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The Aesthetics of Algorithmic Experience

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The Routledge Companion to Art and Politics



Edited by Randy Martin

THE ROUTLEDGE COMPANION TO ART AND POLITICS

The Routledge Companion to Art and Politics offers a thorough examination of the complex relationship between art and politics, and the many forms and approaches the engagement between them can take.

The contributors—a diverse assembly of artists, activists, and scholars from around the world—discuss and demonstrate ways of making art and politics legible and salient in the world. As such, the 32 chapters in this volume reflect on performing and visual arts; music, film, and new media; as well as covering social practice, community-based work, conceptual, interventionist, and movement-affiliated forms.

The *Companion* is divided into four distinct parts:

- Conceptual Cartographies
- Institutional Materialities
- Modalities of Practice
- Making Publics

Randy Martin has assembled a collection that ensures that readers will come away with a wider view of what can count as art and politics; where they might find it; and how it moves in the world. The diversity of perspectives is at once challenging and fortifying to those who might dismiss political art on the one hand as not making sufficient difference and on the other to those embracing it but seeking a means to elaborate the significance that it can make in the world.

The Routledge Companion to Art and Politics brings together a range of issues and approaches and encourages critical and creative thinking about how art is produced, perceived, and received.

Contributors: Caron Atlas, Wafaa Bilal, Claire Bishop, Swati Chattopadhyay, Patricia Ticiento Clough, Dudley Cocke, Jan Cohen-Cruz, Critical Art Ensemble, Eduardo de la Fuente, Ricardo Dominguez, Mark Driscoll, Boris Groys, Jack Halberstam, Stefano Harney, Shannon Jackson, Joasia Krysa, Suzanne Lacy, Lisa Le Feuvre, André Lepecki, Ana María Ochoa, Toby

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THE ROUTLEDGE COMPANION TO ART AND POLITICS

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THE AESTHETICS OF ALGORITHMIC EXPERIENCE

Ned Rossiter and Soenke Zehle

We did not need the NSA scandal as a reminder that the minute we decide to engage in technologically mediated relation we inscribe ourselves in matrices of control. In fact, one might even question the status of National Security Agency (NSA) surveillance as a scandal: the democratically legitimated laws authorizing such big data projects have been on the books for a long time. Less known are the algorithmic architectures that scrape, mine, harvest, store, cluster, sequence, combine and analyse data generated through our daily use of computational systems. Even more obscure is the extent to which an aesthetic dimension attends the multiple formats and structures that organize data as a dynamic object. To conjoin aesthetics with algorithmic cultures brings us to the centre of info-politics today: namely, the capture of experience within ‘integrated world capitalism’.¹

We use the term algorithmic cultures not only as a reminder of the transculturality of computational aesthetic practices, recalling the Persian mathematician Muhammad ibn Musa al-Khwarizmi’s introduction of the concepts of algebra into European mathematics.² It is also a reminder of the epistemological equivalence of analogue and digital systems that has faded from memory in the wake of the cybernetic romanticization of the analogue. As ethnomathematician Ron Eglash contends, ‘[a]nologue systems can achieve the same levels of recursive computations as digital systems’.³ Recursivity multiplies across the digital and analogue, caring nothing for the borders of machines, economy, people and code. Think, for example, of computational systems where recursion is a function of procedures whose reiteration holds the potential to generate different outcomes, results or events.⁴ Such processes can be found in the work of pollution, in the transformation of material properties and (in)organic life gathered around metal components found in electronic devices as they move across supply chains, economic cultures and ecological conditions as transactions in waste. Underscored by contingency and inconsistency, Luciana Parisi terms this the ‘entropic’ dimension special to algorithmic regimes of governance and control: ‘*Randomness* has become the condition of *programming culture*’.⁵ We extend this dictum on computational systems to a broader inquiry into the relation between algorithmic architectures, aesthetics and the politics of experience.

The chapter identifies four positions central to the social implications and political stakes of what we are calling algorithmic experience. Integrating aesthetic and technological registers, algorithmic experience is the new terrain of extractive industries within contemporary capitalism whose structural logic is itself algorithmic. First, we see the rise of algorithmic

architectures as central to the capture of experience. Second, we seek to complement analyses of social media use with a focus on the infrastructured registers of lifestream logistics. Third, we elaborate the critique of logistical software as an aesthetics of prediction associated with big data analytics. And finally, we address the politics of objects with reference to debates in speculative realism and object-oriented ontology (OOO). Our interest here is less to untangle epistemological debates and more to acknowledge the general uncertainty surrounding how to deal with experience-objects, using the term 'algorithmic experience' in the diagrammatic sense of a metamodel.⁶ Fixating on the origins of agency, whether this resides with objects or subjects, is insufficient to the task of critiquing the force of algorithmic capitalism.

1. Experience Capture

If the power of art (and aesthetic experience) 'belongs to the apprehension (not the acquisition) of an object that breaks with customary divisions of labor and places us in a state of contemplative bliss that belongs to everyone and no one',⁷ this bliss is now owned. The act of sensation, contemplation and more broadly experience becomes ownable as it is expressed (Massumi), grammatized (Stiegler) and captured (Agre).⁸ We see a need to engage capture as the enclosure of aesthetic experience, not, however, from the perspective of the contemporary commercialization of the art world. As Jacques Rancière notes, the latter is 'merely a distant effect of the revolution constituted by the very birth of museums' and its display of princely predilections and looted treasures.⁹ Instead, we focus on the immanence of the algorithmic to experience.¹⁰

For Rancière, the conditions of the emergence of art as an autonomous practice 'cannot be deduced from a general concept of art or beauty founded on a global theory of man or the world, of the subject or being', but depends 'upon a transformation of the forms of sensible experience, of ways of perceiving and being affected'.¹¹ Rancière explores the 'sensible fabric of experience' – the material conditions within which works of art are produced – through specific scenes, each of which is 'a little optical machine that shows us thought busy weaving together perceptions, affects, names and ideas, constituting the sensible community that these links create, and the intellectual community that makes such weaving thinkable'.¹² Scenes are not representations; instead, they map a network around aesthetic practices, inscribing them 'into a moving constellation in which modes of perception and affect, and forms of interpretation defining a paradigm of art, take shape'.¹³ Key for our argument is that Rancière here sketches a thought of *aisthesis* that can serve as point of departure for articulations of the actual (material) *mise en scène* of algorithmic experience.¹⁴

The integration of algorithmic architectures (social media, finance capital, big data, supply chain operations) with labour and life has further intensified the subsumption of value from the realm of experience. A shift is registered from economies of production predicated on regimes of scarcity and the governance of labour-power to economies of extraction immanent to biopower and algorithmic agency. Far from some kind of instrumental takeover of the body and brain, algorithmic architectures are what Parisi terms 'performing entities', which is to say they 'expose the internal inconsistencies of the rational system of governance, inconsistencies that correspond to the proliferation of increasingly random data within it'.¹⁵ In analysing the material conditions that produce, modulate and ultimately capture experience as surplus value, we find critical (in fact paradigmatic) purchase in algorithmic architectures special to global logistics industries and a 'supply chain capitalism' that organizes the lifestream logistics of practices of relation and production.¹⁶

2. Lifestream Logistics

With the rise of social media and ‘lifestream logistics’, software today drives the production of affect.¹⁷ From the mathematical execution of algorithmic rules to user experiences of interface design, a recursive loop of action is derived from human affect and the operation of commercial tools. The parameters of these relations are finite and determined. The borders of parameters operate as a new universality within computational regimes. The ‘outside’, for all intents and purposes, no longer exists. There is only meaning within the horizon of parametric architectures.

The agency Super Nature Design was commissioned to ‘design and create a series of low energy digital sculptures and light installation showcasing its operational efficiency, infrastructure system and live-feed data of the green energy consumption’ of the Nike China Logistics Center (CLC) in Taicang. The installation, ‘by the CLC’s conveyor system, infrastructure and the cubical cartons’ and meant to reflect ‘the dynamic of the system’, captures the idea of logistics as an aesthetic experience: the incorporation of real-time energy data combines atmospheric media and lifestream logistics. In ‘+ City Runs’, YesYesNo visualized for in-store displays the user data uploaded via the Nike+ running app to Nike+ servers. The object (the user-object assemblage) continues to generate data (metadata about where and how the object is used), extending the customer relation to cover the entire period of usage, documenting the logistical dimension of ‘smart’ objects.

The coupling of self-management with the operational efficiency of production, illustrating the processuality of competitive optimization, has been reflected upon within what might be called a literature of depression, calling attention to the mutual implication of consumerist practices with economies of affect in turn understood as engines of big data models of valorization.¹⁸ The so-called internet of things (IoT), a network of ‘smart’ objects, turns out to be an internet of experiences as objects can now be (become) the subjects of experience. To attribute such reconsiderations of the distribution of subjectivity across (and beyond) the object/subject divide as occasioned or necessitated by the arrival of ‘smart’ objects is, of course, yet another instance of supreme technodeterminism radically contextualized (and historicized), for instance, in the recent resurgence of interest in the animist assumption of a shared relational frame of interaction between humans and non-humans.¹⁹

Not surprisingly, media theory has identified experience as a key terrain of contestation. Following André Leroi-Gourhan, Bernard Stiegler has already affirmed that ‘the human and the tool invent each other’.²⁰ The earlier twentieth century research by Lewis Mumford and Harold Innis in technology and communication arrived at similar conclusions. As we think of user-as-product paradigms and the lifestream logistics of the ever-expanding ethico-aesthetic supply chains manifest in and through social media, such a simultaneity of invention and constitution reminds us that use is not what we do but what we are.

Let us briefly return to the question of the common. For Cesare Casarino, ‘In communication, everything is common: its potentialities, its actualities, as well as the processes that continuously turn the former into the latter’. Casarino continues: ‘There is a privileged, essential relation between potentiality and the common, in the sense that if the common partakes both of actuality and potentiality, potentiality can only be shared and in common: potentiality constitutes our common substance. The common in its potential aspect today is nothing other than the assemblage of those capacities that do not belong to anyone and in which we all share: linguistic faculty, intellectual powers, as well as the capability to affect and to be affected’. In short, the capacity to experience. Importantly for Casarino, labour-power is the expression of the common whose potentiality arises within social cooperation.

Our claim is that it is precisely the realm of the common – of affect and social cooperation – that becomes the new site of exploitation due to its integration with algorithmic capitalism.

This raises the critical question for politics – where to find resources that hold a degree of relative autonomy within such a techno-scientific conjuncture? Or do we involuntarily retreat into the indifferent machines of capital whose first move is capture? Can we subtract experience from algorithmic capture? Or do we get on with the job of collectively designing sustainable forms of ‘social interaction and organization’, as called for by Geert Lovink in response to Galloway, Thacker and Wark’s flight from media to mediation, communication to ‘excommunication’?²¹ To be honest, we do not know. The current conjuncture is still one of disorientation as we (finally) assess the ‘end of the internet’ in the wake of Snowden’s exposure of the NSA surveillance program. It is enough, for now, to return to the operating theatre and begin assembling the component parts that make up the apparatus of capture.

3. Predictive Aesthetics

German-based software developer SAP is one of the leading firms in developing ERP (enterprise resource planning) software that can be found across a wide range of industries – from warehousing, education, transport, financial services and global logistics. Yet ask any self-respecting programmer what they think of SAP’s ERP software and they will quickly tell you it’s a dog. It is ugly and it is buggy. For all this, SAP declares that ‘63% of the world’s transaction revenue touches an SAP system’.²² The design of real-time analytics technologies like SAP’s HANA platform links ‘big data’ to what SAP has come to refer to as ‘dark data’.²³

Widely reported as a successful attempt to ‘score’ in the US, HANA technology now powers the National Basketball Association’s (NBA’s) statistics platform. Here is a reminder of the infrastructural dimension of professional sports, from one of the first chronicles of data-driven sports management in Michael Lewis’ *Moneyball* (generally understood as business rather than sports journalism) to Electronic Art’s (EA’s) FIFA series, now with movement data collected in mobile motion capture studios that follow players across the world. These are the same players that play the game as a pastime whereby changes in movement are recorded and feed into the cloud-based game experience. A recursive loop is thus enacted, providing yet another example of the ‘playbourization’ of everyday life.²⁴ Such technologies demonstrate how data drives experience, integrating user-as-product paradigms and the machines of self-optimization.

In their survey of the stakes of the shift to big data paradigms, Viktor Mayer-Schoenberger and Kenneth Cukier ask: ‘What role is left for intuition, faith, uncertainty, acting in contradiction of the evidence, and learning by experience?’²⁵ For Mayer-Schoenberger and Cukier, experience is displaced by the power of big data to exert a logic of correlation over causality. The predictive capacity of big data that ‘speaks for itself’ is based on algorithmic architectures organized around an ideology of ‘solutionism’.²⁶ The algorithmic coordination of supply chains is one obvious example of how pattern recognition is put to work in order to maximize the extraction of value from time and space. Amazon’s recent patent for ‘anticipatory package shipping’ is designed to predict customer orders before they are made, and thus minimize the time between purchasing an item and its delivery to a final destination.²⁷ By managing consignments through distribution hubs strategically located near markets defined by predictive modelling of demographics of consumption, Amazon competes for the ‘real-time’ desire for instant gratification by optimizing supply chain movements.²⁸

Logistics always strives for ‘efficiency gains’ as a value-adding measure. Social media is a classic example here, in which the parameters of possibility hold enough variation coupled with low-level demands to prompt users to act and – most importantly – stay within the garden of compulsive communication. The rise of predictive prosumption is designed to give users limited forms of interaction in exchange for even more limited access to decisions over what it is we consume. One can only imagine the next step is 3D printing of purchased items – straight from

the computer to the lounge room, making real that long-held techno-fantasy of ‘beaming’ instantly from one place to another and thus reducing the arduous route of supply chains and their intermediaries to the invisible magic of circuit boards and software.

The present reality, however, is still some seconds off from these Trekky dreams. Far from the interoperable, seamless connectivity of supply chains and logistics, the movement of people, finance and things is underscored by friction, struggle and contingency. Whether this takes the form of labour disputes, software glitches, infrastructural breakdown or sabotage, the management science of logistics is an extraction machine that captures value even in moments of seeming assault. The volatility of spot and futures markets in the shipping of freight, for example, ensures that economic value is generated by the perpetuation of price variation from the moment commodities and services are purchased to the time upon which they are received. As Randy Martin writes, ‘Subjecting the world to the logic of derivatives means acting as if no transaction is final and there is always a globally realizable potential for improved performance’.²⁹

This raises the question of politics and intervention. What constitutes political action when disruption is seemingly absorbed as a normative condition within systems of calculation and control? The power of logistical regimes suggests that resistance is futile. The revolutionary theatrics of Badiou and Žižek service logistical forms of enclosure when disruption is situated within the apparatus of predictive analytics. Counter-power is no longer sufficient as an alternative to algorithmic capitalism. A key reason for the valorization of sociality, politics and affect rests with the valorization of expression as it is reduced to data whose hermeneutic key subsists in the logic of financialization. The political challenge, therefore, requires articulating data with territories of value robust enough to function as protocological conflicts that refuse translation into economies of depletion and despair.

The politics of parameters opens spaces for counter-design that contests the logics of extraction and exploitation. One might think immediately of the small-scale artisan economies special to maker cultures, or the slow food movement, both of which illustrate the difficulty of matching an artisanal imagination with a scale-free mesh. At worst, such practices ‘integrate the point of view of manual labour back into a sociomorphism derived entirely from non-manual understandings of labour activity’.³⁰ But perhaps they can be articulated beyond a contemplative materialism to bring back into view the ‘activity of labour’,³¹ including the operation of global supply chains and the outsourcing or offshoring of labour in ways that obscure their enmeshment within networks of algorithmic capitalism.

How, then, to think labour processes outside relations of exploitation? This is the perennial leftist critique of capitalism, and this task lies beyond aesthetic interventions to affect a redistribution of the sensible.³² For a while it seemed the free and open source software movement was one haven for escape. But with the help of post-*autonomia*, we understand these kind of ‘free labour’ practices to function as part of the social production of value that also drives the data-mining economies of social media, calling for a reassessment of the political promise of a valorization of the withdrawal or subtraction of labour from the processes of capital accumulation promoted in the political thought of an earlier generation of Italian autonomists. No longer can we see such actions as techniques of sabotage or forces of acceleration that push the logic of capitalism closer to its end game. Bonded by the algorithmicized circuits of ‘infinite debt’, such possibilities for political action become stifled if not neutralized by the intrusion of financialization into everyday life.³³

4. Autonomous Objects

In his critical survey of OOO and speculative realism, Galloway draws a correlation with technologies of post-Fordist capitalism, whose ‘object-oriented infrastructure skims off unpaid

surplus-value from living networks'.³⁴ Latour's so-called 'parliament of things' turns out instead to be an aesthetics of recursion that extracts value from the work of experience. The political – understood as the work of antagonistic encounters – is evacuated. Indeed, Galloway declares an end of the political: 'it does not exist in any place or situation'.³⁵

We need a thought of algorithmic objecthood that not only registers the historicity of objects, but the historicity of sense – which is key to our understanding of 'algorithmic experience'. After software studies has told us to attend to the machinic agency of algorithms, it seems to have left us to explore the promise of a new positivism. Yet what we need to comprehend is a sense of experience from within such a machinic horizon, as 'the fascination with the open and with the outside that erupts in the twentieth century within a history of sense that had always resisted the exterior and the open, is related to the history of machines and objects'.³⁶ Not to be overlooked is the coincidence between the desubjectification of the human and the interpenetration of machines with life. The economy of intensive extraction can proceed once the problem of the human and the monopoly of the subject is superseded by an ontology of things.

Still considered primarily in its role as a source of retreat and renewal in the mediated world of algorithmic capitalism, experience calls out to be better understood, as it is not simply available for a retreat from theory (or media, or mediation, for that matter). As the algorithmic folds itself into experience, the latter can no longer serve as an outside. Passing through various material registers of the *mise en scène* of algorithmic experience, we hope to develop thought on the level of experience as a vantage point. That is, on (what has now become) the level of the work of affect as algorithmic agency. We end by posing the question of the algorithm as dynamic object, not quite comprehended by the objectal (but strangely static) horizontalism of object-oriented ontology. Still largely unknown, algorithmic architectures determine, direct and enable the experience of algorithmic cultures. Sketched as a metamodel, algorithmic experiences pose the question of modes of relation and constitution offered as well as enclosed and foreclosed by and in algorithmic cultures. It is precisely at the multiple points of tension striking the relation between experience and algorithm that one finds the instance of politics. And against its own image and infrastructures of capture, logistics provides a possible device of articulating political insurgency.

Notes

- 1 Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton, London: Athlone Press, 2000.
- 2 Christopher Moore and Stephan Mertens, *The Nature of Computation*, Oxford: Oxford University Press, 2011, 36.
- 3 Ron Eglash, 'African Influences in Cybernetics', 1995, <http://www.haussite.net/haus.0/SCRIPT/txt2001/01/eglash.HTML>. See also Ron Eglash, *African Fractals: Modern Computing and Indigenous Design*, New Brunswick: Rutgers University Press, 1999.
- 4 See Luciana Parisi, *Contagious Architecture: Computation, Aesthetics and Space*, Cambridge, Mass.: MIT Press, 2013, 104. See also Fuller and Goffey: 'recursion may be used to organize heterogeneous material into a singular pattern'. Matthew Fuller and Andrew Goffey, *Evil Media*, Cambridge, Mass.: MIT Press, 2012, 75.
- 5 Parisi, ix.
- 6 See Gary Genosko and Andrew Murphie, 'Models, Metamodels and Contemporary Media', *Fibreculture* 12 (2008), <http://twelve.fibreculturejournal.org>. 'Metamodeling de-links modeling with both its representational foundation and its mimetic reproduction. It softens signification by admitting asignifying forces into a model's territory; that is, the centrality and stability of meaningfulness is displaced for the sake of singularity's unpredictability and indistinctness. Importantly, the diagram's productivity entails that metamodeling is productive of a new kind of reality; it functions; forces things together; doesn't need meaning, just the manufacture of it' (ibid.). See also Luciana Parisi and Stamati

- Portanova, 'Soft Thought (In Architecture and Choreography)', *Computational Culture* 1 (2011), <http://computationalculture.net/article/soft-thought>: 'Metamodels alienate us by building complexity, instead of serving us by making it more accessible: for Guattari, as we have seen, their true value lies exactly in their capacity to do without their material counterpart, their factual origin or aim'.
- 7 Joseph Tanke, 'What's New In Aesthetics?: Jacques Rancière's "Aisthesis"', *Art in America*, 30 July 2013, <http://www.artinamericamagazine.com/news-features/news/whats-new-in-aesthetics-jacques-rancieres-aisthesis>.
- 8 See Philip E. Agre, 'Surveillance and Capture: Two Models of Privacy', in Noah Wardrip-Fruin and Nick Montfort (eds), *The New Media Reader*, Cambridge: MIT Press, 2003, 737–60: 'the capture model employs linguistic metaphors by means of various grammars of action; describes the readily apparent instrumentation that entails the reorganization of existing activities; portrays captured activities as being constructed in real-time from a set of institutionally standardized parts specified by the captured ontology; emphasizes the locally organized nature of contests over the capture process and their structuring within particular institutional contexts; takes as its prototype the quasiphilosophical project of ontological reconstruction undertaken by computer professionals in private organizations' (ibid. 756).
- 9 Jacques Rancière, *Aisthesis: Scenes from the Aesthetic Regime of Art*, trans. Zakir Paul, New York: Verso, 2013, x.
- 10 We use 'enclosure' in relation to the status of (aesthetic) experience as common. On the common as that which is im-proper, that which cannot be owned (according to the OED: 'improper: not truly or strictly belonging to the thing under consideration'), also see Cesare Casarino, 'Universalism of the Common', *diacritics* 39.4 (2009): 162–76: 'What is destructive and self-destructive is to produce surplus and to experience being as valuable rather than as common, to produce and to experience one's own surplus, one's own share in being, precisely as one's to own – and hence as always liable to being captured, being dispossessed of itself, and being (dis)owned by others – rather than producing it and experiencing it instead as that which must not be disowned at any cost and indeed cannot be owned by anyone at all' (163).
- 11 Rancière, *Aisthesis*, ix.
- 12 Ibid., x.
- 13 Ibid., xi.
- 14 See Parisi and Portanova, who conclude their brief discussion of enactive cognition (Varela and Thompson) with the following: 'cognition is not equivalent to a form of information processing that is able to run on any system, but emerges out of the performing activities of being in the world'. Then turn to the extended functionalism of Clark: 'extended cognition posits the primary function of thought in terms of a minimal Cartesianism, according to which the mind exists before the body' by affirming that 'computation, or the formal architecture of algorithms, only remains limited to a closed formalism if one does not take into consideration how algorithms themselves tend towards abstraction, infinity, or the reality of the incomputable' (ibid.). A thought of algorithmic experience must acknowledge the possibility 'that it is the very capacity of software as first of all a prehension of abstract mathematical ideas to be not only ubiquitous but also able to articulate different spatio-temporal configurations in a bodily movement or a whole city' (ibid.).
- 15 Parisi, *Contagious Architecture*, ix.
- 16 Anna Tsing, 'Supply Chains and the Human Condition', *Rethinking Marxism* 21.2 (2009): 148–76.
- 17 See Soenke Zehle, 'The Autonomy of Gesture: of Lifestream Logistics and Playful Profanations', *Distinktion: Scandinavian Journal of Social Theory* 13.3 (2012): 341–43.
- 18 Of the contributors to this multidisciplinary body of research, we have been most interested in the perspectives of Franco 'Bifo' Berardi, Alain Ehrenberg, Michel Foucault and Bernard Stiegler.
- 19 See Anselm Franke (ed.), *Animism*, Berlin: Sternberg Press, 2010.
- 20 See André Leroi-Gourhan, *Gesture and Speech*, trans. Anna Bostock Berger, MIT Press, 1993; Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins, Stanford: Stanford University Press, 1998, 175.
- 21 Geert Lovink, 'Hermes on the Hudson: Notes on Media Theory after Snowden', *E-Flux* (forthcoming), <http://www.e-flux.com/journals/>. And Alexander R. Galloway, Eugene Thacker and McKenzie Wark, *Excommunication: Three Inquiries in Media and Mediation*, Chicago: University of Chicago Press, 2014.
- 22 SAP, *Helping the World Run Better*, 2012 Annual Report, 4.
- 23 SAP Analytics, 'The Rise of Dark Data: A Journey To The Network Of Truth', 2013, is a comic-style call to join an (all-male) team of data visualization 'superheroes'. <http://www.sap-com/datageek>.

- Although certainly a popular visual idiom, superheroism's uneasy relationship to politics seems symptomatic both of a state of exception (and ultimately the disappearance of the political as sovereign decision passes on to the anti-democratic figure of the superhero) and a contemporary form of the 'social relevance' (DC Comics) movement in popular culture in which (now) data analysts are assumed to be key political actors.
- 24 See Julian Kücklich, 'Precarious Playbour: Modders and the Digital Games Industry', *Fibreculture Journal* 5 (2005), <http://five.fibreculturejournal.org/fcj-025-precarius-playbour-modders-and-the-digital-games-industry/>. See also Trebor Scholz (ed.), *Digital Labor: The Internet as Playground and Factory*, New York, Routledge, 2013.
 - 25 Viktor Mayer-Schoenberger and Kenneth Cukier, *Big Data: A Revolution That Will Transform How We Live, Work, and Think*, New York: Eamon Dolan / Houghton Mifflin Harcourt, 2013.
 - 26 Evgeny Morozov, *To Save Everything Click Here: The Folly of Technological Solutionism*, New York: Public Affairs, 2013.
 - 27 See Lance Ulanoff, 'Amazon Knows What You Want Before You Buy It', *Mashable*, 22 January 2014, <http://mashable.com/2014/01/21/amazon-anticipatory-shipping-patent/>
 - 28 See also Amazon's combination of 'random' and 'directed' storage of products as a technique for both labour management and inventory optimization in Clare Lyster, 'The Logistical Figure', *Cabinet: A Quarterly of Art and Culture* 47 (Fall, 2012): 56.
 - 29 Randy Martin, 'After Economy? Social Logics of the Derivative', *Social Text* 31.1 (Spring, 2013): 90.
 - 30 See McKenzie Wark, 'A More Lovingly Made World', *Cultural Studies Review* 19.1 (2013): 302. Available at: <http://epress.lib.uts.edu.au/journals/index.php/csrj/index>
 - 31 Ibid., 303.
 - 32 See Joseph J. Tanke, *Jacques Rancière: An Introduction. Philosophy Politics, Aesthetics*, London: Continuum, 2011, 150: 'How, given the overwhelming tendency of the world to naturalize its distinctions, distributions, silences, and prejudices, do people manage to conceive the world otherwise?' The sense that the assumption that art can and will redistribute the sensible is not an effective way of engaging the enclosure of experience is widely shared among critics of Rancière. See, for example, Hal Foster, 'What's the Problem with Critical Art?', *London Review of Books* 35.19 (10/10/2013), 14–15, <http://www.lrb.co.uk/v35/n19/hal-foster/whats-the-problem-with-critical-art/>: 'certainly art is no match for the image and information industries that control and concentrate "the sensible" with such ease and efficiency' (ibid.).
 - 33 Maurizio Lazzarato, *The Making of Indebted Man*, trans. Joshua David Jordan, Los Angeles: Semiotext(e), 2012, 71. See also Randy Martin, *Financialization of Daily Life*, Philadelphia, PA: Temple University Press, 2002.
 - 34 Alexander R. Galloway, 'The Poverty of Philosophy: Realism and Post-Fordism,' *Critical Inquiry* 39.2 (Winter 2013): 363.
 - 35 Alexander R. Galloway, *The Interface Effect*, Cambridge: Polity, 2012, 139. Also see Tatiana Bazzichelli, *Rethinking Oppositions in Art, Hactivism and the Business of Social Networking*, Aarhus: Aarhus University Digital Aesthetics Research Center, 2013, <http://disruptiv.biz>, for another example of the search for non-antagonistic concepts of the political at a time when disruption has become a paradigm of commercial innovation (and the artisanal maker cultures surveyed by Chris Anderson or Cory Doctorow not only mirror the start-up cultures of the previous decade but take the infrastructures of a global venture capital scene, ranging from small crowdfunders to major investors, as a given).
 - 36 Erich Hörl, 'The Artificial Intelligence of Sense: The History of Sense and Technology after Jean-Luc Nancy (by way of Gilbert Simondon)', trans. Arne De Boever, *Parrhesia* 17 (2013): 11–24, 12, http://www.parrhesiajournal.org/parrhesia17/parrhesia17_horl.pdf.