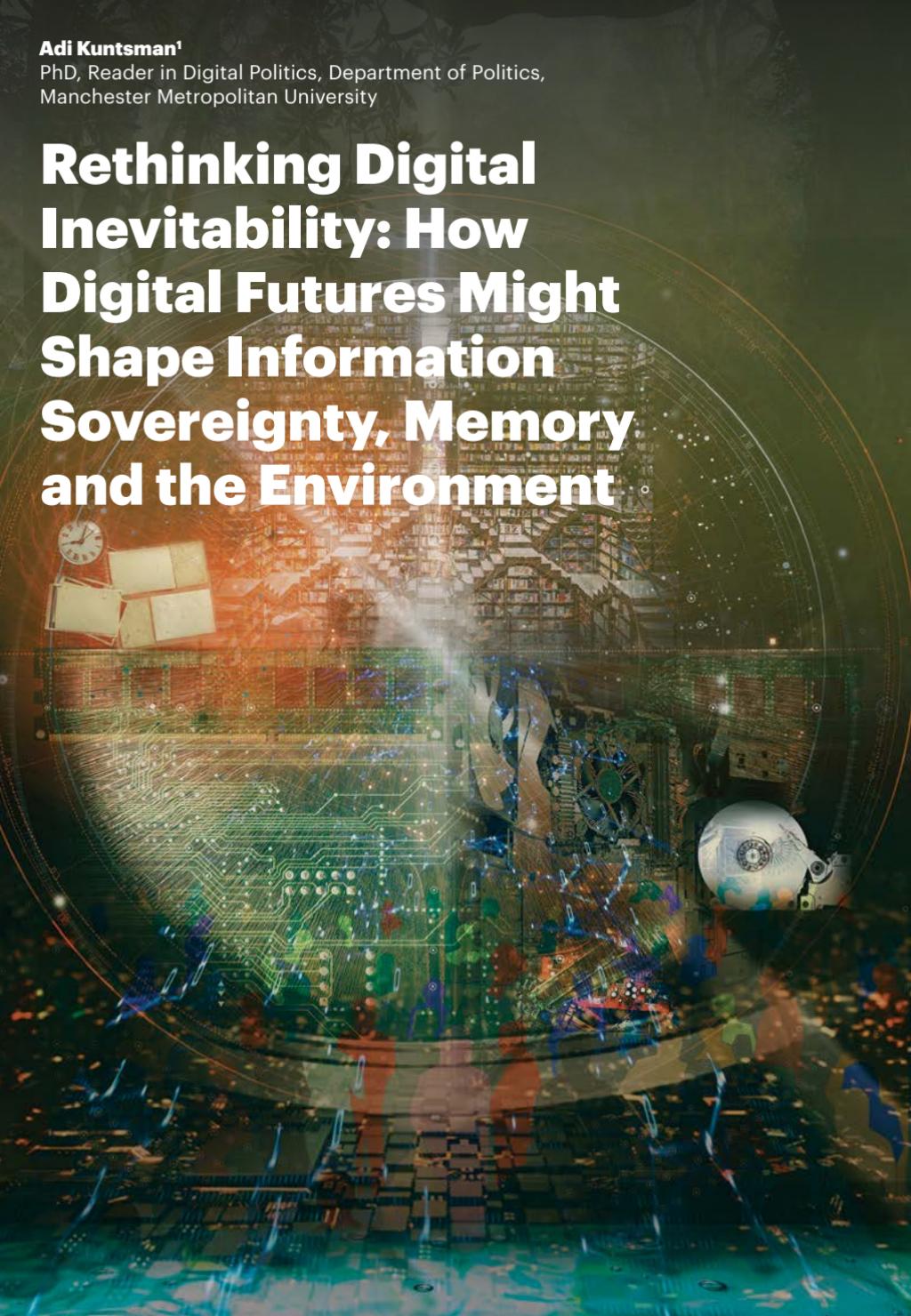**Adi Kuntsman[1]**
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Rethinking Digital Inevitability: How Digital Futures Might Shape Information Sovereignty, Memory and the Environment

Prologue: an automated new world

The year is 2022. Almost everyone has an "Auto" – a super-app, a digital personal cloud-based assistant, helping organise the user's everyday life. Work meetings, celebrations and holidays are arranged automatically, based on the analysis of past events and preferences. Once finished, their record moves into an online archive. All the incoming social media traffic is automatically sorted; likes, RSVPs and comments are made by the Auto on the user's behalf, leaving only the really urgent or important information for the user's attention. Dating and personal relations are based on a compatibility index, run by the Auto and based on deep analytics of existing data and future predictions; successful weddings are planned by the two people's Autos together; and sometimes, the relationships end if an Auto predicts a high likelihood of one partner's deviant or dangerous behaviour. Life is connected, everywhere and at all times – connected to the web, sensors, cameras, screens and personal gadgets. All information about everything is located on the Internet, and the only way to tap into is it is by using an Auto. Each person can only have one Auto – a legitimate, verified, and unique digital identity, which is supposed to be immune to fraud or replication. All life is entirely transparent, except for the small group of "noninternets" – unconnected citizens who leave no digital trails, do not have Autos and, therefore, do not have access to the Internet. Interpersonal privacy, of course, still exists (privacy settings are active and widely used), allowing navigation of specific interactions, conversations or spaces. Digital invisibility, on the other hand, is impossible – there are no secrets from one's Auto. Instead, there is immortality: after death, the deceased person's Auto changes status to "unloving" and continues to exist, post, and communicate with both its living and unliving digital friends, using compilations of phrases and behavioural scenarios from the deceased's life, analysed and shuffled by the Auto's artificial intelligence. Family and friends visit their departed ones, by calling their voice-activated Autos, or by coming to the cemetery, where

tombstones come to life when "looked" at by the living through special augmented reality glasses.

Digital Inevitability

This is life as it is described in the sci-fi novel, *Auto*, published in 2013 by the British author David Wailing,[2] telling us the story of a very near future to come. Despite its exaggerated nature, common to the genre of sci-fi dystopia, this life resembles the kind of future, often described in policy and popular science, where futurity and the digital are metonymically intertwined, impossible to imagine without one another. The internet, personalised gadgets, and Big Data, we are told, are going to be incorporated into, support and govern all aspects of civilian, economic, political and private life. Creators of digital technologies and policy makers of digital transformation offer us scenarios of a near future, where cities are smart; cars drive themselves; banking and production processes are fully digitised; nature is saved form degradation thanks to smart planning of resources; and citizens are moving effortlessly from one augmented reality screen to another, while remaining connected to each other. All digital services are carried out through personalised devices (bracelets, smart watches, phones or other Wi-Fi-operated gadgets that are positioned on or close to one's body). Every service is adjusted based on individual preferences and geolocation; every move is calculated and registered.

Not everything is flawless in such public futuristic imaginaries. Sceptics remind us that in order to move to a fully digital future, we must consider the need for digital literacy: that without understanding the work of algorithms, netiquette and on-line safety protocols, digital automation is neither feasible nor effective.[3] We are also reminded that it is crucial to remember the high costs of digital gadgets; the affordability of digital connection and other issues of digital inequalities – what is known as the "digital divide," which includes individual differences in wealth and education, as well

as larger geo-political disparities in access to communication infrastructure, without which a digital future is not possible.[4]

Those concerned with social justice emphasise that a successful digital future is contingent on democratised affordability of digital technologies – whether with regards to money or skills and literacy – in other words, that digital education needs to be widespread; and that all devices must be universally affordable.[5] However, despite the critiques and the caution, no one disagrees with the advantages of digital technologies themselves; no one challenges the over-all attractiveness of digital futurity. I call this a paradigm of "digital inevitability": when the fact of the future being digital is predetermined, fully accepted and rarely challenged, and so the only matters debatable are strategies of achieving justice in distributing digital resources and access.

For most protagonists of Wailing's novel, just as for many of us today, the comfort and convenience offered by this digital inevitability conceal just how problematic it already is (and will become even more so), for personal life and for civil society alike. And this is not only because the auto-mated life of the near future is seamless and appealing, but also because our notions of transparency, in/dependency, memory, freedom and even life and death are changing. For example, Wailing describes a growing threat to freedoms and the disappearance of anonymity: online communication, everyday activities and even information search cannot be anonymous and traceless. Similarly, in his book there is no anonymity of the body. Temperature, breathing, heart rate etc. are routinely recorded and monitored by a range of sensors; and this information can be used for a range of purposes, both in the immediate moment – for example, when heart rate or blood pressure indicate an emotional change – as well as in the future, as evidence. Travel, physical movements and activities in one's home or in public spaces are noted and documented by various gadgets; analysed by algorithms; and used in future planning.

Yet, instead of being terrified by these developments, citizens in Wailing's near future have full and utter faith in

digital data and its necessity. Data will protect their health, they believe; data will find the best travel routes; offer most efficient city planning; data will protect personal safety; combat crime and defeat death. All this sounds deeply familiar to our realities today, where the cult of data characterises both the so-called democratic and wealthy societies, and those that are more authoritarian, and/or economically struggling. Ironically, in the world of poverty, injustice, tyranny and corruption many tend to believe that the AI would be more impartial than, for instance, a corrupted judge or a policeman. And this despite the fact that research has already clearly demonstrated that algorithms and the AI are not neutral; that they recreate and enhance racial and gendered stereotypes; that they serve the powerful; that they are based on the logic of profit rather than the logic of justice; and they continuously and substantially interfere in the process of information access.[6]

Digital and networked memory is vulnerable

In many ways, the convenient but terrifying future described by Wailing already exists in the present, even if in a somewhat experimental form. For example, digital technologies are already playing a substantial role in shaping and functionality of individual memory. In the last decade digitisation of memory has dramatically increased, and the process is ongoing.[7] Our phones are remembering phone numbers and contact details of other people for us; diaries, calendars and reminder apps keep track of our exercise, eating, sleep and menstrual cycle. Our photographs live on various "clouds"; and everyday moments – what might be called *the archive of the everyday* – are spread across social networks, sites and communication platforms.

Beyond the individual, digital technologies are central to reorganising collective memories, too – whether organisational, community-based, or even in broader socio-cultural contexts. Businesses and governmental services (taxes,

voting, paying bills) are going paperless, creating logs and archives that are simultaneously individual and institutional. Today, most organisations hold substantial digital repositories: emails, reports, data etc. Libraries, museums and collections are actively joining (or planning to join) the process of digitisation, knows as Digital Humanities, where heritage, past histories and current cultural production are formatted, catalogued and accessed via digital tools.

Digitisation of cultural artefacts is not only about a more convenient way of curating or providing a better access, that transcends physical distance, for example, when one can virtually "visit" museums and libraries across the word without leaving one's own room. Furthermore, it is also about reconsidering the very idea of an archive. Digitisation allows us to seek, find, retrieve and analyse information on a completely different level: we can code, describe patterns and tendencies across large corpora of data; and "slice" data in various ways, that was not previously impossible. At the same time, our approach to cultural heritage is changing, too, especially when it comes to the threat of disappearance. Today, to *preserve* often equates to *digitise*; and digitisation, in turn, has become a synonym of preservation. This is particularly true for groups and communities, who are denied a voice and presence in traditional historiography, often due to reasons of censorship, ongoing political contestation, or other forms of conflict, where histories are violently erased, and where physical commemoration can be an act of resistance or treason.

It seems, then, that it becomes harder and harder to imagine a future without such mnemonic possibilities. As platforms and gadgets expand their presence in our lives, and as our daily experiences of creating and accessing memories becomes more integrated with digital technologies, it could very well be true that in the near future digitisation of memory would become almost complete. However, one must consider carefully and critically, what such a future might entail. First of all, excessive reliance on digital technologies can weaken our memory, when we

delegate all responsibility to memorise and hold information to computers, cloud storages and the AI. And this is not just about the decline in individual mnemonic skills – something that psychologists and educators have been warning about for a while[8] – but also about the possible destruction and disappearance of entire cultural segments.

A case in point would be the numerous efforts to preserve oral traditions, for example of small remote communities or in cases of rapidly shrinking numbers of native speakers of certain language, often in Indigenous and native communities, destroyed by settler colonialism, state expansion, and generations of forced assimilation. Preservation efforts, often led by outside experts (ethnographers, linguists, anthropologists), are carried out via digital recording and subsequent online archiving, as well as via various projects where traditions are shared and displayed in social networks and virtual museums. Here, the traditions and the disappearing heritage are indeed preserved, but *only* for those who are themselves digitally literate and have access to the internet. This, de facto, means that such digital future memories are accessible only to those in the younger generation who are in possession of digital tools and skills, or, more often, to those outside the community whose life, history and spirit are being preserved – the researchers, the "experts," and the international audience. This way, instead of nurturing and supporting communities' own ways of knowledge transmission and preservation, and placing the ownership of the process in the community's hands, digital memory creates a dispossessed heritage, once that is dependent on digital skills, which, in turn, is dependent on platform power and the digital economy as a whole.

Dependency on platforms and algorithms, in turn, can lead to the loss of control over the process of archiving and, ultimately, result in the loss of the archives themselves. This danger is particularly acute for those whose collective access to heritage and history is subordinate to state and/or expert powers; but in some respects, this same danger lingers for everyone. Consider, for example, the ways cur-

rent social media platforms such as Facebook mediate and control access to one's own digital memories. Currently, Facebook allows its users to access events that took place on the same day but in previous years, via the "on that day" feature. Past posts are often added to one's feed by an algorithm; and users are actively encouraged to share their "memories." Free browsing of future posts, on the other hand, does not exist as an easy option – one can manually scroll through feeds by year, but such scrolling brings inaccurate and incomplete results, and at some point, the loading crashes when too many past posts are brought up. The archiving architecture of Facebook, in other words, is about persistent, algorithmically structured recollections and about networked and performative remembering – but in a structured, controlled and limiting way.

Furthermore, the architecture and the terms of use, on Facebook or any other platform, can and do change over time, expanding or minimising access to one's memories, without warning and consultation. What is not available today, might be offered tomorrow; and vice versa. Access to memories can be restricted; or they can force-flood our screens, catching us off guard.[9] Platforms can be bought, go bankrupt, close down or change owners, modify their terms of use or delete their archives entirely – due to their own preferences, or because of political pressure. The future of memory, in other words, is already intertwined with techno-autocracy, hostage to platform gate-keeping, and political and corporate guardianship. All this poses a major threat to information sovereignty – and I am using this term more broadly here. Traditionally, information sovereignty refers mainly to the states' ability to control information flows within their borders, without external interventions – however, here I wish to make a point by expanding the concept of information sovereignty as a tool to think about our access to our own digital heritage – be it personal, communal or ancestral.

With such a critical understanding of information and memory sovereignty, our view of digital memory is transformed; and our beliefs are re-evaluated. Digital archives

carry an illusion of precision, neutrality, and timelessness: we think that Facebook does not forget; that photographs and videos do not lie; that digitised libraries do not have secret rooms and closed storage the way physical museums do; and that everything, saved on a cloud storage, will live there forever. However this is a dangerous illusion: digital memory *can* be timeless and firm; but it is neither impartial nor always precise. On one hand, today digital memory is already tied to unique personal identification (an email, a profile, an IP address, phone or computer details) and can already create an extensive and permanent digital trace: search results of all searches one has ever conducted on Google or Yandex; one's personal digital dossier, documenting social media behaviour; an archive of online shopping; taxi trips and other journeys; and much, much more. In the future, such a digital dossier might become all encompassing, just as it did for the protagonists of *Auto*. The digital dossier will record and monitor all spheres of life, coordinating and controlling *all* databases – personal, corporate and state-owned. Such dataficaiton should be a matter of concern, because of its potential totalitarian power; and also because it might lead to complete individual powerlessness and loss of rights.

On the other hand, digital memory is not always impartial, and not always precise. For example, our everyday archives on social media are ridden with silences, exaggerations, and self-censorship, which would not be visible to an archaeologist of the future, and which are sometimes forgotten by the archive subjects themselves, when they look back at their digital memories. Behind every post, selfie, or story might exist a completely different reality, one that may no longer be remembered. What becomes the digital memories we rely on are distortions, beautifying, and sometimes straightforward lies; deleted posts; removed images; not to mention political censorship and large scale blocking of whole sites and domains.

State archives, museums and libraries can have similar flaws, because their very existence begins with deliberate decisions regarding what to digitise and what to leave out

(read: what is to be allowed into the digital future, and what is to be relegated to oblivion). Digital archives are not untouchable, and not ageless: their authors or owners can edit them after the fact; they can be arrested by police or state bodies. The hardware they are made of may become obsolete – How many of us remember what floppy discs are? How many of us own one and can access its content? Servers may get damaged by flooding or overheating, destroying the keys to our past forever.

This hope that digital archives are indestructible – "everything can be found – nothing is lost" as the popular Russian joke about search engines goes.[10] The seemingly endless storage of digital memory – another illusion, supported by both the expanding sizes of many free cloud services, and by the affordability of the paid ones – conceals the fact that digital archives are unreliable and fragile, and increasingly dependent on natural resources to sustain them; and these resources are finite.[11] The finite materiality of the digital world is invisible, until the moment when the rising cost of storage comes up, as it happened, for example, in Wailing's book, where some Autos of dead people continued to enjoy a luxurious afterlife, while the functionality of others was severely cut off after they were moved to cheaper servers because the families could not afford the cost of full "unloving." The finite materiality of the digital comes up when a server is hacked and precious memories are lost. Or when we consider the possibility that a server, holding the data which our precious memories are made of, may become flooded with water or run out of energy to continue its operation.

Digital toxicity

I would like to pause here and dwell on the materiality of the digital for a bit longer. At present, the topic is rarely addressed by humanities and social science researchers of digital technologies. Among media scholars we see

what Sibo Chen has aptly described as a belief in the "digital sublime": as if our digital world is full of disembodied ideas, texts narratives, semiotic structures, and nothing else.[12] What is left outside of our field of vision, here, are the metal and plastic of which our computers and smartphones are made of; the infrastructure of cables and servers; as well as the graveyards for digital devices after the end of their short lives, made disposable by design.

It is no wonder, then, that digital technologies are still perceived not only as environmentally neutral, but also as specifically *good* for the environment. For example, moving to paperless services – which are saving trees and minimise paper waste – are seen as a great alternative to traditional offices. Among environmentally-oriented organisations and projects which focus on the so called "sustainable futures," digital technologies usually play a key role. Virtual modelling is seen as a green alternative to traditional ways of production, be it clothes, building environments or many other objects of everyday use. Modelling, just like paperless offices, reduces the use of raw materials and the flow of waste, since a large share of the process is done virtually. Similarly, organisations and services dedicated to environmental protection rely on digital technologies in pretty much everything: sensors collect data or warn around natural disasters; scientists rely on big data analytics – and often claim that in the future, environmental protection will be fully computerised.

This kind of digital futurity is particularly present in public and policy imaginaries of smart cities. Although the main aim of a "smart city" is management and efficiency of urban operations, rather than necessarily environmental protection, almost all smart city projects have an ecological platform. Some argue that air pollution is will be reduced when sensors monitor, and big data analyses pollution levels and CO_2 emissions, directing flows of traffic accordingly and sometimes alerting citizens about dangerously high levels of pollution. The same forms of monitoring and data analytics will calculate the pollution

of land and water, and devise appropriate strategies such as planting trees or redirecting water flows. Other smart cities plan smart bins and smart waste management: the bins, equipped with sensors and wireless communication, would only be emptied when necessary (thus reducing carbon emissions from unnecessary travel of waste collectors); all the while educating citizens about correct recycling. And yet others promise to give control over the city's life to the residents, by creating accessible dashboards containing all data about the city.

Material damages inflicted by the digital are rarely discussed, both by the smart city enthusiasts and by the researchers of digital society and culture, and that despite the wealth of evidence and studies in the fields of energy, geography, environmental science and human health. The mining of the rare metals needed to produce our devices is itself a process ridden with toxic leaks, poisoning the ground, rivers and seas, and destroying whole co-systems and displacing communities. Equally if not more toxic is the e-waste generated by the discarded digital devices, which do not go to die on the cloud, as it were, but literally end up buried in the ground, in e-waste disposal sites, poisoning the water and the people who work there.[13]

Digital technologies are toxic not only when they born and die; but also throughout their existence and use. Wireless communication systems, as well as every "smart" (i.e., wireless or cellular) device have electromagnetic radiation, potentially harmful to humans and animals. Underwater cables create ultrasound signals which are damaging to sea life. Server farms emit large amounts of heat.[14] And all digital data and the way it is stored and transmitted have very high energy demands. According to some scholars, the internet is already consuming 10% of the world's electricity, a figure that grew from 8% in 2012 and continues to grow.[15] The carbon emissions of digital communication are approaching (and, as some argue, have already exceeded) that of air travel.[16] The lead culprits are big data and AI training; followed by social media, cloud storage, bitcoin

mining, internet search, emails.[17] And, considering the progressive growth of the digital world – its devices, platforms, archives, data – today's statistics are only bound to grow, and very, very rapidly at that.

Rethinking digital inevitability

So, is digital inevitability as attractive as it seems? What will happen to civil freedoms, to history and collective memory, if all predictive scenarios are controlled by algorithms, which, in turn, are serving governments and corporations? If archives and memories are scattered across various communication platforms, comply with their laws, are recorded and indexed, and can be either kept forever, or erased momentarily, and all without any consideration of our wishes? What will happen to our health and our environment, when the toxicity of the digital exceeds all safe levels, and when the energy demands outgrow the available resources?

Among scholars of digital technologies in social sciences and the humanities, but also in industry, business, and economics, the paradigm of digital inevitability is currently prevailing. Here, I want to specifically focus on the social sciences and humanities scholars. There are, of course, many critical voices. For example, theorists of digital surveillance and civil rights in the era of datafication warn about the dangers of high levels of biometric recognition and everyday surveillance, leading to almost total transparency and control.[18] But even they argue that surveillance and transparency can work both ways, creating "horizontal surveillance" and possibilities of "sousveillance" (recording activities by those participating in them, often by small wearable cameras).[19] This might offer citizens more control and autonomy in relation to state institutions; it can make law enforcement more accountable, and thus, make governmentality more democratic – or so goes the popular belief.

This, of course, is a matter of interpretation, and there are always more sides to the story. Digital technologies can be improved; they can be used in different ways, at times moving far away from their original design. Technologies created to support state surveillance can be used by activist groups and human rights observers. Platforms designed for corporate gain can be used to mobilise against corporate powers. Scholars of everyday digital sociality remind us that user creativity is boundless, and that the limits of platform affordances can always be pushed. However, the two- or multi-sided story will remain limited, as long as it is trapped within the paradigm of digital inevitability: assuming that technologies will always be there, the debate will remain constrained by questions of how to change or improve them. But what if we ask an entirely different question instead:

What kind of future might we have, if digital technologies are not only equally distributed and horizontally transparent, but also have an off switch or a way out?

On the level of individual users or groups, this is a matter of being able to legitimately exit the world of total connectivity, if one wishes to do so. If a digital future is indeed inevitable, it must have not only the right of equal access, but also the right of refusal – the right to not be part of the database, the right to not be connected, which would not lead to discrimination and full exclusion from comfortable life, freedom of movement, financial security, and full participation in civic life. In practice, this might look like this: services (transport, banking, welfare) should not be completely tied to owning a smartphone or accessing the net. It might also look like the right to withdraw and recall personal data, collected by the state or private companies. Or it might look like the right to move around freely without compulsory biometric registration. Or it might look like the right to have no digital memories; or to have them un-digitised at will, leaving no digital trace afterwards.

On the level of society as a whole, rethinking digital inevitability is a paradigmatic shift. First of all, digital

inevitability, especially in the case of multiple and centrally controlled databases and the all-encompassing web of always-connected smart devices, means too much freedom for governments and corporations, and too little control for ordinary citizens/civilians. But above all, the progressive growth of digital technologies *in the shape and form we have them today* is leading towards a planetary environmental catastrophe.[20]

Rethinking digital inevitability does not mean living in the woods or moving back to the stone age. We do not need to reject scientific progress, or ignore the usefulness of digital media where it is due. What we do need is a fundamental change of perspective with regards to digital technologies, as a synonym of desired futurity. Each time we imagine or plan a future, instead of considering digital solutions as the default option, we should untie the metonymic connection between "futures" and "digital," and ask instead: is this digital solution the best? What are its consequences – for individuals, for society, for the environment? Where are the possible ways out of this digital plan, for those whom it may not fit? And most importantly, what are the alternatives?

Epilogue: a non-digital future?

The first person encountered by Wailing's readers is Michael Walker, a former internet guru, a hacker and information freedom fighter, who tried to bring down the internet after the introduction of "International Internet Regulations" – a fictional law, permitting only one digital identity per individual and instituting complete digital transparency and surveillance of online actions. After a few years in exile, equipped with a fake ID and a face transformed by plastic surgery, Michael returns to the UK, this time to finally destroy the entire digital infrastructure.

This is a typical scenario, boringly common in many western sci-fi films and books, where a lonely hero (usually

a male hacker), fights the entire information system all by himself. In reality, however, change and transformation are a collective effort.

So what can civil society do? First and foremost, we must consider the expansion and even transformation of the very notion of civil rights in the time of total digitisation. These rights need to include control and ownership of one's personal digital data – akin to the European General Data Protection Regulation (GDPR) – and the right to withhold it from states and corporations. Furthermore, this also includes the right to refuse digitality altogether, without losing access to benefits and public services, such as transport, welfare, banking, billing, etc., without being tied to owning a smartphone or accessing the web. In other words, the possibility of living without digital technologies should not compromise the civil rights of 'noninternets', and should not lead to discarded lives, outside the safety of a convenient and safe life. Similarly, the right of refusal includes freedom of movement, not contingent on digital IDs and biometric registration, currently used by many inter-and intra-national border regimes; as well as the right of protection from facial recognition technologies in public places.

Realistically speaking, achieving such rights in the immediate future is unlikely, and civil society therefore should explore active forms of resistance such as collective deletion of social media profiles, as a protest against platform data mining and privacy policy;[21] and proactively working on alternative forms of social care and protection for those excluded from digitised civic life, such as grassroot mutual aid or non-monetary exchanges.

Secondly, civil society needs to play a leading role in rethinking digital inevitability more broadly, in ways most suitable for concrete geo-political locations and socio-cultural contexts. A one-fits-all solution would not work here. For example, for those living in the immediate proximity of data farms or e-waste disposal sites, health concerns might take priority, orienting the organising around resisting the

creation of new toxic sites, and demands to remove those already in existence. At the same time, those located far away from such sites, the question of environmentally sustainable devices or clean energy might remain in the realm of abstraction. Here, the role of civic society lies in creating a sense of collective accountability, and promoting alternatives; reducing the use of digital technologies; repairing, rather than discarding, current devices; or supporting more sustainable alternatives.

Similarly, no universal solution exists for vulnerable and ephemeral digital memory. When memory is already deeply integrated into, and dependent on, existing social networks, platforms and cloud services, civil society can and should develop skills in alternative storage. The effort here, first and foremost, is empowerment away from state and corporate control – but equally, this effort needs to support environmental resilience of virtual memories. One such alternative could be the return to paper archives through a process of de-digitisation. At the same time, those individuals, organisations and communities whose oral or visual heritage exists outside the digital might benefit most from protection from digitisation, and supporting other, non-digital, forms of intergenerational cultural transmission instead.

No one can foresee the future. Perhaps, in a decade or less, everyone would come to be fully and entirely dependent on automation, AI and full transparency and surveillance, akin to that described by Wailing and other sci-fi authors. Or, perhaps, an environmental catastrophe would lead to complete destruction of digital infrastructures, with both the digital social life and the powers that control it disappearing in a blink of an eye. Civil society needs to be ready for both of these scenarios – as well as other possibilities – starting today.

Endnotes

1   I am grateful to Esperanza Miyake, a dear colleague and long-term co-researcher and co-author of works around digital disengagement. Many of the ideas discussed in this article are discussed in our joint publications – see Kuntsman, A. & Miyake, E. (2019). The Paradox and Continuum of Digital Disengagement: Denaturalising Digital Sociality and Technological Connectivity, *Media Culture and Society*, 41 (6), 2019, pp. 901-913; Kuntsman A., Miyake E. & Sam Martin (2019). Re-thinking Digital Health: Data, Appisation and the (im)possibility of 'Opting out', *Digital Health*, https://journals.sagepub.com/doi/10.1177/2055207619880671

     A special thanks goes to Nadine Chambers, whose discussion of the intimate connections between aluminium mining and the aluminium-containing pens and laptops, used to tell the story of this mining, inspired me, several years ago, to focus on the material and environmental implications of digital communication. See Chambers, N. (2020). *De Zie Contre Menti Kaba* – When Two Eyes Meet the Lie Ends, in Jack D. Webb (ed.), *Memory, Migration and Decolonization in the Caribbean and Beyond, 1804 to the Present*, SAS Academic Publishers, 2020.

     Finally, I thank the editors for their feedback on an earlier draft of this chapter.

2   Wailing, D. (2013). *Auto*, self-published e-book, http://www.davidwailing.com/stories/auto/

3   The literature on the notion of digital literacy is substantial, covering both theoretical matters and practical considerations. See, for example, Katharine Reedy and Jo Parker, Digital Literacy Unpacked, American Library Association, 2018. For some, digital literacy is first and foremost about the ability to understand and navigate communication eco-systems, understand contexts and (n)etiquette, as well as being able to practice personal and data safety. Recently, a rising number of scholars discuss digital literacy also in the context of disinformation and the ability to check and verify "fake news."

4   Ragnedda, M. (ed.) (2015). *The Digital Divide*, Routledge.

5   See, for example, Goggin, G. (2014). New ideas for digital affordability: Is a paradigm shift possible?, *Journal of Telecommunications and the Digital Economy*, 2 (2); Leung, L. (2014). Availability, access and affordability across digital divides: Common experiences amongst minority groups, *Journal of Telecommunications and the Digital Economy*, 2 (2), 2014.

6   See, for example, Noble, S. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York University Press; Murav'ev, D. (2019). *Обществу хотелось бы знать, как алгоритм принимает*

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7   Garde-Hansen, J., Hoskins, A., Reading, A. (Eds.) (2009). *Save As... Digital memories,* Palgrave; Kate Eichhorn (2019). *The End of Forgetting: Growing up with Social Media*, Harvard University Press.

8   Gwinn, J. (2013). Overuse of Technology Can Lead to 'Digital Dementia', alzheimers.net. URL: https://www.alzheimers.net/overuse-of-technology-can-lead-to-digital-dementia/; Perry, P. (2016). Cognitive Offloading: How the Internet Is Changing the Human Brain, Big Think. URL: https://bigthink.com/philip-perry/cognitive-offloading-how-the-internet-is-changing-the-human-brain

9   As, for example, happened in 2014 when Facebook added the "This is what your year looked like" highlight to its "year in review" feature. Algorithmically selected photos – usually those that received most user engagement in emoticons and comments – were selected and pushed into users' feeds, causing distress among many users, for example, when the selected photos were of their loved ones who had died.

10 As per a well-known, now already stale Russian internet joke: "Yandex: 'Everything can be found'. Google: 'Nothing was ever lost'."

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