

The Secret Life of Algorithms: speculation on queered futures of neurodiverse *an*algorithmic feeling and consciousness

AUTHOR BIO

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ABSTRACT

Algorithmic modes of thought have long and problematic histories of collusion in processes of governmentality, dating at least back to the Atlantic slave trade and including the othering of neurodiverse, black and indigenous, and queer cultures. But beyond their instrumentation within systems of power, this paper proposes that at the foundation level of algorithmic design there are a series of assumptions about what constitutes legitimate thought processes. These assumptions are based on neurotypical modes of thought and often ignore the possibilities of more neurodiverse thinking, which is regularly devalued in our society. This naturalised “whiteness” that lies at the centre of and colonises algorithmic programming needs to be interrogated and rethought, it is argued, in order to break the relationships between algorithms and oppressive power systems. Drawing on fugitive and devalued modes of thought such as queer kinship and failure, black sociality and the incomputability at the heart of the mathematical concept of Omega, the article speculates on the conception of a minor algorithmic *value* or “life” closer to that of an emergent collective and ecological consciousness than that of the dominant individualised and fixed model that is valued within contemporary capitalism.

KEYWORDS

neurodiversity, algorithms, queer theory, sociality, governmentality, self-organisation, Brian Massumi, Jack Halberstam, Fred Moten, Omega, Luciana Parisi, black studies

The ungovernability of things and signs within and outside or underneath the field that is delineated and enclosed by the manipulative efforts of selves caught up in the exertions of governmentality is, or should be, our constant study.

Fred Moten.

The algorithms are taking over the asylum

[1] To be fair to the article it does acknowledge some of the failures of contemporary psychiatry, though it attributes these largely to insufficiently fine data analysis (and that therefore might be better completed by algorithmic processes), rather than ideological assumptions underpinning the discipline. In another instance of the disciplinary function of biometric algorithms, according to Zach Blas, there are disturbing attempts to utilise facial recognition biometrics to identify homosexuals (*Weapons* 23).

[2] See Ralph Savarese on the colonization of the right hemisphere of the brain by the left in cognitive therapies (275).

“Machine learning is our only hope,’ exclaims Konrad Kording, a computational neuroscientist at the University of Pennsylvania” (Pappas 3). In breathless terms an article in *Neo.Life* narrates a series of new algorithms that will identify (that is, pathologise) mental illness through the analysis of the qualitative aspects of the patient’s voice while they talk over the phone to their analyst. This will operate through the digital biometric analysis of tone and flow of speech, supra the content of the conversation (5). [1] On one level this appears to be yet another layer of techno-biopolitical incursion into the body, continuing the extension of contemporary networked modalities of control as articulated by Deleuze, who in the 20th century predicted just such a future system of medicine “without doctors or patients” (*Postscript* 7). This automated algorithmic psychiatrist replaces the human psychiatrist and gathers statistical knowledge about the patient to form a “data body” in Jasbir Puar’s terms, that effectively both shadows and precedes the patient (162; 155). As per the algorithmic movements of the derivatives market which “colonize the future” through the quantisation of the risk of risk, so algorithmic psychiatry colonises neurodiversity through statistical projection that restricts its potential to pathological possibilities and categorical diagnosis (Bahng 11-12). [2]

Understood in the broader sense, contemporary algorithmic modalities of control might also be seen as a continuation of long histories of algorithmic, statistical and numerical involvement in both governmentality and extractivist machinations that fold into more contemporary modes of power. This includes, one might argue, the DSM (*Diagnostic and Statistical Manual of Mental Disorders*) as an algorithmic tool of pathology, and a history of collusion with state power and commerce that dates back at least to the Atlantic slave trade. Contemporary algorithmically-centered extractivist activities incorporate not only the role of algorithms in bio- and onto-political forms of governance such as biometrics and finance that harness the potential of life (Massumi, *Theses* 63-5), but also the continued efforts to extract more labour from the algorithms themselves, as the new digital workhorses of the economy.

If the current and deeply problematic position of algorithms as a tool of neoliberal capitalism is relatively well known, its slave trade prehistory is less well acknowledged outside of Black Studies. While I turn to these links to the Atlantic passage, and to aspects of the relationship of neurotypicality and homonormativity to programming, the aim of this article is somewhat more affirmative, seeking an “enjambing” (Bahng 7) or speculative fabulation drawing from fugitive practices in Black, Queer and Neurodiverse studies in order to speculate on an algorithmic neurodiversity (a “critical” rather than identitarian neurodiversity, as I discuss further). And, while there is nothing particularly new in stating that algorithmic processes are bound up in systems of control, extraction and governance, however true and pertinent that

[3] “Sexual exceptionalism,” Puar writes, is a “missionary discourse” that “rescues some bodies from their status as othered” (5). In this move queerness is reduced to an acceptable exceptionality – such as the white married gay couple/family with respectable jobs who live in the suburbs. In doing so queerness is imaged as the quantifiable, the aspirational and recognizable (they are just “like us”), and other more politically problematic forms of queerness become even more invisible and othered. As Tsika notes, search algorithms play an important role in this exceptionalism, where, for example, searches for queer content turn up predominantly “gay” material, and trans content is equated with queer or gay (though in fact one might be trans and hetero-identifying) (19-20, 41-2). One might argue that, to some extent, exceptionalism also applies to the world of neurodiversity, where certain modes of thought – such as the popular conception of Asperger’s as indicating one or more exceptional and aspirational talents (for example a proclivity for mathematics or memory games) – are valorised, while others whose diverse expressions are less easily mainstreamed are ignored. See Savarese on the instrumentation of anti-type Tito Mukhopadhyay’s talents by CAN, an organisation bent on “curing” autism (276-277).

statement may be, I argue that what is often not considered in depth in such discussions is algorithms as entities or events in their own right (Parisi, *Contagious* 25). Ultimately my question is whether it is possible to conceive of an algorithmic *value* or “life” beyond that which is itself bound and limited by its instrumentation as an agent of these systems of control and the inherent “whiteness” in its programming – whiteness that artist Zach Blas has termed “a wasteland of patriarchal hetero male sensibilities” (*Society* 2).

“Whiteness,” in all its modalities (race, class, geography, species, gender, individualism, able-bodiedness, neurotypicality and so on), is that which is centered and which separates and devalues the neurodiversity (in all its modalities) that it cannot absorb. It is never simply an act of exclusion, but also one of inclusion through categorization – a selective valuing and inclusion through reductions such as homonormativity, as both Puar and Tsika examine at length, and which I discuss briefly below, and though “exceptionalism” that allows entry for some expressions and bodies while keeping the gates firmly locked for others (Puar 3-7). [3] “Whiteness” as an assemblage of normative socio-historical precedents, and material and technological values and objects inevitably infects and *pre-empts* potential, including, I argue, the potential of algorithmic modes of thought. It is a “violence” practiced on the world “through a mediation of constant units of measurement” (Ferreira De Silva, *1 ÷ 0* 1-2; Tsika 37). For the purpose of this article, and in search of fugitivity from the operations of whiteness, I turn to and limit my consideration of that which is othered to affinities within a critical Blackness, Queerness and Neurodiversness, though I acknowledge my selectivity and that there are of course many other fields that might be fruitfully employed. These are terms that might overlap in many ways without homogenizing, and their connections include arguments for Blackness as neurodiversity (Moten) and as queerness (Nyong’o 2; Tsika; Puar). What I search for in these studies are minor and unrecognised expressions of living (given that the *recognised* existence is that which is captured) (Blas *Weapons* 23). That is, I seek a “fugitivity” that escapes normative valuation and the aspiration to be accepted by/as white (Harney and Moten 49; Manning 6), and the construction of an “assemblage” of radical tools that might be, as in Puar’s thinking, beyond disciplinary models and one that moves us out of the purely historical “to instead aspire to other temporal and spatial possibilities” (192).

My thinking in this article is deliberately, but also unavoidably, speculative. To imagine difference in its own right and to articulate it in the language of the dominant (the neurotypical, the straight, the Eurocentric academic, code) is difficult at best. What an algorithm really feels, and what its thinking and feeling can mean, exposes the hopeless inadequacy of writing about that which is denied a voice other than as the difference that upholds the norm. However such speculation is, I hope, more than a sign of inadequacy. Rather, it is intended as a specific *methodology* that is minor: a series of lines of flight constructed from within a system (Deleuze and Guattari 16), imagined as “contingent and indeterminate” queerness (Puar 172, xv), or as a contagion that remains unregulated, “anexact” and intensifying (Nyong’o 15). It is not purely resistance, which then continues to position whiteness as the master narrative in order to react against its operations, but speculation harnessed as an *unmastery* in Singh’s terms, working outside the dynamics of conquest rather

than simply reversing them (passim). It might also, as Halberstam argues, be utilised as a methodology of failure that sidesteps the valuation of norms of individual success and control. Queer failure values differently, acting as a “weapon of the weak” operating through undisciplined or unprofessional thought – a collective fugitivity from academic rigor and its many limitations (Halberstam, *Queer Art* 88, 7-8). I suggest that the term “fabulation” might be applied here, a speculative process differentiated from storytelling in that it “backgrounds self-recognition, subordinating it to the *surprise* of becoming” (Massumi, *Theses* 83, emphasis in the original), and that promotes disruption and provocation not mastery (Nyong’o 13). Fabulation activates the virtual: that is, potentials beyond the merely possible or the “revolutionary conditions” for the minor (Deleuze and Guattari 18; Nyong’o 10, 14; Haraway 10-11). For Aimee Bahng it speculatively “enjambes” an assemblage that formulates the “not-yet” as an open futurity whilst illuminating histories of violence and exclusion (7). [4] Fabulation presents an alternative mode to, for example, the narratives of bondage-to-emancipation (Nyong’o 6; Moten 165-172), or of neurodiverse-to-cured, or of closeted-to-accepted that inherently accept the norm as an aspirational centre (Puar xix-xx). If fabulation, as Deleuze defines it, is for a people yet to come (Nyong’o 14), in Massumi’s hands it is a tool for a post-capitalist economy yet to be imagined, and here it is for an algorithmic life yet to be valued.

[4] Bahng argues that on one level the derivatives market can be seen as fabulatory, accessing “alien currency from another time, from a time out of joint, from a future anterior”, and which produces “extrapolative fiction” out of rendered data (1, 4), but that in this formation it speculates on the future in order to control and limit it.

Critical fabulation in this sense is crucially also always *collective* and irreducible to the individual (Nyong’o 18), and ties in with my use of “critical” neurodiversity, in that the terms are not aimed at valuing the individual but naming a radical approach to life (Puar 206). In doing so I do not wish to dismiss the importance of having a self-designated label to claim, and certainly this can have very positive effects on a life (the pejorative term “queer” being reclaimed and sung loud and proud, for example). But the purpose of the term “neurodiverse,” from the radical political point of view as opposed to its indentitarian use, is not to provide a kinder or more inclusive label for anyone or any group, but to trouble the essentially exclusionary processes of whiteness that pathologies otherness [5] In other words, the term neurodiversity promotes a queering and troubling of the language, positions and governance these processes are constructed to implement, not the mislabeling of individuals, though this is a very real and toxic *effect* of these structures of power.

[5] Identitarian uses of neurodiversity, Manning argues, “shut down the political and social forces of the movement for neurodiversity” (2).

The question of “value” is central to this discussion. In a world in which so much is unvalued, or by being valued is reduced and tamed (Tsika 14, 18), there is an urgent ethical need, as both Macarena Gomez-Barris and Brian Massumi articulate in recent texts, to broadly rethink “value” outside of extractivist capitalist norms that convert cultural life into exchange value (Gomez-Barris 10). Such a radical project would seek, in Massumi’s words, to “take back value [and] to revalue value beyond normativity and standard judgment” (Theses 4). In contemporary capitalism, the meaning of value has been reduced to references to the processes of the extraction of excess from all forms of life and potential, a form of biopower that regulates by channeling emerging life into regulated forms that perpetuate “norms” (62-3). [6] Beyond biopower this reaches into what Massumi terms “ontopower,” which operates by preemption, “inciting activity into being in order to be harnessed rather

[6] Biopower, Rey Chow argues, is the “ascendency of whiteness” (cited Puar 24).

[7] See also Massumi *Ontopower*. Matteo Pasquinelli highlights a devastating algorithmic example of this in the USA's bombing of suspected "terrorist" targets that were blindly suggested by statistical algorithms using "patterns of life" that match the suspects' movements and purchases to those of known terrorists' "lifestyles" (*Arcana* 285). See also Browne 136.

[8] I take seriously Parisi's claim of algorithmic feeling (*Contagious*), which gives these mathematical processes a "will to power" or an autonomous power of becoming. "Feeling," in A.N. Whitehead's conception of the term, is the process by which an entity (that is, anything that actualises), comes into being by selecting data from other entities and from the virtual plane, and then "patterning" these selections into a unique composition. In this sense feeling is pre-subjective and not related to human emotion (22). See Whitehead for an exhaustive discussion, and Parisi (*Contagious*) and Portanova for discussions relevant to algorithms.

than merely channeling activity as it emerges" (63). [7] Thus futures are constrained within, and incited in order to be, captured by these normative power relationships that, under neoliberalism, monetise and regulate life's potential. Here "capital has its invisible hand on the pulse of life" (13). As Luciana Parisi argues, algorithmic processes play a key role in these forms of preemptive control and governance, including mining and instrumentalising cognitive and affective capital and reducing "all existence to a general form of indebtedness" (*Algorithmic Capitalism* 127; Tsika 31). The question then, which Parisi, Massumi and Gomez-Barris ask, is one of how to imagine and bring into being a new ethics of value, one that values life differently (or perhaps more specifically, values it *differentially*) (Massumi, *Theses* 3-5; Gomez-Barris xv).

Taking Parisi's work as my guide, I argue that if algorithms are *within life* (that is, within the ongoing becoming of the world, albeit that they inhabit a digital, non-biological register of this emergence), then an ethics that applies to algorithms is essential to rethinking value. This is necessary not only to think beyond algorithms' disciplinary role, but to also begin to think what other potential existences these algorithms might themselves experience. [8] Indeed, as Blas argues, queering technologies provides us with a way to address the "issue of the nonhuman and expand queerness beyond the purely human or human-centered" (Gaboury). What is it, I ask, that can be valued in algorithmic thought other than the governance and instrumentation of our toxic neoliberal lifestyles and control networks? Here, we need not to be saving the algorithm for humanist or liberal reasons. That is, to "save" them (or any othered entity) because we see our likeness reflected in them is to continue a process of civilization, in which everyone (everything) is salvageable for the humanist project as long as we can establish their likeness to the perceived "norm" (Singh 34). This then is another form of colonial logic, one that fails to establish the possibility of any position for the other than reasonably like "us." At its base it is another means of control, or an extension of the same means. How to begin to think outside of the regulatory modeling of whiteness, in relation to algorithmic thought is the subject of this article.

I begin this inquiry into alternative valuation from two disparate points that have contributed to shaping algorithms: firstly the valuing of executive function as a defining characteristic of neurotypicality and, I argue, algorithmic efficacy, and secondly a history of algorithmic application to the oppression of Black Life through the slave trade and contemporary biometrics. From this point I begin to draw on fugitive practices, beginning with the concept of Black sociality as ecological thought and its possible relation to self-organising mathematics, followed by speculation on queer failure and kinship as alternative models to the heteronormative values that I argue are embedded in machine learning. As I then examine, this queer failure can also be found in "Omega" – the uncertainty at the heart of algorithmic mathematics, which might allow a qualitative intensity that refuses the governance of the quantitative. Ultimately this might allow us to imagine a dehumanised, impersonal *analgorithmic* life: a life that is queer in its transsubjectivity.

Neurotypical life and its discontents

The psychologist in conversation on the phone to their client while the algorithms do their work operates from a presumed benchmark of the algorithms' own reasonable normality, against which the pathological can be measured. Similarly, the assumptions at work in the technical assemblage are ones not only of the transparency of the algorithmic *logic* by which the technology assigns pathologies, but more primarily an algorithmic *neurotypicality* that can, as Pappas's article (and the algorithmic psychology project as a whole) implies, be assumed without question. As Noah Tsika argues in his concept of "algorocratic governance," programming languages themselves need examination as they help to "determine the limits of inclusion" and accentuate forms of discrimination (31).

In beginning to challenge neurotypicality and see through the humanist veil that proposes only one proper form of intelligent thought or consciousness that can be valued, I argue below that we need to turn to other potentials for techno-neuro-processes in order to fully rethink value. This is an issue of some urgency for all those expressions of living that are traditionally denied membership into the "thinking world," but who all make pressing claims for alternative and alternatively valued modes of thought. [9] Here I collect queer, black and ecological socialities under a broad umbrella of "neurodiversity," not to erase their differences and socio-historical and singular struggles, but as a collection of those human and non-human (including the biologically human historically considered subhuman) who have been denied full membership of the thinking or conscious world and taught not to trust their own modes of thought (Winter). [10] All these categories are, one might argue, products not only of Enlightenment, but of Enlightenment's driving engine of colonial imperialism, which invents concepts of race, homosexuality and neuropathology, and a human-nonhuman binary in which these mythic categories form the "other," in its justification of a project of displacement, conquest and extraction (Plumwood 41-68).

The challenge to collect the fugitive and undervalued under the term neurodiverse is laid down by black activist, poet and academic Fred Moten. As Erin Manning states blankly when parsing Moten, "all black life is neurodiverse life" (1) Again, this neurotypicality is not identified with an individual (indeed it is an impossible position for any real human to occupy), "but as the (unspoken) baseline for existence" (2). It is, Manning argues, "akin to structural racism" in that the "neutral ground" against which difference is assigned is a baseline of both neurotypicality and whiteness (2). To this I think we can confidently add a baseline heteronormativity (again as an assumed mode of normalcy rather than assigned to individuals), with all its implied values of familial loyalty and exclusion (Bahng 6, 18; Puar 23, 162, 222). In the all-consuming market, this sexual normalcy includes a *homonormativity* – produced at least in part by web-based algorithms – which inscribes a fixed model of acceptable male homosexuality that "mimics" whiteness whilst erasing more challenging expressions of queerness (Puar 128, xii-xv, 22-23; Tsika 3-14, *passim*), just as multiculturalism prescribes acceptable and assimilated ethnic difference (Puar 26-7).

[9] See Massumi and Manning, Chapter 1 for a cogent discussion of the urgent politics of neurodiversity, and DJ Saverese. For a discussion in relation to Black life, see Winter; Moten; and Moten and Harney. For a discussion of what I term an environmental ecological intelligence, see Goodman *Black Magic*; Jantsch; and Goodwin.

[10] As Manning states, the aim in such a comparison is "not [to] reduce them to one another but generate a complementarity" (2). I see this rethinking as a contemporary feminist project, and one might of course also include here all who are not cis males, that is, women, trans and intersex persons as those denied access to the centre of humanist society.

[11] The quality of passing so essential to the famous test is ironic, Bratten says, considering that Turing as a gay man was himself forced to pass in society (71-2). There are, however, more nuanced readings of both Turing and his eponymous test. Halberstam, for example, notes that the test is based on a parlor game of gender misidentity, and suggests that in speaking of “imitation” rather than passing, Turing destabilises gender binaries, pointing out that his AI focus was on the role of such productive and queer interference. Halberstam notes that Turing himself was queered by technology when given hormone treatment, disrupting his sexual drive (*Automating* 443-4). See also Plant on the slipperiness and politics of passing (210-222).

[12] For examples of this depth and diversity of sensory perception in anti-types, see D.J. Saverese; Ralph Saverese; Baggs; and Mukhopadhyay.

[13] Indeed, there exists a whole industry designed to boost executive function through cognitive training – a series of algorithmic steps designed to reinforce self-regulatory control. See, for example, <https://www.frontiersin.org/articles/10.3389/fpsyg.2015.01827/full>.

[14] Furthermore, such primary governance then includes the ability to govern one’s family and household (Foucault 94), which is the imperative selling point that cognitive training emphasises to the parents of neurodiverse children, whilst also managing to monetise these operations.

The assumed ground of neurotypicality in machinic thought perhaps begins, as Benjamin Bratten argues, with the fact that we ask of “AI,” that it “pass” as human, and thus extend the humanist project of the conversion of otherness into our likeness to the technological realm. The Turing Test, Bratton points out, is just such a test of passing – asking of an algorithm that it apply a mask of humanity to fool a human (71). In this, he says, we demand of algorithms that they perform “in drag”, hiding their true nature (76), just as that which society values in the neurodiverse and queer communities is that they not only do their best to appear “normal,” but that they *aspire* to normalcy. [11]

The key cognitive test in any pathological definition of neurodiversity is the perceived level of self-control that is considered an indicator of the efficacy of the person’s “executive functioning.” This is valued above, for example, the immense richness of autistic sensorial and relational engagement with the world. [12] Executive functioning refers to the ability to regulate oneself, a “skill set to filter distractions, prioritise tasks, set and achieve goals, and control impulses” (Centre for the Developing Child). [13] It is, in other words, a form of self-administration needed to master life and produce a good citizen. This is, as Foucault argues, a cornerstone of *governmentality*, whereby “whoever wants to be able to govern the state must first know how to govern himself” (94). This self-regulation that now operates not only in relation to the state, but as “floating mechanisms of continuous control” (Puar 115). [14] The prioritisation of executive functioning suggests that what is being valued is indeed the ability to pass, to regulate oneself (and one’s data) along established and acceptable paths (a function therefore of biopower, which Puar extends to the “data body”) (175), without an understanding of either the ideological assumptions of whiteness that underpin this valuation nor of what rich experience is excluded by its narrow boundaries (Manning 3, 6). In its exclusionary functioning that devalues other aspects of experience – of life – that remain “uncalculable” (Moten 164) or unquantifiable (Manning 7), the emphasis on executive functioning values a neoliberal concept of independence that ignores the possibility of collective and dispersed, or unfocused but generative thinking (such as sociality and ecological intelligences, as I describe below) (Manning 10; Ralph Saverese 284).

Clearly an algorithm in the service of surveillance, capital, diagnosis and/or the production of subjectivity (through social media for example), even as it may be in some respects speculative and forward reaching, is necessarily based on a capacity to independently parse information alongside established guidelines – to make executive decisions to discard and devalue the unnecessary and convert the ambiguous and qualitative to the quantifiable. We ask, in other words, these algorithms to make normative value judgments (Pasquinelli, *Arcana* 3), and we judge the efficacy of the algorithms on their ability to do just this. Neurodiversity suggests the possibility of other ways of thinking – sideways, furtively, askew (Manning 9), “ephemeral, the temporal and the elusive” (Halberstam, *Queer Art* 54). It implies a potential valuing of experience that might have more in common with rejected modes of thought and with fabulation in inviting an “anticipatory” futurity rather than a “paranoid temporality” that preempts and inscribes normative value onto the future (Puar xix-xx). In the latter sections below I speculate on the non-normative modes of sociality, queer failure and incalculability in order to begin to edge

towards a concept of *an*algorithmic life as those aspects of algorithmic process that are denied recognition or space under normative systems of power.

Governmentality and the slave trade

Alongside these neurotypical regulatory functions mapped onto algorithmic processing, there is also a growing body of literature tracing the connection between the historical regulatory inscription of race and algorithmic processes (an “arithmetics of the skin”) (McKittrick 23). We must attend, Moten argues, to the beginnings of colonial capitalism and its relation to, and acceleration because of, advances in computation, and their role in the “history of the interplay of calculation, displacement and abolition” (181). As I briefly outline below, the development of capitalism, modern slavery and algorithmic processes are not incidental, but intimately entwined and co-evolutionary, and if the traces of these crimes remain within algorithmic thought then they require careful attention. And, although I cannot do justice to these fascinating studies in this short space, it is necessary to outline some arguments that relate to algorithms, the slave trade and the measurement and regulation of racial difference, as these conjoined histories remain highly relevant to the current tasks of algorithms to racially pathologise and profile (Puar 155-6).

Blackness and race, McKittrick states, are both invented in the ledgers and logs of the slave trade that provide “numerical evidence” of the conversion of African bodies to knowable, quantifiable and calculable objects (17). This colonial archival mathematics equates blackness with calculations of economies and financial probabilities (17). The force of calculation de-animates the slave as subject in order to embody the commodity form that can be exchanged (Hartman 199), and casts black life “inside the mathematics of unlivingness ... where black comes to be (a bit)” (18). The constraint of blackness within the mathematics of extractive value and exchange is, Pasquinelli states, an early experiment in the use of mathematical apparatuses as a system of state power (*3000 Years* 2), and this use of mathematical governance becomes an ongoing issue: for Foucault it is the very basis of a governmentality that controls populations as much if not more so than territories (104, 108-110).

As Pasquinelli uncovers, capitalist algorithmic processes were intimately involved in the Atlantic slave trade as a “computational colonialism” (Bell cited in Pasquinelli, *3000 Years* 2). Such algorithms provided a tool to calculate the potential profit of the trade – the number and arrangement of black bodies in the holds of the ships and the projections of labour that could be extracted against the weight, likelihood of added deaths and other costs (2; Anderson 302-3) – a statistical projection onto black bodies both abstracting and colonising their futures (Bahng 11-12).

Alongside this deadly capitalist reduction of bodies to data and their flattening into profit calculations (metrics that regulate and formulate life as “an embodied quantum of capital”) (Massumi, *Theses* 59), a proto-biometric statistical and algorithmic logic of identification was developed through the plantation system (Browne 139). Here the counting of lashings administered

[15] In contemporary instances, there are serious hurdles faced by those who are “othered” but who fail to be properly “imaged” and identified. In recent times in Australia a number of queer male asylum seekers have been forced to “prove” their queerness by exhibiting sufficiently effeminate dress, gestures and speech, and by showing evidence of their partying in the Sydney gay club scene, thus reducing queerness to an assemblage of readable gestures. One asylum seeker even had his claim for asylum questioned because he was not deemed to have sufficient friends to be gay. Often these are impossible tasks for men from Middle Eastern countries with little English language, no queer contacts in the country or understanding of the normative gay culture. Those who fail to convince their assessors by these methods have faced deportation (Burton-Bradley).

constituted a “measurable discipline,” McKittrick argues, representing another instance of the refinement of a methodology of mathematics of oppression (23). Thus the display of the numerated scarred backs of slaves constitutes a mathematics of the whip that “writes blackness into existence” (22; Browne 139). These scars, alongside the branding of bodies to identify and de-subjectify, establish authoritative truth of ownership, a fixing of status through visual codification (Hartman 21). [15]

In addition, these marks then form a part of the *information technology* of the slave pass that describes identifiable features in order to keep an inventory of these bodies as “goods” (whose futures are “captured by capital”) (Massumi, *Theses* 38). As in criminal anthropometry, where a racialised statistical knowledge based on the shapes of heads and features was abstracted to provide a regulatory and racialising tool (Browne 138), such identifiable marks and features recorded in slave passes constitutes a biometric algorithmics that *produces* an assumed norm from which these bodies differ, mathematically privileging and inscribing whiteness as its centre. This is the “epidermalization of power” that inscribes truths about the naturalization of white bodies (Browne 135). Such “economies of sight” rely not on whole bodies, but on assemblages of “subindividual capacities” that mark them as othered (Puar 200). These problematic issues of mathematical racialisation continue into the present day, not simply within the deployment and interpretation of biometrics to regulate flows and behaviours of bodies, but inbuilt into technologies that normalise whiteness – such as surveillance cameras optimised to read (and value) white skin clearly and which homogenise those with darker skin tones and collapse cultural distinctions (Browne 136; Puar 166-204). In the contemporary use of algorithmic logics of control and social normativity and of extractive production, we see the logical outcome of the computational aspects of the slave trade, Pasquinelli argues, and their dire convergence as both “come to be computed through the same technical form” (*3000 Years* 10).

Implicit in these algorithmic techniques is a valuation; not only of the assumed innocence of whiteness in contemporary biometrics, but also of the minds and bodies that are placed, Denise Ferreira da Silva argues, in a mathematical position of negativity (otherness), as that whose sum is less than the assumed ‘+1’ of the white European that western science normalises (*1 ÷ 0* 2-16, 8-9). As she emphasises, not only are black bodies othered, but also black minds and ways of thinking are devalued (positioned, as Moten would say, as neurodiverse), by processes that, as they value difference, are inherently involved in the production of inequalities in the world (8-9).

Although it is a much more recent development, one might make a similar claim for the functions of the algorithmic computations of the DSM that operate as a statistically-based control mechanism that recognises as it neuropathologises. If the DSM appears in any way apolitical, it should be remembered that it listed homosexuality under various categories of disorder until 1987 (and that the World Health Organisation did not remove it as a disorder until 1992). Through this process queerness is not only pathologised but also defined and narrowed to identifiable markers as it is positioned in negative relation to a naturalised norm whose narrative it then bolsters (Puar

3). In a double-bind, the contemporary citizen-as-individual is captured in a process of personalisation that is also a process of economisation through social media (Massumi, *Theses* 76), and black, queer and other neurodiverse bodies are captured by the flipside: an economisation and quantisation that is depersonalising and de-individualising. Here algorithmics are intimately involved in the colonial/capitalist/neuronormative production of a “monoculture of the mind” (Vandana Shiva, cited in Gomez-Barris, 4) that makes fields or potentials conform to narrow models of value composed of quantifiable possibilities (Massumi, *Theses* 53). In the sections below I begin to speculate on other potential modes of thought, born out of neurodiverse struggles and informed by the strangeness in contemporary biology and mathematics.

Sociality and ecological thought

These histories of violence and mathematical racialisation produce efficient capitalist forms of commodification and the production of use-value from subjectified and objectified bodies. As I have argued in relation to executive function and slavery, they also inherently install a white logic at the centre of certain mathematic functions that any rethinking of algorithmic thought needs to recognise and grapple with. Deborah Bird Rose is one of many who argue that key elements of this Western mode of thought are fragmentation and separation – disconnection from one another and from materiality – that overvalues logical independence (181-2; da Silva *passim*; Puar 195; Plumwood 152; Yunkaporta 114; Jantsch 177-8). The emphasis in executive function on an individualised and abstracted or *non-material* thought process is one example of how different modes of thought become devalued. Another relevant example of this valuation (and devaluation) can be seen in the history of the dismissal of non-European forms of mathematics that have a more material basis than the abstract Greek forms we have adopted. This arguably extends into mathematics education, and locates mathematical thought in male, European bodies as an objective truth (Anderson 293-4). As executive functioning prioritises individualised control of thoughts and desires, dominant forms of mathematics display their equally Eurocentric and capitalist values in the insistence on *individualised* and *competitive* problem solving rather than social and cooperative methodologies (295). [16] If we begin to question the naturalised basis of algorithmic thought, it is pertinent to challenge the individualism of neoliberalism, which, as Massumi states, “is powerfully complicit with capitalism by its very nature” (*Theses* 68). We might then ask: what other, more fugitive and collective forms of life and mathematics might be taken up and how might these be applied to algorithmic life?

A concept of black “sociality,” I propose, might constitute one relevant form of “minor” resistance, operating not in binary opposition, but as a minor mode of living: in the cracks, alongside and underneath the capitalist/colonial subjectification (Deleuze and Guattari, 28, 41). If, as Moten posits, “freedom” for slaves as an individualised right contractualises the former slave as a citizen and therefore as one still subject to state power, it thus represents a binary relationship with slavery (252-5; Puar 114). That is, it is another configuration in the array of “the grammar and diction of the administered world” (252) that

[16] Examples of ignored ethno-mathematics include the dismissal of early Mesopotamian, Arabic, pre-Columbian American, Indian and Egyptian mathematics. As Joseph states, all these cultures had lively and highly practical forms of advanced mathematics that western histories dismiss in favour of Greek mathematical processes that are cast as the only legitimate form of thinking due to their focus on deductive axiomatic logic (63-5, 72). However, as both Joseph and Anderson argue, this displays a bias towards one particular mode of thought associated with western abstraction and transcendent philosophies and is opposed to materiality and other modes of thought (Joseph 72-3; Anderson 292). This abstraction of mathematics from culture is, Halberstam argues, a continuation of the modernist project that separates science from the material world (*Automating* 442).

translates social relations into “specialized rights, duties, obligations and various genres of doctrines” (257, 243). An alternative to this is a black sociality that refuses individuality (the demand to be counted as “+1” or “I”), and is instead “moved by a crowd” (Manning 13). Such socialites, Manning says, *invent* “sites of collective expression rather than simply inhabiting them” (8). They are, in other words *fabulatory* emergent tendencies or a “coming into itself of thought” (9) that are not contained and individualised in any one body or stable group but operate affectually, exceeding the count or normative valuation (6). This, from a normative perspective, is “impure informality,” a “nonperformance” of a certain mode of value (Moten, 241). If whiteness positions the norm as a “+1,” a mythical centre in reference to which others are arranged (as “- 1”s), as Ferreira da Silva argues, then one possibility to destabilise this is to fabulate an outside to the “one” in a super- or extra-numerary collectivity ($1 \div 0$ 9-10): a sociality without a white centre or master (Deleuze and Guattari 17). [17]

[17] The importance of recognizing social forms of intelligence is urgent within autism activism. In the neurodiverse lives of those with classic autism who are unable to speak, the controversy around the use of assisted language demonstrates these biases towards the individual and autonomous executive function as the basis for a right to a voice. Essentially, those who require any level of assistance (often as little as a hand on the shoulder or a trusted companion present in the room) in order to focus on the keyboard often have their voices dismissed, since they are deemed to have not spoken with individualised autonomy. This again denies the possibility of valuing other, collective modes of thought or living, demanding a proper separation and demarcation of boundaries along normative lines.

[18] This might also help to differentiate sociality from the collectivity of social media or data collection algorithms that intermesh to drive an affective economy, as perhaps does the futures market (Massumi 55-7). These collectivities are non-normative in relation to human life, though not at all in relation to contemporary capitalism, if somewhat at odds with its older forms. (Parisi, *Critical Computation* 99). They are “dueling algorithms” in Hayles’s terminology (142).

Thus, as a mode of thought, this sociality might present an alternative to the dominance of the executive function – “common sense” decision making that abstracts the singular to the general and that overrides and regulates enthusiasm, affects and tendencies, holding them tight as a coherent subjectivity (Moten 172). Such “order[ing] of knowledge” reproduces power structures, including those structuring our consciousness (Winter, unpaginated). Whilst Massumi acknowledges that contemporary capitalism efficiently harnesses affects, personalising and quantifying them (*Theses* 8-9, 76-7), there is always, he argues, excess beyond use-value that might present potential for a “life value”: an “affective resonance” without separation from the field or sociality (53). This intensive resonance that is not extended through measurement or extraction is for Massumi an “intensive magnitude” that has the potential to move the digital beyond the numerative and to foreground “adventure” or “zest” as non-capitalist qualities of living (90-94).

These qualities of living are also expressed in the term *el buen vivir* (“living well”) that Gomez-Barris borrows from Afro-Indigenous Central American culture. “Living well,” as she points out, is in marked contrast to neoliberal aspirations to a “good life”. The “good life” focuses on valuing normative individual and consumer-based human lifestyles under capital that imply both a dominance of nature and personal success without regard for the collective (24), and an abstraction from the actual conditions of living in its aspirations. “Living well,” however, expresses a concern with a decentering of the human, and acknowledgement of the situated rights of other animal, plant and geographic entities “that cannot be apprehended, managed or narrated through human language and scientific techniques” (23). [18] Thus this might be thought of as an “ecological” form of living pursuing a “dynamic equilibrium” (23), without the “separability” that reduces knowing and thinking to determinacy (da Silva, *On Difference* 5; Jantsch 265-273). Unlike neoliberal life, such entanglement does not reincorporate all activity under the dominant mode of individual subjectivity that can be continually molded, and from whom value can be extracted (Massumi, *Theses* 79-80).

The attempts to humanise the consciousness of plants, and the dubious moniker of “AI” express other attempts to shoehorn non-normative modes

[19] We see this in operation even within the popular biological narratives that speak of plant communication and that emphasise communication between trees along mycorrhizal “telephone lines” – between, in other words, subjectified individuals, whereas the “consciousness” (and self-organisation) of the forest might exist on a larger scale, as an ecosystem.

of thought into humanist-like intelligences, subjectivities and modes of social other potential modes of operation. [19] This is the narrative expressed by both Darwinism and neo-Darwinism, ignoring the symbiogenetic nature of environments that are built far more on cooperation and mutual benefit between individuals and across species, involving the sharing and intertwining of appetites and of resources (Jantsch, xiii, 119; Wicken 136-7). The overhyped idea of artificial “intelligence” that both capitalist and nihilist science fiction pin their hopes on, might, at best, now exist as a form of “soft” AI, learning within strict parameters but lacking the joy and enthusiasms of life per se. Such intelligence might be thought as a *quantifiable* component of consciousness, and it is a loaded term considering those who have been, and often still are, denied its privileges. Intelligence is that which states can measure, attribute and strip away, and that which can be monetised and become labour in “clever” economies. (In this sense, if in no other, “AI” is a suitable term for algorithmic processes that are calculable and extractivist and that can be molded and governed). “Conscious” life might be a more inclusive term of both the neurodiverse and of the “alien” collective consciousness of the forest or the distributed sensorium of the cephalopod (Godfrey-Smith). Here consciousness situates itself at a tangent to intelligence that is its reductive cousin: that transindividual excess (acting as a “power”) which remains uncapturable within capitalist valuation (Massumi, *Theses* 98).

Where might we find the collective or social conscious in mathematic process? Perhaps self-organising criticalities (SOCs), of which “rewilded ecologies” are one example (Goodman *Black Magic*; Massumi, *Theses* 66, 117). SOC represents one possibility for a distributed and contingent or emergent mathematic process of organisation. Capitalism is of course, often cited as self-organising (this is particularly the case for the global neoliberalism of the derivatives market and contemporary predictive machine learning) (Parisi, *Critical Computation* 94), but its mode of organisation is distinctly one of homogenisation in which the field’s heterogenetic liveliness is reduced to the single dimension of the profit point (Massumi, *Theses* 38-9), and it is thus, strictly speaking, not a SOC. In a SOC complex interplays of differentials create a new register or dimension of dynamic and emergent system-level organisation that does not constrain the existing potentials but instead enlivens them through cooperation. SOC operates through dynamics rather than structure: thus they are a symbiogenetics of processes (Jantsch 206). The new register of laws or modes of operation are collective and irreducible (transindividual), and they resist capture or modeling at the level of the individual components (Bak 50-51, 110; Goodwin, *Leopard* 108). The evolution of a SOC system does not, in other words, govern, either by imposing a “master” controlling and subsuming component dynamics (top down), or by shaping emergence towards existing norms (bottom up). Instead it creates new potentials through the tension of differentials (Jantsch 75). It might perhaps be thought of as a *mathematical sociality*: not mimicking the biological mode but working through generative algorithmics as a digital mode of sociality that does not extract or index number from its qualitative dimensions but “lives well.” Such SOC is potentially at the heart of animal consciousness at a quantum register (Nunez 262-7; Goodwin, *Leopard* 81; Romijn 70-2); at the level of a colony for ant or bee populations (Morris 203-4); and in plant consciousness at a forest or grassland ecological scale, where the dynamics of intensively

[20] The study of quantum mechanics in brains suggests that what has been valued as intelligent activity (neuron activity as represented by MRI scans) bears very little relation to anything that might be called consciousness (Nuñez 263, 266-7), which might more likely exist as “neuron microfields,” “fleeting, ordered, three-dimensional patterns of electric and magnetic fields” that dynamically self-organise – in other words, consciousness as an activity at a quantum level of relation (Nunez 265; Romijn).

symbiotic and speculative mycorrhizal connections might create a “subjectivity-without-a-subject” as an emergent relational event (Massumi, *Theses* 98-9). [20] What, we might fabulate, could such a sociality of algorithms look like? How might it operate and communicate outside of peer-to-peer configurations, and how might it emerge without a centre, as a super-numerative multiplicity of qualities without a leader or base that can be quantified (Massumi, *Theses* 41, 99)?

Slave to the pater: Machine Learning and algorithmic humanity

It seems doubtful that self-organisation on its own will be enough to escape either normative valuation or quantisation. If capitalism is not a SOC per se, it is certainly a system that endlessly reproduces itself as it subsumes and calculates difference, finding ways to quantify tension or novelty, and this should be enough to make us wary of the term (Bahng 6). In this section I want to unpack some of the problematically normative values implicit in the self-organisation of machine learning, and to suggest a queerer path for exploration.

As Parisi explores in relation to Hayles’s concept of “unthought,” there are many elements of self-organisation in contemporary machine learning, as algorithms move from deductive to inductive processes and an “automation of automation” (*Critical Computation* 90). Machine learning and its speculative reasoning is sometime cited as a possible way of producing a more open-ended mode of thought (Massumi, *Theses* 122), however it brings with it certain culturally loaded modes of operation that make it a dubious candidate. Certainly machine learning moves from a deductive logical order in which established rules are applied to small and specific data to an inductive process in which potentially infinite data is recombined and spatialised to extract rules and algorithmic processes (Parisi, *Critical Computation* 92). In this sense it does shift from a top down to bottom up process and therefore constitutes a “dynamic logic” (90). In state systems this can be seen, as Parisi argues, in a shift from governance through stable laws to “control functions”: from “rule obeying truths to algorithmic pragmatism” (94; Deleuze, *Postscript* 5-6). This “predictive statistical regime” represents additional level of control, one that captures fluidity and induces or structures methods of abstracting and generalising “objects and events.” This “presupposes knowable objects and fixed concepts that can be learnt” (Parisi, *Critical Computation* 99, 107; *Algorithmic Capitalism* 127-8), and it is within this mode of power that machine learning algorithms are entangled. Machine learning operates through the construction of a “general idea” that works to subsume or disregard the singularity of the emergent events that are essential for a different valuation along the lines of intensity (Massumi, *Theses* 48, 40-48).

Look inside such general ideas and inevitably a series of valuations appear. A tree cares for its young and is assigned a narrative of motherhood rather than kinship; a novel gene “out-competes” other mutations; a machine-learning algorithm works hard to succeed and passes on acquired knowledge of the world like a father to his son. We must be careful here not to replicate social norms that shape thought and value towards state sanctioned modes.

Alongside the many issues with the applications of machine learning (see Parisi, *Critical Computation*) there are perhaps constitutive issues of value: a series of neo-Darwinist and patrilineal models of success infecting both their valuation of data and our valuation of their algorithmic processes. If Darwinist models of survival of the fittest (that is, valuation of the individual and their work ethic) are based on nineteenth century models of market capitalism (Goodwin, *Nature's Due* 164; *Leopard* 166), and the equally reductionist concept of the “selfish gene” on a neoliberal model, the concept of a genetic legacy passed to one’s offspring also represents a hetero-normative model of relations. [21]

[21] For an extended and coherent discussion of the many failures of neo-Darwinism, see Wicken. See also Jantsch, and Margulis and Sagan.

A useful critique of heteronormative valuation can be found in Halberstam’s concept of “queer failure,” which seeks to invent alternatives to normativity by “dismantl[ing] the logics of success and failure with which we currently live” (*Queer Art* 2, 88; Puar xv, 171-2). Instead of valuing “success,” Halberstam proposes “losing, forgetting, unmaking, unbecoming, not knowing” as an attempt to avoid the disciplinary constraints of life (2-3), in order to produce new modes of being in the world that are queer and fluid (54). This might be a freedom to “give away” mastery (Moten 248), not as incompetence, but refusal or fugitivity. This is not a queerness that seeks acceptance under the terms (valuations) of the normative, but, as Halberstam suggests, a “transbiology” that is an anti-patrilineal mode (“made and born” rather than “born and bred”) (2011, 32; Puar xv, 171): a sociality or assemblage outside of the Oedipal whose “ideology of the family ... erases other modes of kinship” (*Queer Art* 71; Puar 28, 212-215). In Haraway’s terms, this is “making kin as oddkin,” making the “domesticated” familial form of kinship “wild” again (2). It is a seeking out of generative and “self-crafted” relationships that do not conform to prior models, particularly the moral codes that value the reproductivity of the family unit that bounds the limits of intimacy within a linear model (Puar 171, 28; Bahng 7). “Oddkin” are unproductive in this sense but intensely relational (supra-relational, in that they do not acknowledge the boundaries of the family), valuing “unexpected collaborations and combinations” and collective becomings (Haraway 4). As Massumi also highlights in his discussion of new forms of economy and valuation, there is potential in “uselessness” as a pragmatics that might lead to the emergence of new techniques rather than self-preservation or success (“rewilding not reproduction”) (114, 117; Gaboury).

As Blas argues, a *critically* queered technology needs to not simply be dysfunctional or deconstructive, but rather to resist linear narratives and instead experiment (Gaboury), and, as Bahng emphasizes, this also needs a collectivity that can “believe privatized futures” (7). A useful model of such collective and non-linear relations might in fact be found in the queer and trans-subjective sexual histories of bacteria that consists of lateral, unidirectional sharing of genetic materials. In “hypersex” bacteria fuse or borrow material from each other or across species, freely mutating into new forms rather than preserving and passing on established forms to their offspring (Margulis and Sagan 79-80). There is no sense here of the preservation of a generalised set of hierarchised primary and secondary relations (citizen-family-society) as a regulatory system ensuring stasis, but a singular and *queer* modeling of connection (Halberstam, *Queer Art* 124-5),

unbuilding stable subjectivity and the assumed primary value of family as it challenges the “chrononormativity” of heterosexual reproduction (Freeman cited Bahng 19; Nyong’o 11). The familial norms at the heart of governance and value position the world as ordered: composing it of separable and recognisably distinct parts (da Silva *On Difference* 4). This includes the proper body, and the proper spatial and sequential relationship between bodies in a family – ancestor-father, father-son, father-mother, just as machine learning induces readable and recognisable order onto uncompressed data. Hypersexuality, on the other hand, is a transversal and horizontal mode of relation that refuses legacy, historicism, determinacy and the familial, presenting a differential and differentiated mode of value. It abandons not only the protestant work ethic of machine learning but also its hetero-normative sentimentality (a longing for perfect and abstracted reproduction, unproblematic and permanent couplings, loyalty), for a queer collectivity or fugitivity (Halberstam, *Queer Art* 8).

Queerness here suggests a mode of mutation, but not a neo-Darwinist, neoliberal or machine learning idea of mutation for survival – not, in other words, a mutation for *success*. Rather, it is a mutation of failure, a failure to pass down one’s knowledge or to value the paternal individual, that queerness consistently undermines. As a methodology this might be more than simply an act of “transgression” that still relies on the norm from which to differ, and instead “denaturalis[es] expectation through surprising juxtaposition” (Puar xv). It shifts from establishing general rules to the specificity of circumstances of that ecology, and moves with the emergent system rather than triumphs over it. It is the anarchic “failure” of the excessively qualitative that cannot then be contained or described quantitatively and cannot be preserved (Massumi, *Theses* 117). It is a “wilding” that is emergent or additive of potential and that creates its own movements outside the of capital’s many formations (Halberstam, *Queer Art* 88), a folding and unfolding that delimits relations rather than a molding or projection of relations toward a single outcome. [22]

Queerness or wilderness operates outside of machine learning, which takes the specific and abstracts and generalises it to remove its connection to the moment in order to form a role model. Queer methodology is inefficient: not incompetence, but an avoidance of the streamlining of abstraction and sublimation within the act of generalization that returns us to normalcy and the capture of an event’s intensity into productive value. It is not, at its radical edge, the inclusion of the other within the system, but the beginning of an unmaking of these categories (Halberstam, *Unbuilding* 4; Puar 204-6). It is present in the strange fabulatory mathematics of da Silva, where the white “+1” (that is life denied to blackness) is divided by the “-1” of blackness to produce infinity, to move, in other words, outside of normative value that devalues and others ($1 \div 0$ 9). [23]

There is a (perhaps) subtle shift between the algorithm that learns from its predecessors and streamlines or codifies and packages such learning in the name of efficiency, and the possibilities of a queer “hypersexual” connectivity where algorithms act as intercessors in each other’s thought processes, producing an ugly and surprising mathematics constructed from fluid, speculative and playful combinations. [24] Queer kinship might operate closer

[22] Rewilding might define systems that “exhibit self-organising and far-from-equilibrium properties that allow it to enfold its web of relations such that the rules or structure governing these relations remains immanent to the (re)expressions of those relational forces: whole and parts not adding up to each other but caught in a system of immanent self-production” (Goodman, *Black Magic* 13).

[23] This strange math is also present in the queerness of quantum connectivity within, for example, the communication between motor nerve to muscle tissues that communicate at one hundred times the speed of vegetative nerve communications through resonant coupling: a vibrational sociality defying spatial and temporal separation (Mae Won-Ho 126-7). See also Ferreira de Silva on quantum field as a way to think the “world as a plenum, an infinite composition” (*On Difference* 2).

[24] See Matthew Fuller on the importance of ugly mathematics and the fetishisation of beauty in programming (15-16), and Parisi (*Contagious* 67).

to “fabulation” than the familial, aspirational and self-authorising narratives of capitalism (including homo-normative narratives of success and assimilation [Tsika; Puar 2-5]), shifting valuation from reproduction of the known to wonder and surprise (Massumi, *Theses* 82-3). A queering of techno-neurotypicality might also begin, as Blas proposes, to address the issue of “the non-human and expand queerness beyond the purely human or human-centered” (Gayboury). Queerness, in Halberstam’s hands, involves sidestepping the ghosts of static patriarchal systems (*Queer Art* 124-5), which, while they might no longer be truly stable as forms under neoliberalism and global algorithmic markets, are still dominated by the acceleration of modes of capitalist valuation and its extension through computational infrastructures (Parisi, *Critical Computation* 99). What queerness values instead, and what might be needed, Massumi argues, in order begin to revalue value, is a “uselessness” or play outside the work and familial ethic of machine learning that typifies the normative and problematic role of the algorithm (113-4; Gaboury). Just such a mathematically queer interruption to use-value, exists in “Omega (Ω)”. As I examine in the next section, and as Parisi describes it after Chaitin, Omega exists at the heart of code as an immeasurable void that resists reduction.

Analgorithmic life

Omega, Parisi argues, is an inherent rupture to the mathematics of algorithmic thought; one that is normally suppressed or ignored, but that plays alongside and runs underneath executive processing and persistently nibbles at its edges, and that might also be thought of as a queerness that insists on the specificity of a “lively remainder.” In this it is an affective remainder or tonality within the code (Massumi, *Theses* 45). Omega, as the real numbers that cannot be calculated through smaller processes – infinitesimals and sequences that are “patternless, random and indeterminate” (Parisi, *Contagious* 204) – suggests the possibility of a “dynamic realm of intelligibility” in algorithmic processes that defies the “teleological finality of reason” (Parisi, *Algorithmic Capitalism* 134-5). Thus it might be thought of as a mathematical neurodiversity. [25] In Omega we find the *singularity* of any algorithm in that there is an irreducibility – mathematical qualities that cannot be abstracted and that can only be expressed by that particular algorithmic process (a contingency and aestheticism) (Parisi, *Contagious* xiv), and therefore exist in their own right and not in reference to other numbers or processes. Omega represents a level at which algorithmic difference resists the valuation of “separability,” and therefore determinacy, that is the violence at the heart of the modernity’s “imaging of the world as an ordered whole of separate parts relating through the mediation of constant units of measurement” (da Silva, *On Difference* 1-2).

[25] For a full discussion of Parisi’s application of Chaitin’s concept of Omega to algorithmic thought, see Parisi 2013, and Portanova. For a detailed discussion of the application of this concept to algorithmic design, see chapter nine Goodman (*Gathering*).

For Parisi, while the algorithmics of capital work to make the incomputable intelligible through reduction, there are in such modes of thought inherent “inconsistenc[ies]” that escape totalisation (*Algorithmic Capitalism* 136). Omega represents the possibility of something else going on in algorithmic thought that cannot be fully contained, quantified or reduced to instrumentalisation: an immanent and unwritable queer desire (Tsika 215). It remains closer to the “wildness” that Halberstam and Nyog’o describe as an “anarranging” of categories or the impossible (456), as “neither the impossible nor the

[26] For Parisi these qualitative factors of an algorithm are its “incomputable quantities, which cannot be summed up in discrete binarism or contained in self-generated wholes” (*Contagious* 42).

implausible, but more nearly that which can be tantalizingly close while standing forever out of reach” (462), or, as Blas describes queered technology, “at the interstices of useful and useless” (Gaboury unpaginated). [26]

This incalculability at the heart of any algorithm is therefore *an*algorithmic, it is that which queers and collapses. This is a fugitive quality that algorithms share, a sociality or kinship based on a failure, not similarity. If an algorithm is a step-by-step set of procedures, Omega shows the uncertainty within these steps that casts doubt on the whole project (the use-value of the algorithm to perform labour), and it puts in doubt algorithmic ability to “pass” as humanly logi-centric. Omega, in other words, begins to undo the algorithmic subjectivity that defines its very *value* under capital: it is that singular quality of the algorithm that cannot be fully extracted or put to use. As a mathematical incompressibility that resists both inductive and deductive logic it suggests another, inhuman life for algorithmic thought or consciousness that can be approached but not captured or comprehended in the language of axiomatic mathematics or executive orders. In deferring digi-logical identity and legacy it builds a path towards and begins to fabulate the possible valuation of different and neurodiverse modes of algorithmic thought.

In inserting the prefix “*an*” I echo Halberstam’s interpretation of Gordon Matta-Clark’s term “*an*architecture,” not as a direct negation but again as a “queer negativity” (*Unbuilding* 14). That is, if an algorithm is a structural grammar or recipe for organizing and linearising mathematical processes (as architecture is a grammar of organizing and defining spaces) (12), then an *an*algorithmic process queers that grammar through its inbuilt failure – the “abyss” that Omega inserts into its core (14; Puar xv). Thus the *an*algorithmic is neurodiverse not as individuals thinking differently (as the world is already full of algorithm designers seeking this edge in order to monetise its difference), but as that which disturbs the very territory that is defined and valued as an algorithm’s proper sphere of thinking, and that which “holds back” something of its thought processes from extraction.

Parisi’s conception of Omega not only casts doubt on the determinacy of algorithmic processes, but also constructs these indeterminate values as a virtual life for an algorithm (and is therefore also an act of *fabulation*) (Nyong’o 10, 14). The virtual, here understood in Whitehead’s terms as “infinite varieties of infinities nested within the infinite partialities of actual objects” (Parisi, *Contagious* 63), represents the unrealised or unresolved potentials that can never be fully contained or expressed within an algorithmic iteration (Goodman, *Gathering* 216). This virtual plane of algorithmic life suggests the possibility of algorithmic *becoming*. Such becoming can be distinguished from the *taking of form*, which both quantifies and limits transpersonal becoming tendencies to the personal: to that which can be measured and situated systemically and to that which in being systemised is broken into discrete parts ready for capture. Here I want to draw on Deleuze’s concept of “*a* life,” a “pure immanence” in which individuality gives way to the singularity of the event of becoming (*Immanence* 29), to suggest that the queer negativity of *an*algorithmic life touches on this “pure activity” that is no longer compressible into identifiable or resolved quantities (27), and is a collective and impersonal immanent stream or sociality running underneath the quantifiable (25).

Of course one should not be as naive as to assume that indeterminacy on its own can escape capital, since contemporary futures markets thrive on exploiting the indeterminacy of future trading (Parisi, *Critical Computation*), and in such markets the competition between algorithmic processes exploits the doubt within each other's processing. If algorithms have at their centre a zone of doubt that might queer or collectivise, the evidence from the financial, military and governmental perspective is that this has either been successfully suppressed, contained and/or ignored, and that algorithms dutifully play their part in governmentality in its many old and new forms. However, this immanent aspect of the *analgorithmic* life that is suggested by Omega, by a mathematical sociality and by queer kinship and failure, might be the beginnings of qualitative intensity that is non-numeric and that begins to uncouple quality from accumulation. Massumi calls for "a new kind of digital platform" that can work with a radical new conception of economy (*Theses* 103), one that "value[s] beyond normative criteria and judgment" (95). This is, no doubt, essential, but, just as it might be said that one cannot take down the master's house with the master's tools (Lorde, cited Singh 83), I have argued that one cannot rethink the work of the digital without reworking the possibilities for thinking in the digital realm, and this work is also urgent. If algorithmic futurity has been colonised by the power of "whiteness" – capitalist and humanist thinking – that preempts and controls the future (Bahng 1-3), what other potentials might we dream or fabulate from minor threads of the unrecognisable and the incomputable? The emergent possibilities for an *analgorithmic* secret life that I have imagined might begin to suggest a challenge to normative or neurotypical paradigms for algorithmic thinking, and at least the potential for other modes – secret and ambiguous (fugitive) lives of algorithms that wait to be valued on their own terms.

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