

TRANSFORMING THE HUMAN:

Algorithms, Intuition and Networked Activism

By Carolyn Pedwell



In the midst of the Fourth Industrial Revolution, digital, smart and algorithmic technologies, it is claimed, may be fundamentally transforming ‘the human’. They may, that is, be radically re-mediating human senses, habits and capacities. In *Thumbelina* (2015), for example, the late French philosopher and media theorist Michel Serres argues that millennials are not only the first generation to experience the internet and related forms of digital media in their adolescence, they have also been comprehensively ‘[re]-formatted by the media’, and, thus, ‘no longer have the same body or behavior’ as previous generations (2015: 5-6). While ‘Thumbelina’ and ‘Tom Thumb’, as Serres affectionately names his millennial prototypes, are characterised by their profound affinity with digital technologies - their ability to send a text message (*with their thumbs hence the nicknames for millennials*) in an instant - they have limited ‘faculty of attention’. Indeed, through their immersion since birth in mass media and advertising cultures, their attention spans have been ‘meticulously destroyed’ (5). Although they ‘can manipulate several forms of information at the same time’, Serres’ millennials ‘neither understand it, nor integrate it, nor synthesize it as we do, their ancestors’ (6).

Yet, as Serres contends, Thumbelina and Tom Thumb do not possess the same cognitive habits or capacities as their parents or grandparents because *they do not need them*: ‘With their cell phone, they have access to all people; with GPS, to all places; with the Internet, to all knowledge’ (6). Just as the advent of previous communications technologies—from the practice of writing, to the printing press, to the telegraph—transformed the workings of human cognition and memory by making the need to mentally store huge amounts of information redundant, with the rise of digital media and smart technologies, ‘this head has now mutated yet again’ (Serres 2015: 12). Thumbelina does not have to work hard to gain or memorise knowledge, Serres argues, because ‘it is already in front of her, objective, collected, collective, connected, accessible at her leisure, already reviewed and edited’ (19-20). As such, Serres extends a long genealogy of media theory - from Marshall McLuhan and Friedrich Kittler to Bruno Latour and Donna Haraway - which has explored how various ‘new’ technologies act as

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‘extensions[s] of ourselves’; functioning to shape ‘not only habits of life, but patterns of thought and valuation’ (McLuhan [1964]1994: 1, 12).

Although tertiary memory is vital to social and cultural transformation—as James Ash notes, ‘when information is stored outside of human memory it can be reliably recalled into the future’ (2015: 121)—in the context of late capitalism, it is also associated with more disquieting effects. For Bernard Stiegler, efforts by a range of cultural industries to manipulate the content of digital tertiary memory in the interests of profit generation have led to a ‘fundamental disaffection on the part of people who become oversaturated by the media that swamp their lives’ (2015: 121). This saturation, he suggests, has fundamentally transformed the ‘functioning of the nervous system’, reducing human attention span and hindering ‘critical and creative thought’ (2012: 186). Digitally re-programmed to accede to the will of corporate capital, contemporary subjects are increasingly trapped within ‘cycles of mindless consumption’ (ibid) and thus estranged from engagement with the political concerns and complexities of everyday life.

These perspectives on human cognition and behaviour in the digital age would seem to paint a rather bleak picture of the future of radical politics and social transformation. If, as the digital media scholar Wendy Hui Kyong Chung puts it, ‘through habits users become their machines’ (2016: 1), then it might be argued that our contemporary media habitus is producing an *army of automatons*: digital humans programmed in what Serres (2015) calls an ‘algorithmic mode of thought.’ An algorithm is ‘a finite set of instructive steps that can be followed mechanically, without comprehension, and that is used to organise, calculate, control, shape and sometimes predict outcomes’ (Coleman et al 2018: 8). In our current age of media analytics, an ever-

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growing swath of ‘our cultural experiences, social interactions, and decision-making are governed by large-scale software systems’ that operate via algorithmic procedures (Manovich 2013: online). Indeed, whether via the aggregative nature of social media, the filtering of results on search engines, or the dynamics of contextual advertising and automatic news production, algorithms now play an increasingly central role in everyday life. In this context, the term ‘algorithmic thought’ can be employed to refer not only to the ways in which people think *about* algorithms but also to how our intermeshing with algorithmic technologies may be *changing the nature of thought itself*. As we become increasingly algorithmically mediated by digital capital at the micro-level of affect, gesture and habit, the above perspectives imply, our embodied capacity for political resistance and solidarity may be progressively diminished - or even irreparably destroyed.

However, as this essay explores in an analysis that brings together theories of mediation, philosophies of habit and affect and writing on new social movements, these emerging digital forms of personhood are also subject to more hopeful political visions. This occurs in a context in which associations between digital media, capitalist colonization and political disaffection have become automatic and smart phones and social media are widely assumed to be detrimental to young people’s subjectivity. Thinking speculatively, I will argue, can open up and complicate these processes of mediation in ways that may help us to imagine and enact other possibilities for techno-social life.

Habit, intuition and the sensation of change

Although *Thumbelina* describes millennials as having diminished capacity for sustained attention and conceptual thinking, Serres nonetheless

proclaims that ‘this newly born individual is good news’ (2015: 5). What their digital re-programming has made possible for Thumbelina and Tom Thumb, he argues, is ‘*an innovative and enduring intuition*’ (italics mine, 2015: 19). That is, precisely because millennials no longer have to dedicate so much mental energy and neural capacity to gathering, storing and organising information, they may develop greater aptitude for a different, more intuitive, mode of being-in-the-world. In delegating habits of mental synthesizing and processing to digital technologies, Thumbelina and her peers are participating in the development of ‘new genius’ and ‘inventive intelligence’ - ‘an authentic cognitive subjectivity’ (19). *Thumbelina* thus compels us to confront how the idea of ‘human-machine hybrids’ has taken on new significance in an age characterised by media analytics and algorithmic technologies.

To be sure, Serres’ view of the potentialities of such techno-cultural transformations could be described as unrealistic or utopian - and certainly in stark contrast to more prevalent reports of the damaging impact of digital culture on young people’s subjectivities and mental health. In her bestselling book *iGen*, for example, the psychologist Jean Twenge argues that the generation of American youth born in 1995 onwards, who ‘grew up with cell phones, had an Instagram page before they started high school, and do not remember a time before the Internet’, are ‘at the forefront of the worst mental health crisis in decades’ (2017: 3). Similarly, a 2017 study by the UK’s Royal Society for Public Health (based on a survey of 1,479 14- to 24- year-olds) reported that social media platforms including Instagram, Snapchat, Facebook and Twitter were experienced negatively by many young people who found that they functioned to ‘exacerbate body image concerns’ and ‘worsen bullying, sleep problems and feelings of anxiety, depression and loneliness’. At its worst, social media is linked to increased feelings of ‘self-loathing’ and a growing risk of suicide (Campbell 2017: online). Moreover, given everything we know about the pernicious interaction of networked technologies with global capitalism, international securitisation, racial profiling, political interference in national elections, ‘fake news’, conspiracy theories, echo chambers, trolling, and so forth, such an *affirmative* engagement might seem

wilfully blind to the more disturbing realities of our contemporary digitally-mediated world.

My argument, however, is that precisely because accounts of the corrupting influence of digital technologies have become so pervasive, it is increasingly difficult to imagine how human-technology co-production could be otherwise. To start, I want to return to the term 'intuition' that Serres associates with the emergent digital subjectivities of millennials. As 'the ability to understand something immediately, without need for conscious reasoning' (OED), intuition is often connected with direct sensing, instinctive reactions and 'gut feelings'. Extending these everyday associations, the French philosopher Henri Bergson famously figured intuition as an experiential mode of engagement with the richness and flux of material life. Highlighting the difference between intuition and what might now be referred to as 'representational thinking', Bergson contrasts the sense of a town one would gain from viewing photographs 'taken from all possible points of view' compared to the visceral experience of walking through it. While there is value in both encounters, he suggests, the two can 'never be equivalent' because only the latter allows for the 'unity' of experience ([1903]1999: 22). Unlike 'analysis', which reduces objects to 'elements already known', intuition is, for Bergson, a form of immersive inhabitation which connects one with 'what is unique' and 'consequently inexpressible' in an object ([1903]1999: 24). It is embodied experience before, or outside of, its translation into the categories of representational and analytical thought.

What is also important for Bergson is that both we and the objects we encounter are never static but are rather always moving and becoming. Intuition thus allows us to appreciate change *as it is happening*: It is, as Sarah Kember and Joanna Zylinska put it, 'a moment of our own duration that enables us to connect with a wider one' (2012: 15). Bergson's interest in temporality and mobility, as well as the non-representational thrust of his approach, resonates with more recent work associated with the 'turn to affect'. This is perhaps most notable in the work of the cultural anthropologist Kathleen Stewart in her book *Ordinary Affects: Through inhabiting the varied sensations of everyday life - from the feeling of being part of the mainstream*

to the lived textures of racism - Stewart seeks to interrupt the automatic 'jump to representational thinking and evaluative critique' (2007: 4). Similar to Bergson, she is interested not in processes of demystification 'that support a well-known picture of the world,' but rather in 'speculation, curiosity and the concrete' (1). In socio-political terms, what is vital about Stewart's approach - and *intuition as method* more generally - is its ability to register that which *exceeds* weighty terms such as "neoliberalism", "advanced capitalism", "liberal democracy" or "populism" and yet nonetheless 'exert[s] palpable pressures' (3). That is, intuition as a method's capacity to viscerally grasp how "the social" and "the political" are actually much more fragile, ambivalent and mobile than is usually conveyed.

What, then, might be distinctive about the workings of intuition in the digital age? This is a salient question given that, as Rebecca Coleman notes, for Bergson, 'true intuition' was 'an empiricism' that implied the need for direct embodied experience rather than technologically-mediated perception (2008: 112). Returning to Thumbelina, she is, on the one hand, skilled in a mode of algorithmic thought that seems antithetical to the kind of affective inhabitation that Bergson and Stewart advocate. When asked 'what beauty is', for instance, Thumbelina responds not with an incisive unpacking of the concept, or a rich description of its felt qualities, but rather in the manner of a search engine: 'a beautiful woman, a beautiful dance, a beautiful sunset...' (Serres 2015: 42). On the other hand, what Thumbelina's endless list of examples may be seen to express is a resistance to unnecessary or stultifying abstraction. As Serres suggests, Thumbelina and Tom Thumb seem to understand intuitively that, while conceptual thinking has its place, 'we do not have an ineluctable need for concepts' and that

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there is value in lingering ‘as long as necessary in narratives, examples, singularities...’ (2015: 42-3). As such, although their experience of the world is continually mediated via networked technologies, these ‘new humans’ would seem to excel at the very kinds of more-than-representational thinking Bergson associated with intuition.

From this perspective, we can begin to appreciate how, precisely because they are not preoccupied by a particular kind of analytical labour, Thumbelina and her millennial peers may hone their capacity to engage those moving forces that escape the analytical purchase of our most prominent socio-political concepts. In doing so, these emergent digital subjects might also helpfully illuminate the ways in which, as Stewart suggests, ‘politics starts in the animated inhabitation of things’ (2007: 16).

What I am suggesting here, then, is that the ‘authentic cognitive subjectivity’ that Serres speculatively attributes to Thumbelina and Tom Thumb is characterised by two key features: first, an emergent capacity for intuition (made possible, in part, through the delegation of human memory functions to digital technologies) which pushes against dominant modes of representational thinking to *connect with moving events as they unfold*, and, second, an algorithmic mode of thought (conditioned by our growing intertwinement with computational technologies) which is *procedural, technical, calculative and data-oriented*. While Thumbelina’s intuitive orientation attunes her to change as it is happening, and thus the potential inherent in the present for things to be otherwise, her algorithmic aptitude allows for a more precise ‘arraying of possibilities such that they can be acted upon’ in the future (Amoore 2013: 23).

Importantly, these newly ascendant cognitive and affective features continue to work in and through multiple other human modes of sensing, perceiving, thinking and acting – including more conceptual, analytical and representational registers. The rise of algorithmic thought, from this perspective, does not inevitably function to erode young people’s abilities to engage contextually, critically and politically. Rather, in its articulation with intuition, speculation and the pre-emergent, it might constitute a vital form of ‘quantum literacy’ which enables millennials to navigate

networked relations across (non-linear) time and (non-bounded) space, and to recognise the ‘principle inadequacy of thinking about numbers and letters, mathematics and language, as two separate domains’ (Coleman et al 2018: 8).

Of course, Thumbelina and Tom Thumb are themselves abstractions – in ‘reality’ they exist only in the multiple; at lived intersections of gender, sexuality, race, class, ability and nation, and the various material, social and geo-political differences and inequalities such shifting relations entail. To the extent, however, that Thumbelina is a *useful* abstraction to think through, she compels us to deconstruct dualistic figurations of millennials as either apolitical automatons or overly-sensitive ‘snowflakes’. Indeed, from Serres’ perspective, ‘the new democracy in knowledge’ that digital media and tertiary memory offer – and which Thumbelina and Tom Thumb both cultivate and rely on – corresponds to a political ‘democracy-in-formation’ that will soon ‘become inescapable’ (2015: 55).

Movement, affect and digital activism

There is clearly no necessary link between intuition and socio-political change in the interests of freedom and social justice. As an embodied capacity and form of relationality, intuition is, in principle amenable to mobilisation by ‘progressive’ and ‘regressive’ ideologies alike. For example, as the political geographer Louise Amoore (2013) explores, a ‘politics of possibility’ premised on intuitive engagement with pre-emergent flows and relations characterises not only certain strands of continental philosophy and cultural theory, but also practices associated with capitalist financialization and international securitization. Algorithmic processes, moreover, are increasingly associated with problematic socio-political patterns and prejudices. Safiya Umoja Noble

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argues, in this vein, that algorithms created and employed by global platforms such as Google are 'serving up deleterious information about people, creating and normalizing structural and systematic isolation, or practicing digital redlining, all of which reinforce oppressive social and economic relations' (2018: 10).

Assuch, I do not wish to downplay the importance of engaging critically with mobilisations of intuition and algorithm that perpetuate dominant relations of power and violence. Keeping these political dynamics in mind, however, I also seek to complicate narratives that associate digitally re-mediated forms of personhood predominately with capitalist colonialization and political apathy - or interpret engagement with the pre-emergent primarily as a mode of violent capture - to explore how these phenomena might be conducive to more affirmative modes of political relationality and solidarity.

In particular, there are, I want to suggest, significant resonances between the 'intuitive digital subject' that Thumbelina represents (or may become) and the logics and sensibilities of contemporary networked movements for social justice - including Occupy and Black Lives Matter as well as various feminist, queer, trans and anti-fascist mobilisations gaining momentum in the wake of Trumpism. As the 'movement' in social movement signifies, these forms of collective action and solidarity are continually *in process* - evolving and transforming as they attract new members and respond to unfolding events and emerging socio-political and environmental conditions. To the extent that 'being moved' is a necessary catalyst for participation in, or alignment with, particular political visions, these new forms of activism (like older ones) are also highly *affective* - they are both fuelled by, and productive of, 'bodily intensities, emotions, feeling, and passions' (Gould 2009: 3). What is perhaps most distinctive, however, about current forms of 'progressive' political mobilisation is their *digitally networked* nature.

Extending technological techniques pioneered by the Arab Spring, the Occupy movement, launched in New York City in 2011, used a range of digital platforms both to 'spread the word' and to coordinate embodied activity as it unfolded. As Paulo Guerbedo argues in his comparative analysis of the Arab Spring, Occupy Wall Street and

the Indignados movement in Spain, social media within new protest cultures are not simply means to 'convey abstract opinions'; they also enable forms of *affective choreography* that give shape to how people feel, move and act together (2012: 13). Across these various networked movements, social media, and particularly Facebook and Twitter, have been 'instrumental in instigating an emotional condensation of people's anger' and 'acting as a spring-board for street-level agitation' (2012: 15). Digital applications have also enabled protesters to re-direct crowd activity in real-time to avoid the containment strategies of authorities. During the student protests against the increase in UK university fees in 2011, which was linked in with Occupy UK, for example, a new digital app 'Sukey' enabled activists to avoid police kettling in London by allowing them to both 'submit and access information about which road junctions are clear and which are blocked by the authorities' (Geere 2011: online).

Various digital technologies and forms of techné have also, of course, been vital to the emergence and effectivity of the Black Lives Matter (BLM) movement. Since its inauguration in 2013, BLM has, as Barnor Hesse and Juliet Hooker discuss, harnessed social media to 'organize, heighten immediacy, and widen the scope of the public that acts as witness to the disposability of black lives' (2017: 451). While repeated exposure to violent images tends to be associated with political desensitization and disaffection (Pedwell 2017), BLM's mobilisation of a 'continuous loop of viral videos showing police killing unarmed blacks' has made 'viscerally accessible' to millions worldwide the habitual violent targeting of black bodies by the carceral state (Hooker 2017: 491) in ways that have intensified (rather than dissipated) collective anti-racist affect and activism. Moreover, Twitter hashtags such as #Ferguson, #Baltimore and #Cleveland (associated with the police killings of Michael Brown, Freddie Gray and Tamir Rice respectively) have functioned not only to expand the movement's evolving digital network but also to convey instantaneous 'information about unfolding events' (Bonilla and Rosa 2015: 8) - thus enabling BLM to connect with and respond to *that which is in process*.

The fluid intersection of 'the moving', 'the affective' and 'the digital' characterising these

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movements, I want to suggest, is precisely the terrain with which Thumbelina’s combination of intuitive sense and algorithmic thought resounds. If intuition is ‘a moment of our own duration that enables us to connect with a wider one’ (Kember and Zylinska 2012: 15), Thumbelina is primed for this union. As Serres notes, Thumbelina and her millennial peers, via their propensity for movement and action, are ready to connect with moving events – to resonate with the rhythm of bodies coming together to occupy space, to protest the status quo and to engage ‘the modalities of the possible and the contingent’ (43). Although, as Sara Ahmed (2014) underscores, the embodied cadence of social movements is not simply about synchronicity: It may also involve the sensation of being ‘out of time’ with the mainstream.

Moreover, if Thumbelina’s capacity for intuition attunes her to the mobility and affectivity of new social movements, her algorithmic capacities align her with the digital modes of communication and choreography central to these networked activisms. Indeed, in Serres’ view, ‘the objective, the collective, the technological, the organizational’ now ‘depend far more on this algorithmic or procedural cognition’ than they do on ‘the declarative abstractions’ of ‘philosophy’ (2015: 71-2). This is not to invalidate the ongoing salience of conceptual and analytical thinking but rather to highlight what may be generative about algorithmic thought in a context in which it has been consistently devalued or aligned exclusively with that which is politically and ethically suspect. Think, for example, of the powerful (if contentious) political function of algorithmic practices of listing, counting and cataloguing within contemporary digital activisms – whether via the collective naming online of alleged sexual abusers by the #MeToo movement, or the real-time

tally of unarmed people of colour killed by the police in the United States maintained by BuzzFeed and Gawker in solidarity with #BlackLivesMatter.

Indeed, the ‘hashtag activisms’ associated with these and other contemporary movements can be considered vital forms of *algorithmic politics*. As Yarimar Bonilla and Jonathan Rosa discuss in their digital ethnography of BLM and #Ferguson, in the immediate aftermath of Michael Brown’s death, social media users ‘well aware of the algorithmic nature of Twitter’ were ‘purposefully hashtagging to make Ferguson “trend”’ (2015: 7). Such aggregative practices allowed Brown’s murder to be connected to the perceived ‘expendability of black bodies’ underlying a multitude of past killings of people of colour by law enforcement in the United States (2015: 10). They also, however, facilitated connections with wider social and geopolitical struggles – through tweets such as ‘#Egypt #Palestine #Ferguson #Turkey, U.S. made tear gas, sold on the almighty free market represses democracy’ (2015: 10, 6) – enabling opportunities for transnational collaboration and solidarity (Hesse and Hooker, 2017).

Significantly, while such algorithmic dynamics enable the itemising, indexing and interlinking of ‘the quotidian struggles against dehumanization every brown and black person lives simply because of skin color’ (Rankine 2015: 14), they also offer potent opportunities for reimagining black materiality beyond mainstream mediations. For example, through memes such as #IfTheyGunnedMeDown – in which young people of colour posted two contrasting photographs of themselves along with the text ‘which one would they use’ (referring to which image authorities and mainstream media would print if they were killed by the police) – Twitter users were able to ‘contest the racialized devaluation of their person’ and ‘rematerialize their bodies in alternative ways’ (Bonilla and Rosa 2015: 9). More generally, BLM’s intersectional ethos, and its intertextual articulation with other feminist, queer, trans and anti-capitalist movements online, has enabled ‘the complexity of black lives inscribed differently and multiply ... to be seen, heard, and encountered politically’ (Hesse 2017: 600) – illustrating how algorithmic politics are not simply antithetical to political complexity and expansiveness.

Political tendencies and pre-figurative politics

Of course, there is no guarantee that the emergent cognitive and embodied features Serres ascribes to Thumbelina and Tom Thumb will orient millennials towards participation in progressive or left-wing movements rather than politically conservative, or even fascist, forms of mobilisation. It is clear that the 'alt right' and other forms of fascist politics aligned with Trumpism have adopted similar digital techniques and strategies to those employed by progressive movements for social justice. As Yochai Benkler et al discuss in *Network Propaganda*, alt-right memes are amplified by major right-wing outlets such as Fox News in the US, which 'are adept at producing their own conspiracy theories and defamation campaigns' (2018: 13). Consolidating 'long-term changes in American politics' and 'the already present asymmetric architecture of news media' (2018: 21, 2), such digital dynamics leveraged a media ecosystem ripe for the violent re-emergence of far-right ideologies.

However, if regressive politics depend on rigid identity positions and seek a return to exclusionary versions of an imagined 'the past' (i.e. 'Make America Great Again' and the colonial nostalgia of 'Brexit'), many of the new broadly leftist activisms are characterised precisely by their *openness* to the future – that is, by a deep commitment to pursuing democracy, freedom and solidarity that does not assume that we can know deterministically in advance what 'social justice' might constitute in a given context or indeed how, specifically, it might be delivered. As such, these various, broadly leftist, forms of political mobilisation can be considered part of what the political thinker and activist Chris Dixon calls '*another politics*': a shared politics bound together not by political party affiliation or sectarian lines, but rather by a '*political tendency*' – a tendency aligned with 'a rich democratic vision of everyone being able to directly participate in the decisions that affect them' and resistant to 'all forms of domination, exploitation and oppression' (italics mine, 2014: 6, 3).

From this perspective, if many of the movements which comprise the political tendency Dixon describes are not led by a clearly defined set of policies, goals or 'end-points' (which was, of course, one of the dominant critiques of Occupy), this is,

in part, because they appreciate the importance, in a complex and shifting social world, of sensing and responding to change *as it is happening*. Moreover, they understand the political risks, as John Dewey puts it, of simply 'substituting one rigidity for another' ([1922]2012: 52). As an alternative to more rigid or essentialist modes of political mobilisation, these movements enact a *pre-figurative politics* which aims to 'manifest and build, to the greatest extent possible, the egalitarian and deeply democratic world we would like to see through our means of fighting in this one' (Dixon, 2014: 7). As such, they highlight the vital links between social change and the affect, gestures, habits and solidarities of daily life. They pursue a 'politics of habit' and 'politics of feeling' that are, as Ann Cvetkovich puts it, 'manifest not just in overt or visible social movements of conventional politics but [also] in the more literal kinds of movement that make up everyday life' (2012: 199).

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Consider, for example, not only Occupy, but also other anti-capitalist movements including the Indignados of Spain and the Outraged of Greece, which have repeatedly assembled to protest neoliberalism and austerity. As Judith Butler and Athena Athanasiou discuss, in performing habits and routines of everyday life in the public space of the square – sleeping and living there, cooking for one another, working remotely together – 'taking care of the environment and each other' – such activists are pursuing pre-figurative politics; they are cultivating 'the relations of equality that are precisely those that are *lacking* in the economic and political domain' (2013: 102). While calling attention to the insidious harms of neoliberal governance and induced precarity, they also *constitute* collective relations and capacities which

might support a range of immanent political possibilities.

If pre-figurative politics are unfolding in public squares around the world, they are also ongoing within a multitude of digital spaces and circuits – via practices of tweeting, meme-making, blogging and virtual community-building. Bonilla and Rosa, for instance, highlight the experience of a 25-year-old American protestor, Johnetta Elzie, who first encountered other activists online, with whom she ‘live-tweeted, Vined and Instagrammed’ every BLM protest in Ferguson during the summer of 2014 (2015: 10). Coming to call themselves ‘Millennial Activists United’, these social media users eventually expanded ‘their role from “documenting” their actions to “generating” new forms of community’ – including the use of the hashtag #Ferguson Friday to curate a weekly digital space for political reflection and ‘national “fireside” conference calls during which activists based in Ferguson could speak directly with those following the events from afar’ (2015: 10). In addition to ‘forging a shared politics through struggle’ transnationally (Dixon 2014: 3), these digital practices enable millennials to develop vital political *techné* – the embodied skills, techniques and habits of ‘doing politics’ online (Rentschler and Thrift, 2015). Such ‘learned and socially habituated way[s] of doing things with machines, tools, interfaces, instruments, and media’ (2015: 241) are amenable to mobilisation for multiple, yet to be imagined, political enactments.

In practical terms, this intuitive and speculative approach to politics is enabled, in part, by these movements’ networked qualities, including the capacity of digital and algorithmic media to connect members to *moving events as they unfold*. Much has been written about the propensity of social media to produce ‘echo chambers’ that polarize ideological differences rather than exploring what might be generative about their grey areas. Through a pre-figurative lens, however, we can alternatively consider how the immanent, ‘real-time’ dynamics of networked media might enable (potential) activists to ‘learn and act in the midst of ongoing, unforeclosed situations’ (Anderson 2017: 594). This is significant because, as the philosopher Erin Manning (2016) argues, it is through inhabiting the gestures, habits and relations of life *in process* that we can

discern and exploit the potential for dominant cultural and socio-political tendencies to *become otherwise*.

Of course, we know algorithmic media *tend in certain directions* and thus the forms of socio-political becoming they might support are by no means open or unlimited – a reality that makes ongoing work to expose and contest ‘algorithmic oppression’ and the pernicious links between digital media and capitalism increasingly vital (Noble 2018; Fuchs, 2014). Yet, for movements such as Occupy and BLM, staying ‘in the midst’ of socio-political and material relations in process (Manning 2016), also means recognising that there is no *politically pure* position from which to operate *outside* the dynamics of neoliberalism or racial capitalism. Rather, what is required are a means of working speculatively within existing (infra)structures and relations of power, in order to reorient the tendencies that comprise them. In this vein, one of the strengths of the pragmatic coalitions that algorithmic technologies enable is that they are flexible and responsive, and can form and recalibrate tactics as situations unfold – thus potentially ‘mobilis[ing] a lithe and powerful response able to resist, rework, and undo [hegemonic] social relations and practices’ (Katz 2017: 598).

What is perhaps most important from a pre-figurative perspective is that networked projects of social justice remain ‘in process and unfinished, something that consciously pushes beyond available political categories, and yet something that can be shared, held in common’ (Dixon 2014: 6). It is precisely this kind of openness, inclusivity and ‘processuality’, I want to suggest, that constitutes the power of Occupy and Black Lives Matter as movements, statements and rallying calls. When those marching, occupying, filming or live-tweeting *repeat* ‘Black Lives Matter’, the

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'sense of being present in a particular space is evoked and remains open'; the *reiteration* 'makes common a way to be in the future' that is 'always becoming, always in formation' (Mirzoeff, 2017: 33, 92). The injunction to '#Occupy', and the parallel anti-capitalist slogan 'we are the 99 per cent', work similarity (Fuchs, 2014) - they provide the basis for inclusive modes of collective political action and solidarity that remain open to a host of material and ethical possibilities. Millennials have been at the heart of these activism in part, I have argued, because they practice forms of pre-figurative politics that combine 'the moving', 'the affective' and 'the digital'. While exploiting the aggregative capacities of algorithmic media to live-chronicle everyday inequalities and choreograph collective action and affect, these movements also cultivate transformative relations and capacities with the potential to actualise pre-emergent techno-social futures.

As my speculative engagement with Serres' *Thumbelina* has suggested, embodied and socio-political change is continually unfolding through ongoing processes of *mediation* - multiple, overlapping, non-linear processes that work primarily at the level of affect, sensation, gesture, habit and tendency. 'The digital' and 'the algorithmic' are central to such dynamics; indeed, we are all now 'digital humans' - but what this means (or has the potential to mean) materially, politically and ethically is not straightforward or pre-determined. It may, however, be through cultivating a more intuitive mode of engagement with everyday life that we are better able to sense and apprehend these kinds of transformations as they are happening - and the potentialities that they entail. ■

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References

- Ahmed, S. 2017. *Living a Feminist Life*. London and Durham: Duke University Press.
- Amoore, L. 2013. *The Politics of Possibility: Risk and Security Beyond Probability*. London and Durham: Duke University Press.
- Anderson, B. 2017. 'Hope and Micropolitics'. *EPD: Society and Space*. 35:4: 593-595.
- Ash, J. 2015. 'Sensation, Networks, and the GIF: Toward and Allotropic Account of Affect'. In Michael Petit et al (eds), *Networked Affect*. Cambridge MA: MIT press, 119-134.
- Benkler, Y et al. 2018. *Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics*. Oxford: Oxford UP.
- Bergson, H. [1903]1999. *An Introduction to Metaphysics*. Indianapolis: Hackett Publishing Co Inc.
- Bonilla, Y. and Rosa, J. 2015. '#Ferguson: Digital Protest, hashtag ethnography, and the racial politics of social media in the United States'. *American Ethnologist*, Online First: 4-16.
- Butler, J. and Athanasiou, A. 2013. *Dispossession: The Performative in the Political*. Cambridge: Polity Press.
- Campbell, D. 2017. 'Facebook and Twitter "harm young people's mental health"'. *The Guardian* (19 May 2017). Online: available at: <https://www.theguardian.com/society/2017/may/19/popular-social-media-sites-harm-young-peoples-mental-health> [Accessed 20 April 2018].
- Chun, W. H. 2016. *Updating to Remain the Same: Habitual New Media*. Cambridge MA: MIT press.
- Coleman, F. et al. 2018. *The Ethics of Coding: A Report on the Algorithmic Condition*. Brussels: European Commission.
- Coleman, R. 2008. 'A method of intuition: becoming, relationality, ethics'. *History of the Human Sciences*. 21.4: 104-123.
- Cvetkovich, A. 2012. *Depression: A Public Feeling*. Durham and London: Duke University Press.
- Deleuze, G. and Guattari, F. 1994. *What Is Philosophy?* Verso: London.
- Dewey, J. [1922]2012. *Human Nature and Conduct: An Introduction to Social Psychology*. London: Digireads.com.
- Dixon, C. 2014. *Another Politics: Talking Across Today's Transformative Movements*. Oakland: University of California Press.
- Fuchs, C. 2014. *OccupyMedia! The Occupy Movement and Social Media in Crisis Capitalism*. London: Verso.
- Geere, D. 2011. 'Sukey apps help protesters avoid police kettles'. *Wired* (31 January 2011). Online: available at: <http://www.wired.co.uk/article/sukey-protest-app> [Accessed 20 April 2018].
- Gould, D. 2009. *Moving Politics: Emotion and ACT UP's Fight against AIDS*. Chicago: Chicago University Press.
- Guerbado, P. 2012. *Tweets and the Streets: Social Media and Contemporary Activism*. London: Pluto Press.
- Hesse, B. 2017. 'White Sovereignty (...), Black Life Politics: "The N****r They Couldn't Kill"'. *South Atlantic Quarterly* 116:3, 581-604.
- Hesse, B. and Hooker, J. 2017. 'Introduction: On Black Political Thought inside Global Black Protest'. *South Atlantic Quarterly* 116:3, 443-456.
- Hooker, J. 2017. 'Black Protest / White Grievance: On the Problem of White Political Imaginations Not Shaped by Loss'. *South Atlantic Quarterly* 116:3, 483-504.
- Katz, C. 2017. 'Revisiting Minor Theory', *EPD: Society and Space* 35:4: 596-599.
- Kember, S. and Zylinska, J. 2012. *Life After New Media: Mediation as a Vital Process*. Cambridge: MIT Press.
- Manning, E. 2016. *The Minor Gesture*. Durham and London: Duke UP.
- Manovich, L. 2013. 'The Algorithms of our Lives', *The Chronicle of Higher Education* (16th December 2013). Online: available at: <https://www.chronicle.com/article/The-Algorithms-of-Our-Lives-/143557> [Accessed: 1st December 2018].
- McLuhan, M. 1994. *Understanding Media: The Extensions of Man*. Cambridge: MIT Press.
- Mirzoeff, N. 2017. *The Appearance of Black Lives Matter*. Miami: [Name] publications.
- Noble, S. U. 2018. *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: New York University Press.
- Pedwell, C. 2017. 'Mediated Habits: Images, Networked Affect and Social Change'. *Subjectivity* 10: 147-169.
- Rankine, C. 2015. *Citizen: An American Lyric*. New York: Penguin.
- Rentschler, C. and Thrift, S. 2015. 'Introduction: Doing feminism: Event, archive techne'. *Feminist Theory* 16:3. 239-249.
- Serres, M. 2015. *Thumbelina: The Culture and Technology of Millennials*. Trans. Daniel W. Smith. London and New York: Rowman and Littlefield.
- Stewart, K. 2007. *Ordinary Affects*. Durham and London: Duke UP.
- Stiegler, B. 2012. *Uncontrollable Societies of Disaffected Individuals*. Cambridge: Polity Press.
- Twenge, J. 2017 *iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy - and Completely Unprepared for Adulthood*. New York: Atria.