



There Isn't an App for That: Analogue and Digital Politics in the Age of Platform Capitalism

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'What then shall we choose? Weight or lightness?'

Milan Kundera,

The Unbearable Lightness of Being (1984: 3).

Abstract

The move toward digitality and its individual-level spread through computer applications (apps) is transforming how we communicate. A major component of this transformation is the political process: both how it is enacted and how effective it is for the promotion of democracy. The political process has become both faster and 'lighter'. The acceleration of the political process has received considerable attention over the last decade, but the essay introduces the idea of a 'lightness' that accompanies acceleration. This is connected to digitality and its concomitant diminution of our inherent human analogue capacities. The analogue capacities that enabled democratic politics in its modern version have been eclipsed by what are their digital antitheses. An analogue engendered political process continues to exist, but it functions at the elite levels of business and government; whereas the digitally-created 'lightness' of the virtual sphere constitutes the political process for the growing millions. The essay argues that this is an essentially alienating sphere that offers little by way of the traction and roots necessary for democratic and inclusive politics to grow and flourish.

Keywords

Digital, analogue, politics, time, apps, globalisation

Introduction

The mobile app is a major interface between the individual and the network. It functions presently as both cause and effect of a highly commodified digital culture

that is a cornerstone of the sustainability of the web. However, this culture is rather more than a powerful tool for the logic of accumulation. The suffusion of the app is also a sign of our post-digital ontology. Bernard Stiegler, for example, argues that the post-digital has already asserted itself, and, with the app as an element of this, has created a new sensibility through a transformation from the ‘process of the grammatisation of flows, [to] a process of discretization’ (2009: 40). What he suggests is a social, political, economic and communicative mass migration from analogue (flowing) to digital (discretize) modes of being, and this has created, as its central effect, more ‘efficient’ forms of technological control over society (p.38). This transformation, in Stiegler’s reading, is offered as a negative technological revolution, a ‘new technical milieu’ that ‘articulates and disarticulates the *psychical* milieu’ (p.40). Stiegler’s insight is important, and I develop and extend it here.

Whilst Stiegler considers the *effect* of an important transformation/revolution, he does not reflect upon the transformation/revolution *itself*. In other words, he does not ask: what exactly does it mean to be in a world dominated by digital technologies – in comparison with the world of analogue technology that we are leaving behind? Stiegler does not ask; and few other thinkers do today either. Part of the reason that the analogue-to-digital transition is viewed consciously or unconsciously in terms of a straightforward technological development is connected to something he argues elsewhere in his essay. Stiegler sees the hegemony of digitality¹ as inherently ‘dissociating’ and engendering of ‘the systematic and permanent control of attention and behaviour’ (p.38). Moreover, digitality ‘concretizes globalisation in the form of real time and the delegation of decision-making processes to the automatism of remote-control systems’ (p.32). What this means is that across a wider sphere, users are drawn – often through the app – into a temporally-accelerated sphere. This is a time-space compression that is its own form of control, creating what Virilio, over twenty years ago, foresaw as a form of time-based tyranny, where the growing velocity of information constituted a ‘dictatorship’ over cognitive agency (Virilio, 1995). The rapidity, comprehensiveness, and delegation to automaticity that accompanied digitality, and made it possible, has left us collectively unable to react to or reflect upon root causes and their meanings. Digitality. Discretization.

Dissociation. Time-space compression. These are the fundamental processes under which the app was created and now thrives.

Digital natives were born to this milieu. Surveys show that populations tend to accept digitality as constitutive of efficiency and convenience, or alternatively as tools that are potentially beneficial – if only they can be more democratically regulated (see Cornfield, 2005; Smith, 2018). In the intellectual sphere, where people are schooled to think more reflectively and systematically, the analogue-digital question did gain some purchase in the 1990s, as I will note below, but this faded as digitality itself became all-encompassing. Seemingly more important and immediate questions then began to compete for academic attention. And so those disciplines with perhaps the most ‘natural’ investment in the analogue-digital question, such as media theory, communications studies, social theory and so on, instead began to theorize upon the *effects* of digitality (political, economic, cultural, communicative) as opposed to the nature of digitality itself (i.e. Haraway, 1991; Poster, 1992; Heim, 1993; Negroponte, 1995; Mitchell, 1996; Hayles, 1999; Lunenfeld, 2000; Manovich, 2001). Important for my purpose here is that the established fact of digitality led to what may best be described as a gap where a systematic study of the ontological position of the human relative to the digital should be. Of course, the critical literature on the digital is a very large one, and I have only signposted it in the previous references. However, a certain direction in the ‘digital turn’ of the 1990s was taken. It was (and still is) primarily an outward turn; one directed toward digital effects instead of toward a fundamental theorizing of the structures of digital logic and the human relationship to it.

I want to reflect here upon the question of the nature of digital technology. I will argue that digital logic creates a *different category* of machine, one that is fundamentally different from the analogue machines that dominated the human-technology relationship since the beginnings of our species-drift towards tool-use. From this I consider what I see as the inescapable conclusion: that we ourselves are analogue creatures from an analogue world that is being eclipsed by the growing hegemony of digitality. Stiegler noted digital’s ‘dissociating’ effect vis-à-vis the human agent. I take his concept further to argue that digitality constitutes a profound alienation – not

only from the analogue context and history that enabled us to survive and thrive as a species, to create the worlds, institutions, cultures, ways of seeing and being that we did – but also from each other acting as inherently analogue communicative beings. More particularly it is the digitalising and networking of the communicative process *as it pertains to the political process* that I will theorise here. The essay will argue that digitality as the vector of the communicative process undermines politics in its broad liberal-democratic forms, and renders the analogue political process as unviable in the networked context. The app itself is unremarkable as far as digital enabling goes. It is a work of relatively unsophisticated algorithmic coding. But I use it here because the app, especially since 2010, has become a significant driver of the web ecology and a major point of entry into digital political practice.

The business of apps

App proliferation is driven by the growth of the smartphone, which itself has become a dominant form of web-based communication. Such growth reflects a corporate war of movement taking place in virtual space, and is seen by theorists such as Nick Srnicek as the driving force behind the ‘great platform wars’ where a once relatively open web is being replaced by ‘increasingly closed apps’ (2017: 112). From the simple to the complex and from the vacuous to the intelligent, the number of downloadable apps is vast, with the powerful lure being that many are initially free to the user. The largest provider of apps, Apple Inc., has approximately 1.2 million in its Apple Store and collectively these have been downloaded 140 billion times (Statista, 2018). Users themselves can arbitrate their success or failure – with the ‘going viral’ phenomenon bringing its own magnetising power to the process. The attraction of apps is boosted through the ‘natural user interface’ (NUI) feature. Simplicity of use through touchscreen functionality and what is a mostly easy and quick learning curve gives ‘the user the feeling that they are instantly and continuously successful’ within the app experience, serving to draw the user in further (Wikipedia, 2018).

There are at least three identifiable user contexts that may be identified from those apps able to gain traction. The first is the largely privatised use of an app, say, a game app that users will spend time on whenever and wherever the urge takes them. That

these are massively popular can be gauged informally by observing the numbers using them in trains, buses, and cafes, etc. Second is the class of app that enable the user in the economy: apps such as eBay, Uber, YouTube, airbnb and many others. Here individuals move from the non-pecuniary individuated realm into the digital economy where they are buying, selling, working and hustling to make money either through choice or necessity. Third is the class of social networking apps, primarily Facebook, which is back-ended by powerful, multilayered and integrated platforms combining many functions that engage the user in increasingly connective intermediation processes.

An app like Facebook acts like a driftnet for social experience: it gathers up previously disparate forms of communicative practice and converts it into a commercial resource of retrievable and manipulable data. An underside of this process is that as users we forget (or do not realise) that the digitalisation of social experience has become the algorithmic basis for profiling and targeting, and not just by Facebook, but also third parties who trade in such data, or steal it through hacking (Privacy International, 2018). This is the case not least in the practice of politics. However, before we consider the effects of the app-driven transformation of political action, we need first to theorise the context of the analogue-to-digital transformation, and to consider the effects of this for those who enact the political within the field of digitality.

Being analogue in a digital world

From the title of Nicholas Negroponte's influential 1995 book, *Being Digital*, one might infer that he argues that we were once analogue but have become digital. That would be wrong. *Being Digital* is indeed about the rise of digital technologies, but all Negroponte's references to analogue are concerned with technologies such as television and telephone. The noun 'being' in the title misleads because it does not refer to a transforming ontological state, but simply to a change of technological environment. This is perhaps understandable because until very recently the question 'are we analogue?' was one few thought to ask. Technologically speaking there was no reason to ask because 'analogue' was almost all there was, and so nothing to contrast this state with. I want to argue that with the rise of digitality, not only has

our technological environment changed, but that this change has revealed us as analogue beings – an ancient ontological state that is being outmoded.

My starting-point is that technology is what defines us as a species (Gehlen, 1980). Accordingly, the rise of digital technologies requires a deeper assessment of the ontological effects of the analogue-to-digital shift. I begin therefore from the premise that given human beings were at the very centre of an analogue universe they themselves created through analogue technologies – would it not be reasonable to suppose that our ‘being’ is analogue too?

The OED defines analogue as ‘a person or thing seen as comparable to another’. The term is derived from the Greek word *analogon*, which means ‘equivalent’ or ‘proportionate’. The OED offers a different understanding from the everyday definition that connotes televisions and telephones and machines of some sort. The first thing to note is that it is *human-centred and human-scaled*. It suggests that ‘equivalency’ or ‘proportionality’ are about the relationship between people and things – in the context of their immediate environment. It was the philosopher Democritus who first considered the human-technology-environment relationship in his idea that humans created technologies through imitating what they observed in nature. And so the skill of the spider in the action of ‘weaving and mending, or the swallow in house-building’ are examples of the cues in nature that enabled humans to adapt and control their environments (Menn, 2015: 18). Humans developed tools and techniques based upon what they saw around them, and from materials that were immediately to hand.

Scholars have only recently begun to look at this again. Media theorist Silvia Estévez, for example, considers our analogue essence as being rooted in the human relationship with technology and the natural environment. Key to this relationship, she argues, is the psychological process of *recognition*. Estévez expresses clearly the general principle of recognition in technology-human-environment interaction that has shaped how we have acted upon the world for thousands of years. The essence of analogue technologies, she writes, is that ‘their activity crosses time and space in a visible way that allows us to grasp [to recognise] the link between a movement and

its effect, the process, the continuity' (2009: 402). And so an airplane may today be a highly complex technology that pushes the boundaries of analogue recognition, but in its basic activity of flight we still recognise it in nature in the action of birds. That the airplane is modelled on flight in nature is readily graspable in the Democritean sense if we choose to consider it. The point is that for almost all of human history we did not have to consider analogue in this reflective sense, because the process seemed obvious and 'natural' and there were anyway no alternative technologies to challenge this ancient relationship.

Computers and digitality have changed this. Digital logic has no recognizable analogue in nature; neither is it human-centred or human-scaled. Estévez writes that 'Digital machines do not operate physically like something we could recognise in nature' (Ibid). It is a point taken to a more radical extension by digital philosopher Laura Lotti, who writes that computers 'enjoy a mode of existence proper to their own being' (2018: 51). This also recalls what Jacques Ellul, writing in the 1960s, regarding the autonomy of automation, called the 'characterology' of emerging computer technique, which brings forth the 'attendant exclusion of man' (Ellul, 1964: 135). With such autonomy, digital logic colonises analogue technology's functioning (e.g. the typewriter becomes a networked word processor) and forces it to conform – or kills it off as inefficient if it proves resistant. We know this at the technical level, but where do humans stand in this process? Having no recognisable analogue in nature means that we do not easily grasp, or recognise, what digital does at the technology-human-environment level. Computer logic is invisible to us, and it operates at speeds that do not allow us to discern the 'link between a movement and its effect' (Estévez, 2009: 402). Indeed, in the networked context, especially, digital computers are so radically different that they function as a kind of 'magic', a 'fascination with automatism' that is driven by what Arnold Gehlen terms a 'prerational impulse', which perhaps explains why we tend to be so in awe of them and so vulnerable to their power (Gehlen, 1980: 17-18). It is crucial to understand this vulnerability if we wish to understand the loss of power and control that digital logic effects, both at the individual and collective level. Control over technologies and technological development gave humans the illusion of mastery over their environment (Hassan, 2017). Whether this is true or false, by means of increasingly

sophisticated automation, computers take from us control of technological processes. In this context we can understand what Neil Postman meant in 1993 when he wrote: ‘computers do no work; they direct work...and have little value without something to control’ (1993: 115). That ‘something’ is our relationship with technology, and the cultures and societies that we created through this historical (analogue) interaction.

The app is the tip of the spear in the process of digitality. As Evgeny Morozov (2015: npn) puts it, ‘the app is the end point of [the] much broader matrix of social, cultural, and economic relations’ that is neoliberal globalisation. The capitalist competition that propels digitality, however, ensures that the app is an always-changing and improving interface. With the smartphone we have access to a multitude of apps that are literally and persistently asking to be activated. Engineered purposely to addict by triggering the dopamine reaction in the brain, apps such as Facebook, or WhatsApp, or Instagram have quickly naturalised the habituated checking action that creates an intense but one-sided human-digital relationship (Lanier, 2018: 8-11). Such intensity, in the wireless and networked context, forms what Mark B. N. Hansen terms ‘atmospheric media’; media that are characterised by their powerful capacity to ‘solicit our engagement beneath the threshold of attention’ (2012: 498).

Much that was once analogue ‘natural’ in our communicative practice has become digital ‘atmospheric’. An effect of this has been increasingly less ‘interaction’ as we traditionally understood the term in social theory or political sociology – where person-to-person interaction forms the basis of social relations. Instead the ‘interface’ – where ‘user meets computer’ – becomes the default position for an array of fundamental social relations. We need to think about what this transition means in a general sense before considering its effects upon political communication and political action. The first thing to say is that in interface mode we become physically alone – ‘alone together’ as Sherry Turkle (2010) has characterised it. And the interface mode forms both the threshold and the vector of digitality. It simultaneously enables us to be apart from and to be part of the same communicative process. For example, to ‘lurk’ in social media forums expresses this uniquely digital capacity to be apart from, yet at the same time be a part of, human

communication. This is very different from traditional interaction through physical presence where all kinds of linguistic, cultural and body cues are apparent. Such analogue interaction creates social, cultural and political obligations and responsibilities that have no correspondence, no equivalent 'recognition' within digital atmospherics.

Analogue politics: what was it and do we still need it?

Connecting the technological with the political, the political philosopher Régis Debray argues that the major communications technologies used throughout history have played a key role in how political thought becomes social reality (2007: 5). The principal technologies of writing, print and the evolving mass media of the 18th Century, for example, made possible a certain kind of politics and political process, the liberal-democratic politics that we still see in their modern derivations around the world today. Books, pamphlets and treatises were analogue technologies creating analogue politics for analogue beings in an analogue world that we took to be natural because it corresponded to nature and to human cognitive and physical capacities – to the human scale – and to where the link between cause and effect in their circulation was more or less graspable. Importantly, it was such acting upon the world in ways that appeared 'natural' and in ways that had endured for a very long time, that gave humans the capacity to create the modern world and the modern political process. For Debray, it was through such 'material forms and processes' that political ideas were conceived and disseminated. And as they acted upon political society they did so through analogue 'communication networks that enabled thought to have social existence' (Ibid).

In its broadest sense, analogue politics is offline politics. This does not mean offline politics in an online-dominated world. As I will argue presently, this is a deformed and weakened political process. What I want to consider in this section is offline politics when offline politics was all there was. The first point is that at its most fundamental level, the political process is motivated through communication. But following Debray and picking up on Marshal McLuhan's 'the medium is the message', it is not only that the technologies that we use give social currency to political ideas, but that the *ideas themselves* are shaped by the technology, acting as the

expression of the potentials and constraints that are inherent in any particular medium.

For instance, the ‘Republic of Letters’ that Dena Goodman (1994) describes, wherein the major philosophes of the 18th Century created their own networks of correspondence that served to materialise their thought and transform their world as a consequence, were obviously incapable, technologically, to think in concepts such as ‘real-time’, or McLuhan’s ‘global village’. The actual ideas expressed by Kant or Voltaire or Franklin or Paine through letters and books and journals were demarcated by the technologically-generated time and space of their era. The philosophes had their own time (clock-time), and their own space, an abstract space beyond the physical space of their own hometown, or village, or country. Debray termed this the ‘graphosphere’, elite 18th Century society networked through writing and print and constituting ‘a milieu for the reproduction of certain kinds of life and thought’ (2007: 6). In the context of political ideas, contemporaneous media, such as print, and their communication by foot, or carriage, or ship, had sufficient tractive force in time and space so as to allow for the conception and creation of temporally-specific political ideas, political parties and political institutions (Wolin, 1997). And from that era onward, ideas, parties and institutions grew – as did modern society more broadly – at an analogue technology-driven pace. This was fast enough for the transatlantic milieu of North America and Western Europe to transform dramatically and revolutionarily – indeed at a pace never before seen in human history. But it was slow enough and human-scaled enough also for people to recognise the trajectory of the cause and effect of change, and slow enough for democratic political institutions and political parties to take root and ‘naturalise’ the process.

Media technology underpins communication, and thus the political process. Media technology gave distinctive shape to liberal democracy during the Enlightenment and Industrial Revolution. The ideas and processes, the institutions and practices, were politics enacted as an expression of human-technological interaction. From the pen to the printing press, and from mass media to mass rallies, people, institutions and parties used technologies to act upon their environment in order to change it in some way: positively (in terms of developing democratic norms), or negatively, with history

exhibiting no shortage of instances when ‘progress’ in human affairs was in reverse (Gray, 2002: 153-190). Capitalism was of course very much part of this process, with its dynamic and innovatory energy warranting that media technology (any technology) would not remain static. However, Debray’s ‘graphosphere’ would not be superseded until the arrival of what he termed the ‘videosphere’, or the ‘age of the image’, in the late 20th Century (2007: 5). Prolonged analogue media dominance meant that these Enlightenment foundations could settle and enshrine precepts that would become the modern liberal-democratic process. And so deeply did these suffuse our consciousness and our daily practice of politics that they were considered at the time of their formation, and still today, as the discovery and application of a kind of timeless process; something that always was and would always be. For their part, the philosophes imagined they were uncovering something essential, something lost with the demise of Classical Greece. And in the new American Republic of the 1770s, for example, they revived and almost deified concepts from Athenian democracy in documents such as the Declaration of Independence, which affirmed that ‘all men are created equal’ was a ‘truth’ that was ‘self-evident’.

This has been a simple outline of analogue politics. But it illustrates the general political processes that came to us, via Greece and the Enlightenment, and which also gave rationale and coherence to modernity and capitalist industrialisation. Analogue technologies shaped the time and space of political ideas, allowing them to colonise and institutionalise to the point where they became the ‘recognisable’ practice of liberal democracy. Today this template has its regional variants, but most correspond to what Amartya Sen terms a ‘universal value’, one that has an immanently ‘constructive function’ (1999: 15), meaning that the universal has particularistic expressions. Analogue liberal democracy is thus flexible and often pragmatic, but it adheres to basic principles of equality, justice and freedom. I asked in the subheading above, regarding such politics: ‘do we still need it?’ To this I need to add: ‘can digital communication provide it?’ The short answer to the first question is ‘yes’. Moreover, given liberal democracy’s fragile and contingent composition, we must continually strive to deploy its values and constructive functionality everywhere and at all times – in ways appropriate to their context. However, it is a key concern here that this heritage and the capacities that it has transmitted down the centuries

are being diminished by digitality. New technologies sometimes improve upon the old, and sometimes they don't; but digital logic created another category of technology altogether. It is this realisation that reveals the profound challenge that digitality denotes not only for the analogue world that it renders obsolete; it also exposes an ontological challenge to what we are, and to our continued capacity to practise politics in what had become the 'traditional' ways.

The unbearable lightness of being digital

At the beginning of his 1985 novel, *The Unbearable Lightness of Being*, Milan Kundera contemplates the questions of 'weight' and 'lightness' through Nietzsche and Parmenides, respectively. The concept of weight derives from Nietzsche's idea of eternal recurrence, where every life is destined to endlessly repeat itself. This places a tremendous weight of responsibility that the choices we make be the right ones. As Kundera puts it: 'The heavier the burden, the closer our lives come to the earth, the more real and truthful they become' (1985: 5). A life lived just once, by contrast, has no weight, no real responsibilities, and where 'the absence of a burden causes a man to be lighter than air, to soar to the heights, take leave of the earth and his earthly being, and become only half real, his movements as free as they are insignificant' (ibid.).

The utility of metaphor is that it allows us to think more exploratively about problems or issues that are novel, enabling a process of conception and description that can signal the beginnings of understanding. Metaphor can, as Martin Jay phrased it, 'produce a flash of illumination that may be absent in more sober conceptual language (2010: 98). Questions of digitality and the political process are thus good candidates for the metaphorical approach. I will now develop a little further the metaphor of lightness as a way of thinking about our disconnection from the earth and from the environment and from the human-scaled physicality of analogue technology, culture and society. This will enable a fuller comprehension of the immense transition from analogue to digital that the world has undergone in the last generation.

In the social sciences, Zygmunt Bauman uses heavy and light to think about how capitalism has transitioned from 'heavy modernity', the 'era of hardware', to a 'light modernity' characterised by the logic of 'software' (2000: 118). Bauman also considers how, in the popular mind, and in the rationality of capitalism, this transformation is thought of as positive. The 'seductive lightness of being' through the digital-software revolution was profound and rupturing of the social fabric – but was not as violent and destructive of humans as the industrial revolution was. And so much of the rhetoric accompanying digitality was, and is, about our becoming 'free' from the 'cumbersome machines' (Bauman, 2000: 114) and free from the analogue technologies belonging to a more oppressive time. Bauman wrote some time ago, but he drew upon such metaphors that were common to social science in order to analyse politics and economics. And so for instance the metaphor of the 'weight' of political history can be appreciated in the case of, say, present-day Germany, where shared historical responsibility for the crimes of the National Socialists is still acknowledged by many (Weizsäcker, 1985). And in the economic realm, the 'light' touch or 'friction free' economy – most salient in Silicon Valley, or in software-driven financial services, more broadly – can be understood as another 'seductive' trope that promises a freer and less cumbersome economy, from which everyone will benefit. The state of lightness, one can therefore say, is to 'lose' something; to shed the weight of history, of responsibility, and to unburden culture and society of the physical weight of the 'cumbersome machines' that did so much good, but caused so much damage – in war, in environmental degradation and in construction of the polluted and teeming industrial city.

If we transfer our metaphors from the literary and the social sciences, to computer science and psychology, it is possible to see the ideas of lightness and loss function in a different way, and with different implications. In other words, to think of lightness and loss in human communication in the context of foundational thinking in computing and communication psychology gives new perspectives on what it means to communicate in the digital sphere, and what it means to enact politics there.

An arbitrary correspondence

What came to be known as the Macy Conferences on Cybernetics took place in New York between 1946-53. A series of ten meetings brought together leading computer scientists and others to discuss emerging theories on computing. At the 1951 meeting, R.W. Gerard, a neurophysiologist and behavioural scientist, gave a paper titled 'Some of the Problems Concerning Digital Notions in the Central Nervous System'. Gerard argued that both analogue and digital processes functioned in the human brain, but each function expressed a different logic. He noted that:

...an analogical system is one in which one of two variables is continuous on the other, while in a digital system the variable is discontinuous and quantized. The prototype of the analogue is the slide rule, where a number is represented as a distance and there is continuity between greater distance and greater number. The prototype [of the digital] is the abacus, where the bead on one half of the wire is not counted at all, while that on the other half is counted as a full unit. [...]
In the analogical system there are continuity relations; in the digital, discontinuity relations (1953: 172).

Communication therefore has two aspects: continuous and discontinuous, analogue and digital, and with the latter, in respect of the efficiency logic of digital computing, able to be more easily 'quantized'. At this time, when computing was in its infancy, such differences constituted ideas and concepts of mainly philosophical interest and did not suggest in themselves, at this level of inquiry, anything problematic.

By the 1960s, computing was extending its capacities dramatically. In 1967, *The Pragmatics of Human Communication* appeared, which looked specifically at the analogue-digital question. Drawing from a blend of communication theory and psychology, Watzlawick et al. placed the rather sanguine view of the Macy Conferences in a more critical light. They argued that the 'quantizing' logic of digital computing is not able to usefully replicate human verbal or non-verbal communication because:

In digital computers both data and instructions are processed in the form of numbers so that often...there is only an arbitrary correspondence between the particular piece of information and its digital expression (2011: 41-2).

The authors go on to contend that where communication has a 'content and relationship aspect', and where 'relationship is the central issue in communication' then 'digital language is almost meaningless' (2011: 44-45). What digital communication lacks is 'adequate vocabulary' for the infinite contingencies of human relationships, and so 'Not only can there be no translation from the digital into the analogic mode without great loss of information...but the opposite is extraordinarily difficult' (2011: 47). The political philosopher Leonard Hawes takes this up in his book on political conflict, emphasising that in human communication it is impossible to not communicate; we always communicate something, but the message between the analogue and the digital cannot translate without gaps and voids of potential miscommunication. Digital communication, he concludes, lacks 'an adequate vocabulary for qualities and shading of relationships' (2015: 164).

If we take these insights on the problematic of human communication, especially the loss of information involved in analogue to digital translation, and the corresponding shift from continuity to discontinuity, and then use these to consider the analogue political process within social media, then the processes of digitality, of discretization, of dissociation, and of time-space compression – it is possible to conclude – have a compounding and negative effect upon the democratic process.

Missing information and disinformation

So quickly has Facebook become integral to the lives of millions of people, that we tend to forget it is an app, a commercial device that promotes itself as a neutral form of social communication. Notwithstanding its tribulations in the long wake of the 2016 election in the United States, Facebook remains a powerful platform. But it belongs to the wider app-ecosystem to which humans-as-users attach themselves to form the digital backdrop to everyday life. Walter Ong (1992: 293) observed that the technology of writing is so unusually powerful that it insinuates itself into our

consciousness as something natural, even although it is an invention, something we must learn to use. Apps like Facebook are not quite at this level of normativity yet, but this is the direction of their logic. Much of the app's power comes from computing's principal orientation, which is automation, the engineering out, as much as possible, of the human factor. With almost no physical or cognitive effort, and with no other physical human involved, the digital ecosystem opens up to the solitary user through the app interface. With dabs and flicks of the finger, rapid and invisible digital processes work automatically – 'intuitively' – to produce information worlds on screens that emerge from unseen clouds and databases. Such activity takes alienation to its purest refinement yet (Burkhardt, 2018: 12). This is alienation not only from the technologies we work with, as in the theories of classical Marxism, but alienation also from our natural (analogue) environment (Hassan, 2019).

It has been claimed that the app-ecosystem is not invisible, but is marked by its opposite, which is a 'permanent excess: excessive downloads, excessive connections, excessive proximity, excessive "friends", excessive "contacts", excessive speeds and excessive amounts of information' (Mellamphy et. al, 2015: 3). However, it is precisely the immaterial nature of digital excess that gives the app the power that it has over the user. Excess exists in digitality, and in the network as a whole, but is concealed at the focussed, individuated end point where user touches screen. Just as the growing carbon footprint that makes the internet possible is invisible to us, so too are its digital excesses. The interface appears seamless and smooth. But it is rendered discontinuous through algorithms that both curate and distract in a personalised and not ostensibly-excessive way. Through apps that display a surface simplicity through NUI, we feel 'continuously successful' and unaware of the enormity of which we are a part. The digital experience therefore creates a kind of double-blindness that renders the app-generated atmosphere as invisible: this is blindness to the physical environment that is filtered out when online; and blindness to the background computational immensity that brings the 'magic' of 'automatism' to our fingertips (Gehlen, 1980: 17-18).

Blindly we reach to the app to express ourselves politically at the individual and virtual-collective level. And when we engage the app, digitality acts upon us.

Facebook's algorithms save you cognitive effort wherever possible: the cognitive effort of coming to a thought-out political opinion or trying to form one by considering the issues with others in analogue dialogue. For example, Facebook's 'What's on your mind?' function prompts users to upload anything they feel passionate or perplexed or pleased about. This sounds like the basis for political conversation and a way for feelings to be vented in a mass-communication form that may lead to groundswells of political opinion and potential political action. The first point to make, however, is that Facebook is in the business of content generation; its algorithms are less interested in your political opinion than your data-level response, whatever it may be. Beyond this banal commercial point, it is necessary to ask: can the app replicate or improve upon the analogue processes that gave us modern democracy? Can it indeed enhance and promote democracy?

The post-2016 Facebook-Cambridge Analytica dealings involving the use of customer data to profile and target potential swing voters in the US and UK gives an as-yet murky insight into how agency and power works in the app-ecology (Cadwalladr, 2018). But we can consider online agency and power in the context of two things that flow from the arguments made in this essay. First is that digital political interaction occurs in what has been termed 'network time' (Hassan, 2003). This is the accelerated temporality of the network where the imperatives of the neoliberal economy are coded and engineered into the web to induce users to act in a more distracted fashion (Hassan, 2012). Accordingly, the thought-through response, or measured participation in an unfolding dialogue, gives way online, via the working of the algorithms to amplify negativity, to the proffering of ill-considered opinion, to impulse-driven comment and trolling (Lanier, 2018: 18). However, from the perspective of the logic of content creation that engineers the process, quality is not the point, quantity is. Algorithmically structured for controversy and virality makes the communicative flow of the digitised political process more instrumental, and subordinates the substantive function of political discourse to the *quantizing* needs of data aggregators – an idea that echoes Stiegler's point about the 'discretization' effect of digitality.

The second effect is more far-reaching and relates to how a lack of fidelity in the translation of analogue to digital information plays out in social media; in ways that leave people vulnerable and manipulable as political subjects. What Watzlawick termed the ‘arbitrary correspondence between the particular piece of [analogue] information and its digital expression’ (2011: 41-2) functions much like the problem of ‘missing information’ that Bill McKibben (1992) saw as a key characteristic of early digitality. For McKibben, the ‘information explosion’ of the 1990s had been largely scattergun: disconnecting as much as it connects, and creating the basis for multiple gaps and voids in our knowledge of ‘who we are’ and what we believe (1992: 9). Such ‘missing information’, he maintains, is more than just ignorance of certain facts, but an analogue-level withdrawal from each other, from nature, and from ‘most of our physical sense of the world’ (1992: 34). The ‘information explosion’ of the 1990s is, through developments in algorithmic software, today much more targetable and able to fill such gaps with messages of manipulation that produce a distorted impression of what is going on in the offline world (Singer and Brooking, 2018: 83-117). The dramatic increase in digital sophistication means the effect is much worse today insofar as the political process goes, and ‘missing information’ is now weaponized by disinformation. And as we see in countries such as Sri Lanka, where social media is used to spread anger and panic, this is not just a matter of being manipulated or of manipulating another, but of killing someone or of being killed by someone (Perera, 2018).

In social media politics, arbitrary correspondence, missing information and disinformation can act as a powerful basis for deception and manipulation by users able to exploit the mismatch between analogue and digital. A *lack of confidence* in the authenticity of anything can quickly become the default position online. At the level of banal human misbehavior, scamming and hoaxes and swindles proliferate online because often the ordinary user fails to recognise the digital sphere for what it is – a radically different realm where the analogue rules governing the ‘link between a movement and its effect’ (Estévez, p.402) are not present. Often this vulnerability results in simple commercial dishonesty, where our trust is misplaced and our inability to physically see something we may have purchased online means that either it’s not what we thought it was, or it does not exist at all. More significant is missing

information and disinformation in social media politics. The notorious 2009 Facebook experiment by Anders Jørgensen, a Danish academic, who posted a fake piece about a planned demolition of a famous Copenhagen fountain, and got 27,500 people to sign a petition in a couple of hours, was in retrospect a proof of concept. Today, Facebook can be the vector for political havoc with real-world consequences. In Myanmar from 2015-2017, ultranationalist Buddhists were whipped up by social media manipulators into frenzies of ethnic hatred against the country's Rohingya Muslim minority. According to a UN independent inquiry, Facebook played a 'determining role' in the genocidal attacks that drove hundreds of thousands of Rohingyas to flee their homes and villages and seek refuge in neighboring Bangladesh (Darusman, 2018). Similar examples of disinformation inspire political enmity against an ethnic group or political enemies are found in Sri Lanka, in India, Philippines, Iraq, Turkey and elsewhere (Singer and Brooking, 2018; Vaidhyathan, 2018).

Social media acting as interface between digitality and the individual enables 'missing information' to mix with disinformation to produce a toxic and post-modern form of political 'engagement' where 'truth' can be the first casualty, and where disinformation has no antidote – as the insertion of 'truth' to counter disinformation becomes just another element in the spread of confusion. This is a politics of alienation not only from reality and truth, but from technology and from nature, and reminds us again of Kundera's metaphor of 'lightness'. In his novel he asks: 'which one is positive, weight or lightness?' (1985: 3). In the context of analogue, weight corresponds to the stability of the earth we stand upon to create worlds in and through a natural ecology that will outlast our own time. In the context of digital lightness, we become unmoored in our consciousness from the analogue Earth to be buffeted by virtual currents whose origins we do not recognise, nor fully understand or control. We become vulnerable: to fads, to herd behaviour, to manipulation, and to the unending maze of disinformation. And as political subjects, the growing inability to recognise the world in traditional ways, through traditional political processes, means that the analogue and digital worlds we stride are deeply antithetical, with offline democratic ends through online means destined to produce political frustration or failure.

In an essay titled, 'Why Street Protests Don't Work', Moisés Naím describes the difficulty in translating digital politics into analogue outcomes:

...a powerful political engine is running in the streets of many cities. It turns at high speed and produces a lot of political energy. But the engine is not connected to wheels, and so the 'movement' doesn't move. Achieving that motion requires organisations capable of old-fashioned and permanent political work that can leverage street demonstrations into political change and policy reforms. In most cases, that means political parties (2014: npn).

Naím argues that people and politics need to discard the app and go back to constructing and maintaining political institutions, join parties, go to meetings, read and write for old-fashioned media, and press for reforms in the traditional ways. One can think of the digital element of the Arab Spring risings of 2011 onwards and how, despite the initial successes across the region, the digital activism and its street and square 'political energy' succumbed to traditional political forms that were prepared to use undemocratic means and violence. Jodi Dean (2012) reached similar conclusions writing about the Occupy movement from around the same time with their similarly illusory hopes pinned upon what she terms the 'quick fix of digital media'. Dean tells us that political challenges to digital capitalism must come, ultimately, from the slow and hard grind of analogue politics from an earlier era. Instead of using the app as means for the organisation of struggle, political work must take place in the analogue of recognition, of cause and effect. For Dean, activists in political struggle must see themselves as:

...components of a larger struggle requiring critical research, discussion, analysis and planning as well as the training of activists, organisers and even leaders. Their work is the work of parties: not the mass parties of electoral democracy, but the responsive and revolutionary parties of the previous century (2012: npn).

Concluding remarks

It has been said that those generations brought up with the web are the first in history not to have learned their media skills from their parents or forebears. They make it up as they go along. Their predecessors try to catch up, acquiring new skills, but often losing old ones in the process. This is a problem, one can easily see, if we want to understand the nature of the analogue and our historical role as part of its logic. This is a problem also for politics and the analogue political process. Where do we find and utilise the time for the 'old-fashioned' political work that Naím and Dean argue is so vital? How is it even possible when new generations, who will continue to be heuristic in their communicative practice, are each day less able to recognise previous forms of political practice as the forms that founded democracy?

The institutions of analogue politics still exist, of course. In every democracy, liberal or illiberal, voters elect people and parties that constitute congresses and parliaments that continue with the routines much as they have done for a long time. Bills are drafted and debated, committees do their work, hearings are conducted, questions are tabled, members meet with constituents. The mechanics of an earlier time continue creakily to unfold in recognizable and comforting ways. However, we live in a very different world today, a post-modernity where economic change (globalisation) and technological change (networked computing) has combined to transform almost everything, politics included. As Scott Lash noted in his *Critique of Information*, in digitality, 'power is elsewhere' (2002: 10). And to the extent that political power resided with the legislators in the liberal democracies, this has moved decisively from them to concentrate at the executive level. And power does not rest there but circulates contingently between the elite politicians and corporate CEOs whose interests converge in our post-modernity as never before. Political scientist William Scheuerman argued that power has concentrated at the executive level because it is only here where politicians are able 'act with dispatch' (1999: 27) on issues of vital economic and political importance. Executive-level politics making decisions without reference to the legislature is not new, but what is new is the extent of the overreach, and the rationale for doing so, which, according to Scheuerman, is located in the creation of the 'high-speed economy' (2004: 26-71).

Record levels of social and economic inequality across much of the world, coupled with the growing sense that political institutions no longer reflect the interests of the people, has seen a generalised inexorable drift and alienation from analogue political institutions. But people and society are immutably political. And for alternatives, for new communicative forms to give expression to political ideas in the hope of making them reality, millions have turned away from analogue newspapers and parties and institutions – toward the app and the politics of social media. The Occupy movement took inspiration from the Arab Spring, indignadas and other struggles. These gave hope to millions of disaffected people. These are also explicitly anti-institutional politics, and are an implicitly anti-analogue politics that sets much store in DIY internet activism. Notwithstanding its travails, Facebook and Twitter are prominent means for coordinating their local and global action. These have been given intellectual credibility by scholars such as Manuel Castells (2012) and by politically committed journalists such as Paul Mason (2013). Castells in particular is an influential scholar in the social sciences whose works have been translated into seventeen languages. In 2012 he published a book titled *Networks of Outrage and Hope*. Written up quickly in the heat of the MENA (Middle East and North Africa) tumult of 2011, Castells praises a revolutionary ‘contagion in a world networked by the wireless internet’ (2012: 2). At the end of the book, however, he injects a note of restraint to counter his earlier buoyancy:

...the only relevant question to assess the meaning of a social movement is the social and historical productivity of its practice, and the effect on its participants as persons and on the society it tried to transform. In this sense it is too early to evaluate the ultimate outcome of these movements, although we can already say that regimes have changed, and institutions have been challenged and that the belief in the triumphant global financial capitalism has been shaken, perhaps in irreversible ways in the minds of most people (2012: 244-245).

What can we say with the passing of less than a decade since Castells wrote? Regimes may have fallen, but these were dictatorships, which exist anyway always on a knife-edge. Moreover, Castells did not specify which ‘institutions have been challenged’;

nor can we identify any that were seriously so; and financial capitalism functions essentially in the same free-market way that it has since the 1990s, despite the sector's almost total collapse in 2008.

In his *One-Dimensional Man*, Herbert Marcuse theorised what industrialisation did to political struggle in the 1960s. He wrote that 'the technological transformation is at the same time political transformation [and that] established technology has become an instrument of destructive politics' (1991: 227). Marcuse argued that industrialisation had been commandeered by an instrumental rationality, and it was this that created the 'destructive politics' of the late-1960s. Digitality constitutes a new technological transformation, one that is driven even more by instrumental reason (Feenberg, 2017: 149-150). The critical theory logic governing Marcuse's thought in the 1960s, if applied to the technological transformation of our own time, does not augur well for our politics.

A digitality where much that is political is entangled with entertainment and labour presents us with a problem. This is fundamentally a political problem. To begin to understand the nature of the problem, we need to understand the nature of digital logic and its unsuitability for a politics formed through another category of technology. A possible solution would be to accept the dichotomy between analogue and digital politics and make a collective effort to forge new political processes through new and efficient communications technologies. But what about our political institutions and political traditions? In theory it may be possible to blend the vital, foundational analogue elements of democracy with the streamlining efficiencies of new communications technologies. But it seems that too many are now alienated from traditional politics. Moreover, an illiberal populism, much of it driven from online, is ascendant due to widespread feelings of alienation. And populist politicians pay lip service to their connections with those who put them in power (Lilla, 2017). Another path would be to do nothing. But this would leave politics and its communication processes to the logics of elite state and corporate algorithms and the power and profit imperatives that drive them.

Either way there is no app-based solution for this dilemma. Chris Cheshire, in his ‘Ontology of Digital Domains’, written before the digital turn turned fully toward effects as opposed to essences, argued that ‘The distinction between digital and analogue representation is philosophical before it is technical’ (1997: 86). Apart from the first step of philosophical inquiry into the nature of digital and the acceptance that we are analogue, it’s not even clear what the next step is. Thinking more reflectively about the universal utility of computing might be a starting-point. This should not be endless discussion about automation or robots or privacy or even about disinformation. These are effects of the deeper problem of a new category of technology that we have failed to recognise as such. That networked digital technologies constitute a ‘mode of existence proper to their own being’ that is antithetical to our own mode of being must now be seen as a legitimate philosophical question (Lotti, 2018: 51). The question is therefore an ontological as well as political one. To these we can also add the compounding issue of temporality – the pressure upon cognition and attention that contains the danger of inaction because we will forget or not realise, because of the intense media-cycle, that there is anything outside the digital. And if we get to that point, then what? Jürgen Habermas speculated upon what he called the ‘unfinished of project modernity’ and asked: ‘should we continue to hold fast to the intentions of the Enlightenment, however fractured they may be, or should we rather relinquish the entire project of modernity?’ (1997: 45-46). Given the immaterial nature of digitality, the more we are shaped by its logic, then the less we will have to ‘hold fast to’. And to paraphrase Kundera, the lighter our burden of truth and reality will then become as we live our lives further away from the roots and traction that flow up from our contiguity with the earth. At that point, modernity and its analogue politics will be finished as a means for the promotion of democracy.

References

- Bauman, Z. (2000) *Liquid Modernity* Cambridge: Polity.
- Burkhardt, M. (2018) *All or Nothing: A Digital Apocalypse*, Cambridge, Mass.: The MIT Press.
- Cadwalladr, C. (2018) ‘The Great British Brexit Robbery: How Our Democracy Was Hijacked’, *The Guardian*

<https://www.theguardian.com/technology/2017/may/07/the-great-british-brexiteer-robbery-hijacked-democracy>

- Castells, M. (2012) *Networks of Outrage and Hope* Cambridge: Polity.
- Cheshire, C. (1997) 'The Ontology of Digital Domains' in *Virtual Politics: Community and Identity in Cyberspace*. ed. David Holmes. London: Sage. pp.79-92.
- Darusman, M. (2018) 'Myanmar: UN Fact-Finding Mission releases its full account of massive violations by military in Rakhine, Kachin and Shan States' <https://www.ohchr.org/EN/HRBodies/HRC/Pages/NewsDetail.aspx?NewsID=23575&LangID=E>
- Dean, J. (2012) 'Occupy and UK Uncut: The Evolution of Activism', *The Guardian* <http://www.theguardian.com/commentisfree/2012/dec/27/occupy-uncut-evolution-activism>
- Debray, R. (2007) 'Socialism: A Life Cycle' *New Left Review* 46, pp. 51-74.
- Estévez, S. (2009) 'Is nostalgia becoming digital?' *Social Identities* 15(3): 393-41.
- Feenberg, A. (2017) *Technosystem: The Social Life of Reason*, Cambridge, MA.: Harvard University Press.
- Gehlen, A. (1980) *Man in the Age of Technology* New York: Columbia University Press.
- Gerard, R.W. (1953) 'Some of the problems concerning digital notions in the central nervous system', *Eighth Macy Conference* <http://pcp.vub.ac.be/books/gerard.pdf>
- Goodman, D. (1994) *The Republic of Letters* New York: Cornell University Press.
- Gray, J. (2002) *Straw Dogs*. London: Granta.
- Greenfield, Adam. (2017) *Radical Technologies*. London: Verso.
- Habermas, J. (1997) *The Theory of the Communicative Action*. Vol. 1. Cambridge: Polity Press.
- Hassan, R. (2003) 'Network Time and the New Knowledge Epoch', *Time & Society* Volume 12 Number 2/3.
- Hassan, R. (2009) *Empires of Speed*. Leiden: Brill.
- Hassan, R. (2012) *Age of Distraction*. New Brunswick: Transaction Publishers.
- Hassan, R. (2017) *Philosophy of Media*. New York: Routledge.
- Hassan, R. (2019 *forthcoming*) *The Condition of Digitality*. London: University of Westminster Press.
- Hawes, L. (2015) *A New Philosophy of Social Conflict*. London: Bloomsbury.

- Heim, M. (1993) *The Metaphysics of Virtual Reality*. New York & Oxford: Oxford University Press.
- Jay, M. (2010) 'Liquidity Crisis: Zygmunt Bauman and the Incredible Lightness of Modernity', *Theory, Culture & Society* Vol. 27(6): 95-106.
- Lanier, J. (2018) *Ten Arguments for Deleting Your Social Media Accounts Right Now*. New York: Henry Holt.
- Lash, S. (2002). *Critique of Information*. London: Sage Publications.
- Lilla, M. (2017) *The Once and Future Liberal*. New York: Harper.
- Kundera, M. (1985) *The Unbearable Lightness of Being*. New York: Harper & Row.
- Lunenburg, P. (2000) *The Digital Dialectic: New Essays on New Media*. Boston, MA: MIT Press.
- Marcuse, H. (1991) *One-Dimensional Man*. Boston: Beacon Press.
- Mason, P. (2012) *Why It's Kicking Off Everywhere: The New Global Revolutions*. Verso, London.
- Mellamphy, N. (2015) 'Editorial' *Fibreculture Journal* 25
<http://twentyfive.fibreculturejournal.org/>
- Menn, S. (2015) 'Democritus, Aristotle and the Problemata' in Robert Mayhew, ed., *The Aristotelian Problemata Physica*. Leiden: Brill.
- McKibben, B. (1992) *The Age of Missing Information*. New York: Penguin.
- Morozov, E. (2015) 'The Taming of Tech Criticism', *The Baffler*
<http://thebaffler.com/salvos/taming-tech-criticism>
- Mitchell, W. J. (1996) *City of Bits. Space, Place, and the Infobahn*. Cambridge: MIT Press.
- Naím, M. (2014) 'Why Street Protests Don't Work', *The Atlantic*, April 7th
<http://www.theatlantic.com/international/archive/2014/04/why-street-protests-dont-work/360264/>
- Negroponte, N. (1995) *Being Digital*. New York: Vintage.
- Ong, W. (1992) *Orality and Literacy*. New York: Routledge.
- Perera, A (2018) 'Sri Lanka blocks social media as deadly violence continues', *The Guardian*: <https://www.theguardian.com/world/2018/mar/07/sri-lanka-blocks-social-media-as-deadly-violence-continues-buddhist-temple-anti-muslim-riots-kandy>
- Postman, N. (1993) *Technopoly: The Surrender of Culture to Technology*. New York: Vintage.

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- Privacy International (2018) 'What Zuckerberg Forgot To Mention... Profiling', *Medium*. <https://medium.com/@privacyint/what-zuckerberg-forgot-to-mention-profiling-7b7c596b9823>
- Robins, K. & Webster, F. (2002) *The Virtual University*. Oxford: Oxford University Press.
- Scheuerman, W. (2004) *Liberal Democracy and the Social Acceleration of Time*. Baltimore: Johns Hopkins University Press.
- Singer, P. and Brooking, E. (2018) *Likewar: The Weaponisation of Social Media*. New York: Houghton Mifflin.
- Statista (2018) <https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>
- Stiegler, B. (2009) 'Teleologies of the Snail: The Errant Self Wired to a WiMax Network,' *Theory, Culture & Society*, vol. 26, nos. 2–3 (March/May), pp. 33–45.
- Srnicek, N. (2017) *Platform Capitalism*. Cambridge: Polity.
- Turkle, S. (2011) *Alone Together*. New York: Basic Books.
- Vaidhyathan, S. (2018) *Antisocial Media: How Facebook Disconnects Us and Undermines Democracy*. Oxford: Oxford University Press.
- Virilio, P. 1995. 'Speed and information: cyberspace alarm!', *CTHEORY* http://www.ctheory.net/text_file.asp?pick=72
- Watzlawick, P., Beavin-Bavelas, J., Jackson, D. (1967). *Pragmatics of Human Communication*. New York: W. W. Norton.
- Wikipedia (2015) 'Natural User Interface' https://en.wikipedia.org/wiki/Natural_user_interface (accessed 27th January, 2015).
- Sheldon Wolin (1997) 'What Time is it?' *Theory and Event* Vol. 1 Number 1. <https://muse.jhu.edu/>

Notes

¹ Digitality is a term I develop in *The Condition of Digitality* (forthcoming, 2019 University of Westminster Press) to theorise and describe the emergence and dominance of a new category or technology, the digital. This is not only functionally antithetical to the analogue technologies that enabled humans to survive as a species, but the emergence of the digital has also given cause to reflect (for the first time) that *we too are analogue*, creatures of the technologies we created since the earliest times of our evolutionary drift towards tool-use.

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