention to global issues such as race and terror. With their EXHALE project they showcase electronic art and music engaging with asylum and migration.[11] They have also called on crowd-funding for "Continent chop chop", a transmedia performance based on the work of Nigerian poet Nnimmo Bassey, making the case for Climate justice, opposing global austerity policies and in favour of tolerance for refugees.

Erasmus +Project ECFOLI uses a Massive Open Online Course (MOOC) to sensitise young people to their common cultural heritage. It trains practitioners to help them write stories that encapsulate their everyday experience of art in their street (often a buffer zone in a conflict area) and then to digitise the story with the artefacts in it, using video and game design.[12] Digital storytelling is used for conflict resolution as one of the competences in Media and Information Literacy (MIL).[13] Such a process aims at fostering a sense of diversity and tolerance in culture, to fight radicalisation and extremism.

---

[9] nathaliemiebach.com.
[10] http://translate.bablbooks.com/
[11] http://virtualmigrants.net/
[12] www.ecfoli.eu
[13] Divina Frau-Meigs, *Socialisation des jeunes et éducation aux médias*. Eres, 2011.

Digital culture in the form of videogames is also contributing to conflict resolution. News games have been multiplying since the beginning of the migrant crisis. Not dependent on mega Hollyweb studios, the developers borrow from video games to provide their users with an immersive situation of the migrants' plight, in order to foster a better understanding of the traumatic conditions of exile and to create empathy. For instance, the Swiss studio Blindflug has launched "Cloud Chasers: Journey of hope" to elicit solidarity with exiles as the gamers can follow the tribulations of a father and daughter across the desert.[14] The game is available for smartphones (iOS and Android). Mobility (as in mobile technology) can thus be an asset as long as it allows people to transport their culture with them and to stay close to it at a distance.

These examples have several elements in common that point to the centrality of culture. They use storytelling as a means of keeping people together, cementing memories and values, modifying representations of the world with art. They rely on creativity as an emanation of inter-generational dialogue, intercultural exchanges, tolerance and dignity. They bring in the voices of young people with access to technology in the service of those who haven't such access. They show that migrants can remain connected with their home country instead of being broken apart. They present alternative responses to radicalisation and nationalism. They provide an answer to "non-spaces" such as no-man lands, buffer zones and refugee camps where migrants accumulate the burdens of exile (from their native land), exclusion (behind walls) and exception (to most of the laws of the states they are in).[15]

These examples epitomise what data disruption can do for diversity and inter-cultural and inter-generational dialogue when ethics comes before technology and guides its design. It can help solve problems of the real world for real people, not for robots via robots. Such problems are not going to go away, due to climate change and the expectations of climate refugees, not to mention conflicts of various amplitudes in several parts of the world. For these examples to bloom and to be successful and sustainable, it is important to unpack the whole potential of the Council of Europe recommendation on the Internet of Citizens and thus smooth the rough sailing for democracy in the current testing circumstances.

III. Unpacking the disruptive potential of the recommendation on the Internet of Citizens

In the first stages of its elaboration, the recommendation toyed with a different wording, opposing the "Internet of Subjects" to the "Internet of Things". The choice of the final wording "Internet of Citizens" has a more political connotation, as subjects in the digital world can be abstractions controlled by algorithms and data aggregates that enable trading of online profiles. Constructing the subjects as citizens is a political and cultural question that needs to be considered with the prism of algorithmic regulation and datafication. The experience of online presence, to be empowering, needs to be construed as sustenance in a complex holistic manner that is not just techno-operational. How to ensure that the current mantra of "data are us" becomes "data are for us"?

The recommendation points to several policy guidelines in its introduction, especially the role of human rights in relation to data (1.5):

---

[14] www.blindflugstudios.com/

[15] Michel Agier (ed), *Un monde de camps*, La Découverte, 2014.

a. ensuring that all data processing is carried out in conformity with the principles laid down in the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (ETS No. 108);
b. full respect for the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions.[16]

It then proceeds to recommend 1/ "modernisation of cultural institutions"; 2/ "creative citizens" empowered by "the transformative use of copyrighted works (such as sharing, disseminating, archiving, remixing, mashing-up or consuming)"; and 3/ "Multiliteracy skills for access to, creation and management of digital culture".

Unpacking the guidelines from such a standard-setting document can be a creative roadmap for culture. It needs to be broken down into smaller units so that its implementation does not lose a shared vision that keeps the individual and the collective bound together and clearly positions culture as a pillar for sustainability and empowerment that provides employment, entertainment and wellbeing (beyond health-by-apps), across borders of age, gender and nationality.[17]

- **The non-separation between the Internet of Things and the Internet of Citizens**

At the moment two parallel conversations are taking place in different spheres that ignore each other: the conversation on critical technical resources that monetise data and their disruption (ICANN, ISOC, ITU, mostly between states and the private sector); the conversation on critical human rights in the digital era (Council of Europe, UNESCO, mostly between states, the public sector and civil society). In both cases, the decisions are taken far from users and cultural workers, often to the detriment of their interests, while a whole series of connected non-human agents are appearing without rights and responsibilities (robots, sensors…).

Nothing can be done to bring these conversations together if states and Inter-Governmental Organisations do not organise a common platform for debate and decision-making with regulatory and legal mandates.

- **The portability of personal data**

The current automatic processing of personal data dispossesses users of their voluntary and involuntary traces online. They are rarely consulted about the commercialisation of their data and the commodification of their profiles. They don't reap the benefits of their online participation and their online work (often framed as play). They are at risk of alterations made by non-authorised third parties that can result in lasting damage to their reputation.

Nothing can be done to empower citizens if states and Inter-Governmental Organisations do not ensure user consent and support any technical and legal innovations that provide for the portability of personal data so that users are not captured by the logic of portals and the filter bubble, and have mastery over the destiny of their data (and their online presence and expression), during their whole life and after.

[16] Recommendation CM/Rec(2016)2 on the Internet of Citizens, Feb 2016, article 1.5.
[17] Bruno Durieux (supervision), *L'apport de la culture à l'économie en France*, 2013 http://www.economie.gouv.fr/files/03-rapport-igf-igac-culture-economie.pdf

- **The rights of cultural workers to extract value and sustenance from content production and distribution**

Cultural workers do not benefit from any fair and balanced means of sustenance for the added value of their labour in the digital economy. Their work is not recognised, protected or funded enough. Crowdfunding remains a makeshift solution without proper regulation and all forms of work that deal with data remixing and mashing-up are under-developed or downright criminalised, while there could be technical digital solutions for a better distribution of such activities, highly related to the future of creative industries and digital humanities.

Nothing can be done to promote sustainable forms of online culture if states and Inter-Governmental Organisations do not come to a full revision of IP rights to incorporate the full consequences of datafication, with the recognition of new subsets of rights related to remix and collective mash-up that recognise the fact that the notion of the artist is changing to include mastering programming languages, operating systems and designer software claims for collaborative team-work. This exploration also encompasses fair and proportionate taxation of multiple uses of cultural works by digital mega-corporations.

- **Critical Internet literacy as part of MIL**

Users need to understand datafication at an early age, in order to master its benefits, avoid its perils and influence its policy as Citizens, ensuring in particular that the corporate world addresses the real needs and issues of globalised societies. Critical Internet literacy needs to be better incorporated to Media and Information Literacy, not to be confused with operational digital literacy — currently mostly concerned with code, not values. MIL is also about fighting radicalisation, spotting propaganda and deconstructing plot theories while also providing tools for debunking stereotypes (about gender, migrants, minorities…). MIL can potentially reboot education with new pedagogies of participation.

Nothing can be done to ensure the transition to XXIst century multi-literacy skills if states and Inter-Governmental Organisations do not make certain that education is properly funded and that teachers and practitioners are suitably trained in MIL, in all its digital dimensions (operational, editorial, creative, ethical…). This implies going beyond the subsidiarity principle that currently regulates education in the EU, as a matter of inter-sectorial strategy that also implies working with ministries of culture, youth, economy, labour… This also involves the corporate social responsibility of the private sector, possibly in the development of a referential professional framework for the creative jobs emerging from the digital revolution.

- **Internet Governance to mitigate algorithmic regulation**

Behind algorithms, there are people in control of datafication and the calculated power it affords them. Currently they are not held responsible for the intended and unintended consequences of data disruption, as if they didn't have real life consequences for most citizens. While this vacuum has encouraged innovation and the development of the Internet as a critical resource, it has created new vulnerabilities and created new divides.[18]

---

[18] Divina Frau-Meigs and Lee Hibbard, *Education 3.0 and Internet Governance: A new global alliance for children and young people's sustainable digital development*, Global Commission on Internet Governance Series, Chatham House, 2016, https://www.cigionline.org/publications/education-30-and-internet-governance-new-global-alliance-children-and-young-peoples-sus

Nothing can be done to legitimise Internet Governance if states and Inter-Governmental Organisations do not oversee the management of data within democratic shared values, involving all stakeholders in the creation of a viable and sustainable set of policy guidelines. Internet Governance needs to be the spinal cord that holds together the Internet of Citizens and the Internet of Things, the glue that gives it direction and principles.

- **Digital frugality as a criterion for valuing digital platforms and services**

The new vulnerabilities illustrated by the migrant crisis and its interpretation by engaged artists show that, increasingly, the digital urgency is associated with ecological urgency, that Internet fairness is also connected with climate justice. Internet is one of the biggest current polluters with a growing carbon footprint. Datafication is energy-greedy and this greed expands exponentially as the industry seeks to connect the next billion. Users are neither informed nor consulted about the storage solutions in use and the consequences of digital pollution (on countries, on the seas…).

Nothing can be done to promote the digital contribution to climate justice if states and Inter-Governmental Organisations do not support the necessity to produce alternatives to the solutions currently in use within the Internet industry, to favour systems and software that augment self-regulation and diminish the digital carbon footprint. This should be packaged in deals with corporations and small businesses alike, when funding is considered for nudging their behaviour and elicit attitudes that are favourable to frugal prosumers, for sustainable digital development and solidarity economy.

For disruption to be really creative and to work in culture and education, it needs to be compatible with a vision of humankind based on human-rights, and on citizens who vote with a clear knowledge and understanding of Internet governance, — of which algorithmic regulation is only a subset. Data collection is not to be equated to cultural curation. Digital guidance is not to be used without human guidance.