

YUK HUI'S AXIO-COSMOLOGY OF THE UNKNOWN: GENESIS AND THE INHUMAN

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Yuk Hui, *Recursivity and Contingency*, London, Rowman & Littlefield, 2019, pp317, £24.95/£80.00

In *Recursivity and Contingency*, Yuk Hui prompts a rigorous historical and philosophical analysis of today's algorithmic culture. As evidenced by high-speed AI trading, predictive processing algorithms, elastic graph-bunching biometrics, Hebbian machine learning and thermographic drone warfare, we are privy to an epochal technological transition. As these technologies, stilted on inductive learning, demonstrate, we no longer occupy the moment of the 'storage-and-retrieval' static database but are increasingly engaged with technologies that are involved in the 'manipulable arrangement' (p204) of the indeterminable. It is, in fact, extricating the indeterminable or the Inhuman – and its cosmic anti-capitalist imperative that concerns the core of Hui's project of technodiversity.

Schelling's conception of freedom as the improbable, or absolute contingency, is also fundamental. Hui's first two chapters trace recursivity as it develops throughout the project of German Idealism; Hui eruditely demonstrates how Kant's *Critique of Judgment* is the first philosophical work to made the organism explicit and paradigmatic as, for Kant, mechanical laws are not sufficient to explain contingency and the teleology of nature. Where Fichte reduces the real to the Ideal, Schelling's description of nature as a self-organising system is concerned with deriving the Ideal from the real. In Schelling's philosophy of identity, nature is neither something in us nor outside of us but, instead, it actively abolishes subject-object dualism. Schelling's system proffers recursivity as a 'self-contained whole' (p55). This marks the philosophical crux of *organicism* as a foundation for thinking of an open system through meta-scalar self-organisation, anticipating biological models such as Ilya Prigogine's dissipative system and Francisco Varela and Humberto Maturana's autopoiesis. Schelling's philosophy of nature also informs Hui's *organismic* conception of spatiality, where each organism is understood as both 'self-contained' but, also, always 'influenced by other organisms, so such an 'internal finality' affirms a structural 'external finality' (p163). Qua Schelling, Hui destabilises the conception of our world as a closed and static material system.

If Schelling's *Naturphilosophie* is a precursor to biological organicism, Hegel's logic anticipates the machinic organicism of cybernetics – second order cybernetics to be specific. For Hegel, nature is an 'object of observing reason

from the outset' (p91), whereas for Schelling nature is pre-consciously sensed and detected prior to becoming an object of reflection. Unlike Schelling's emphasis on external force's giving form to the nature's production, Hegel's departure from preformation towards immanent negativity re-introduces contingency into the system of nature. We can map this onto second-order cybernetics quite neatly as, for Hegel, there are two forms of recursion: 1) chaotic nature 2) the logical category (of being).

It is far too common to see the hackneyed use of cybernetics in philosophy of technology and media theory without specificity, thus Hui's work provides much-needed precision. Where first-order cybernetics (associated with Wiener, McCulloch, Shannon, Ashby) concerned positive feedback within a closed single system, in second-order cybernetics (Foerster, Luhmann, Maturana, Varela, Glaserfield), the synthetic determination of auto-organisation and homeostasis is broadened to include the structural domain of environment and machine. Where first-order cybernetics is concerned with perception, second order cybernetics is concerned with observation (meta-order and sub-systems). However, despite second-order cybernetics moves beyond the opposition between mechanism and vitalism, Hui also illuminates how today's elastic technologies prompt a new epistemological relationship with their environment, whereby '[t]o adopt is to affirm what accidentally arrived and integrate it into the whole' (p. 204). Thus, there is a third moment that we currently occupy and which converges upon the synchronised 'accomplishment of a global axis of time' (p34) via recursive modelling that is open to contingency.

Much like Bernard Stiegler, Hui considers Deleuze's 'control society' as a critical rift from biopolitics, where re-integrative modulation displaces the spatio-temporal terms of Foucauldian power. We can also find concrete examples of synchronised contingency in the recursive algorithms informing Google and other Big Data mechanisms, with algorithms integrating 'all the data of its user, updating them and parsing them into useful information' (p218) through recursive subsumption, or hominisation. Consequently, recursion's probabilistic orientation is given form by contingency, which Hui defines as the 'least probable or improbable' (p211). As Hui demonstrates, recursion is meta-systemically dependent on contingency, or the epistemic realm of the 'Unknown'.

Consider how Deleuze's 'control society' transpires through ubiquitous surveillance, facial recognition, data collection, and social credit. Consequently, recursive machines integrate individuals as constituents of computation, rendering them as *dividuals* to be retrofitted from projective datafication. In turn, 'recursion functions like a soul, which comes back to itself in order to know itself, while in every moment of reaching out it encounter contingencies' (p238). By reintroducing the *organismic* into the circuit of general organology, Hui's project uniquely offers a way to undermine the mechanistic rendering of preconceived finality.

Via Simondon's work on complexity and non-linear cognition, Hui advances a fundamental means of differentiation from the Cartesian schema of cognition. Whereas the Cartesian model presupposes linear causal relations and the formal transportation of information from introductory premises towards a conclusion – or a static anchoring point – the model of feedback introduces an altogether unique temporal structure. This is no longer a linear form but that of a spiral, whereby the *telos* is not 'a static point but a constant self-regulatory process' (p238), necessitating active adaptation and homeostasis. From smart cities to the Internet of Things, the *organismic* totality of our technological systems are defined along recursivity, where digital automation delegates knowledge production. Planetary computation is not solely schematic but a faculty of anticipatory reintegration – consider metadata collection on user information as a generative task, with an ever-burgeoning dynamic list of input-content.

One dominant theory of technology, which begins with Ernst Kapp, seeks to demonstrate technics as the projection of organs (e.g. the hook as a projection of the hand). This project is continued with Arnold Gehlen and Alfred Espinas (and is modified by Marshall McLuhan, for whom technologies extend the central nervous system) and further complicated by André Leroi-Gourhan. Leroi-Gourhan theorised that, in addition to the liberation of organs, artefactual objects are the exteriorisation of memory. Leroi-Gourhan's thesis is most valuable for Hui, as it not only demonstrates the becoming-organic of the inorganic, but also how 'technology is complicit with an episteme that is fundamentally cosmological and irreducible to universal values' (p265-266). Rather than determined directionality and temporalisation, it is this element of the irreducible that is key for Hui and proves most inventive for cosmotechnics' political project.

Hui also provides for a rigorous understanding of 'general organology', a term that readers of Stiegler will recognise. Hui's description of organology is remarkably thorough: Hui begins with Kant's reflective judgment, which establishes the unification of the laws of nature with the judging subject, the suppositional condition of transcendental reality. Hui illuminates the recursive relation between the whole and the reflective judgment through the subjective speculative process of reason. This 'speculative whole' is critical to Kant's central methodology and directly influenced Georges Canguilhem, who coined the term 'general organology'. Reading Kant as a philosopher of technology, Canguilhem conceives of intelligence as the act of 'geometrising matter' that recursively constructs its artifactual scaffolding, stilted on 'duration and extension' (p160). Additionally, is through Bergson's work on integrative evolution that Canguilhem's 'general organology' becomes that which infinitises the finite and reintegrates the inorganic into an organized whole – the organic is irreducible to the mechanical, which is merely a particular instantiation of the organic.

Hui also determines an altogether novel query concerning the planetary

scale of technology and furthers Stiegler's system through a discussion of 'tertiary protension'. While 'primary retention' refers to sensorial experience and 'secondary retention' refers to memory, 'tertiary retention' indexes media mnemonics; influenced by Husserl's phenomenological work on time-consciousness, Stiegler and Hui both are interested in retention and protention, where the latter describes anticipation. Hui's work on the improbable, or contingency, reconstitutes the temporal structure of digital technology by showing how machines are preemptive, where 'preemption' describes the delegation of decision-making to algorithms (p215). Protention is also distinctly related to Hui's work on the indeterminate, or the Unknown, as it forms a bricolage between logic and axio-cosmologies.

Perhaps the epochal speculative question of our day concerns the eschatological logic of transhumanism, which portends the earth as a technological superorganism. This perspective conceives of the universalisation of planetary hominisation vis-a-vis predictive technologies, whereby the convergence begins with individuals, but, through the spread of data-organisation and the vicious circle of positive feedback, supersedes all notions of self-dependent contingency. In turn, we are confronted with a 'noosphere' wielding neuro-inferential technological completion.

Steeped in Gilbert Simondon's work on individuation and universal cybernetics (which Simondon termed the 'allagmatic'), Hui approaches technical reality not only as a product of rationalist thinking but from the vantage of historicity and locality. However, it is Hui's work on the inhuman and the indeterminable as an operative 'irreducible other' that challenges the philosophical underpinnings of posthumanist and transhumanist discourse. For Hui's cosmotechnics, the critical fulcrum of intentionality and aesthetic sensibility offers us a model that deviates from the accelerationist modes of technophobic and technophilic determinism. Just as Marcel Mauss' 'gift economy' has haunted the project of capitalism, Hui upholds that an aesthetic engagement with technics deviates from 'absolutisation', destabilising the functionalist-utilitarian conception of singularity and the monolithic noosphere. As Hui remarks, '[w]e are not calling for a return of humanism against the inhumanism of the system, but rather trying to conceive the inhuman as a possibility that transcends the system' (p263).

One of Hui's most prudent comparisons is differentiating the 'positive inhuman' from Meillassoux's 'inhuman'. For Meillassoux, the 'inhuman' is articulated through reiteration as the potential of infinitude, as exemplified by mathematical practice. For Meillassoux, the kenotype is pure identity and indexes that which is outside of the field of sensible repetition. Hui brilliantly demonstrates how Meillassoux's reiteration – the ontology of empty signs – in fact affirms computationalism. Hui's conception of the inhuman attempts to *transcend* systematisation, rather than reaffirm it – instead of rejecting sensibility, or intuition, Hui's idealist conception of the 'positive inhuman' provides us with an (political) epistemology of pluralism indexed

via sensibility. Hui's *Recursivity and Contingency* reads Simondon through Heidegger, rendering a political challenge to develop geopolitics based on technodiversity that is in conflict with its totalising power. As Hui states, technopolitics implies logic, epistemology and an episteme, providing us with a critical philosophy of cosmic indeterminacy to challenge transhumanist and posthumanist totalisation.

The question of indetermination is central to Hui's work. Accompanying the inscription of infinitude within the finite, indetermination prompts an aesthetic sensibility that reconciles necessity and contingency within 'human freedom' (p236). The inhuman or, more specifically, the 'positive inhuman' is borrowed from Lyotard and is the organological concept that rejects the reduction of thinking to techno-algorithmic determination without resorting to rejecting technology altogether. Hui directs us towards Ludwig Wittgenstein and Gödel's work on logic, where we, similarly, can see the inhuman as a rejection of positivism. Much like the practice of 'leaving [...] blank margins in Chinese and Japanese calligraphy and painting' the inhuman is the emptiness which 'completes the fullness; the empty [...] already inscribed' (p. 256).

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WHAT DO YOU WANT?

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Mareile Pfannebecker and J.A. Smith, *Work Want Work: Labour and Desire at the End of Capitalism*, London, Zed, 2020, 208pp; £14.99 paperback.

I read *Work Want Work: Labour and Desire at the End of Capitalism* over a few days on lockdown at a time when work, or the lack of it, is on a lot of people's minds. It makes for a compelling read, both grounded in a breadth of theory – sociological, philosophical and psychoanalytic – and replete with examples from literature, art, film, popular culture and politics. The title alone offers plenty to consider; given now might be a particularly pertinent time to try to imagine the possibility of the end of capitalism. Astute analysis of a range of attempts to contend with 'the problem of work' sit comfortably alongside commentary on some of the stranger elements of late capitalism that serve to illustrate the tensions between what we want and what we actually get in the (dis)pleasures of 'bleeding vegan burgers', Googling your symptoms and trawling Tinder. As arguments develop, so too do considerations of the cultural politics of the moment. #Metoo, the UK's 'Prevent' strategy, TERFs (trans-exclusionary radical feminists), wokeness, and snowflakes all feature, though always with a critical edge putting them into context. Despite its range, the work never seeks to skirt the complexity of its subject matter and succeeds in questioning its own arguments. This is perhaps a consequence of having been co-authored and creates the impression, for me at least, that a concerted effort has been made to create space for the reader to develop their own responses and imagine what their own post-work desires might be.

Pfannebecker and Smith begin by setting out the view that a 'new *lifework* regime' has led to a scenario in which 'all you do is work, and everything you do can be put to work' (pix). The authors adopt the term *désœuvrement* – 'literally 'unworking', but also 'inoperability', 'the absence of work', and 'the absence of a work' in order to conceptualise *not-working* as 'something more than just a passive withdrawal of effort' (p1). *Not-working* might instead be thought of as having 'an active, positive, even material quality', though one 'increasingly under threat in the lifework regime' (p1). Now, the authors argue, 'we are living through a generalised diminishing of *désœuvrement*' (p6), as it becomes increasingly difficult to make an 'imaginative leap to 'something that is not work'' (p5). As work has crept into so many areas of life and so many areas of life have come to be conceptualised in terms of work, the loss of the permanent career, or what the authors call the 'tragedy of not being a baker' (drawing on Richard Sennett), has also come to dominate much discussion of employment. The authors are cautious

not to implicitly romanticise older models, recognising the ways in which nostalgia for certain kinds of work has been a productive part of the politics of Brexit in Britain and MAGA in the USA. They avoid perpetuating the notion that being a university lecturer, for example, was nothing but brilliant before it came under the ‘tyranny of extraneous bullshit’ (p12) that arguably preoccupies so much time in so many professions now. Work has never been straightforward. The authors acknowledge this, describing precarity as ‘a grim kind of stable norm in itself’ (p17).

Under current conditions, the authors argue, when an increasing ‘porousness between the lives of the unemployed and those in low-pay employment’ is accompanied by ‘new powers for the state to expel people from the economy and polity altogether’ (pxi), there is a need for a ‘totally new vocabulary for talking about employment and unemployment’ (p50). Chapter two, ‘Work Expulsions’, features the analysis of Lucien Freud’s painting ‘The Benefits Supervisor Sleeping’ (1995) as a springboard for thinking about differing perspectives on worklessness as unemployment and offers two new terms. The first, malemployment, denotes a break in any conventional binary opposition of employment/unemployment and emphasises the ways in which it has become ‘hard to firmly tell the difference’ (p64) between the two. Unemployment has come to resemble employment – it is a lot of work filling out endless forms, attending meetings, getting online and undertaking mandatory ‘volunteering’ or ‘training’ – and employment fails to seem all that different from unemployment when you might have work and be homeless, have work and be hungry, or have work and be just plain broke. The authors outline how this situation has come about through political decision making, in particular in Britain and the USA. The second term, disemployment, acknowledges the experiences of ‘those who have been removed from unemployment figures, are not collecting benefits, but who have not reappeared within the job market; those in other words, who have simply been expelled or cancelled from the official economy as such’ (p61). The terms seek to address, and perhaps to begin the process of redressing, ‘the violence resulting from the redefinition of unemployment since the 1990s’ (p70), in particular in Britain.

While disemployment and malemployment become the norm for many, ‘quasi-adolescent self-commodification’ comes to define the ‘work-based subjectivity’ (pxi) of others as capitalism ‘produces subjects who relate to themselves as commodities, online and offline’ (p75). In chapter three, the authors use the examples of the two highly mediated deaths of Amy Winehouse (famous for her music) and Peaches Geldof (famous for being famous) to examine the notion of ‘Young-Girlification’. The phrase comes from the French anarchist collective Tiqqun and acknowledges the ways in which the adaptable, self-improving ‘Young-Girl’, labouring primarily on herself, had become the ideal in consumer societies. This chapter’s discussion of digital labour and the ways in which we are ‘increasingly required to perform

our desirability and the desirability of our lives as part of our work' (p137) coincided with my watching the BBC Three documentary *Nudes4Sale* (2020). The documentary follows women and teenage girls who utilise OnlyFans, the London based company premised on the idea that 'whether you're uploading tutorials, tips, behind the scenes footage or just endless selfies, a lot of your followers would be willing to pay for them!' UrbanDictionary perhaps offers a more pertinent definition of OnlyFans as 'a website where one can sell their nudes in an attempt to escape their retail job'. Users post content to those who subscribe for a set fee every month, plus you can earn tips. OnlyFans seems to epitomise what Pfannebecker and Smith describe as 'the ways capitalism puts our time, our subjectivities, our experiences, and our desires to work in unprecedented ways only possible on the basis of globalised technologies' (p149). One of OnlyFans' most popular figures is Jem Wolfie, described by the platform as 'marketing gold' because 'her social media is about her' – she, like Peaches, achieved celebrity status 'just by being who she is'. Pfannebecker and Smith point out that 'while the figure of the person 'famous for being famous' predates platform capitalism, the possibility of being so specifically on the basis of a constantly updated body of work charting one's daily life is clearly specific to it' (p97). You might wonder if platforms like OnlyFans, which complicate Pfannebecker and Smith's emphasis on 'forms of activity that accumulate wealth for capital without being recognised as labour' (p106-7) because users ask for money, really do chart one's daily life or something much more constructed – but then you would perhaps be surprised by how often the women in *Nudes4Sale* are asked for videos of everyday activities like urinating and defecating. Such platforms only add to the urgency of Pfannebecker and Smith's question: 'How do we get out of wanting 'self-valorization', the work of the good girl of capitalism?' (p107).

In its discussions of platform capitalism and desire the final chapter, titled 'Three ways to want things after capitalism', offers the greatest insights. Here the authors draw on psychoanalytic thinking to illustrate that 'to design a system that automatically 'gives me what I want' shows a grave misunderstanding of what desire is' (p131). Sometimes what we want in the moment and what we want long term are in conflict, and the book's discussions of the importance of chance meetings, unexpected matches, serendipitous moments – all of those things unlikely to happen when an algorithm seems to be in charge – prove particularly rewarding. The tensions between what we *think* we want and what others *think we should* want are at the fore as the authors emphasise the often-moralising tendencies that surround so many visions of both work and post-work futures. The discussion centres first on Silicon Valley and the extraction of value from data then on cultural criticism that calls for us to 'repurpose our desire', exploring some of the challenges that typify attempts to get 'to the other side of capitalism' (p140). Pfannebecker and Smith make the vital point here that what many 'post-work visions' fail to acknowledge is 'that we cannot know what the other wants', and that 'a

consensus on the basics of a life well spent, if there may be such a thing, is liable to change' (p28). How can we know now what we would want in the future? Why would the things we want now be the same things we would want then? Why should what we want coincide with what others want? Our desires aren't free from the structures of the world they exist in – desire has what Pfannebecker and Smith call a 'cultural-historical plasticity' (p121) – so if the world changes, so might the things we want.

The book concludes with an emphasis on approaching the future with 'experimentation and openness' (156). In keeping with the literary references throughout *Work Want Work* this is reminiscent of a comment from Ursula K. Le Guin, who argued it was important as a writer 'not to offer any specific hope of betterment' but rather to 'dislodge' hers and her readers' minds 'from the lazy, timorous habit of thinking that the way we live now is the only way people can live'. Pfannebecker and Smith adhere to this in offering not a single vision of a post-work future, but an opportunity to think differently. Now, questions are being asked about whether the current pandemic might open up new possibilities in the aftermath of what no doubt will be, for many people, profound loss. Chris Ridell's cartoon in *The Guardian* titled 'Uncertain future' makes the point poignantly. It pictures two people staring into the clouds, one asking: 'When this is all over, what should change?', the other responding: 'Everything'. As Pfannebecker and Smith emphasise, 'all the future is, until it happens, is present desire' (p147). *Work Want Work* is a valuable contribution to writing on late capitalism and post-work theory. Simultaneously, it offers an engaging prompt for doing the hard work of thinking about what it is we want.

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