

Goldsmiths Research Online

*Goldsmiths Research Online (GRO)
is the institutional research repository for
Goldsmiths, University of London*

Citation

Cubitt, Sean. 2019. Portals, limina, network subjectivities. Parallax, ISSN 1353-4645 [Article] (Submitted)

Persistent URL

<http://research.gold.ac.uk/25923/>

Versions

The version presented here may differ from the published, performed or presented work. Please go to the persistent GRO record above for more information.

If you believe that any material held in the repository infringes copyright law, please contact the Repository Team at Goldsmiths, University of London via the following email address: gro@gold.ac.uk.

The item will be removed from the repository while any claim is being investigated. For more information, please contact the GRO team: gro@gold.ac.uk

Limen, Portal, Network Subjectivities

Sean Cubitt

Parallax

Extended Abstract: The ambiguity of the term 'network subjectivities' is enticing: is there a subjectivity proper to networks? Is that subjectivity itself distributed? The inference in each case is that there is or has been a subjectivity that is or was not networked in either sense. It follows then that there must be a passage between non- or pre-networked subjectivity and networked, a threshold. Anne Friedman's work would suggest that the key threshold is the human-computer interface, the physical display and the software interface that appears in it. Her analysis concerns the actual, but subjectivity also concerns the potential. To pursue that we need to look at imaginary (fictitious, experimental) accounts of thresholds between worlds. This paper looks at liminal spaces and portals in popular culture as evidence for the potential of subjectivities in transition between IRL or individualist subjectivity towards networks and networking. From Odysseus' visit to the gates of the underworld and Orpheus' rescue of Eurydice, all the way to Malevich's black icon, the liminal has been approached with ritual and trepidation. Transitions between worlds retain their magic in the Narnia books of C.S. Lewis and the tesseract of *Interstellar*, but lose their ritual and their power to demand awe and fear in the promise of easy, cost-free travel between the mundane world and any one of thousands of networked worlds.

Such transitions, we know from our GPS trackers, do not involve a change of place; therefore they must involve a change of state, whose essence will be temporal rather than spatial, and thus also historical. The major historical change of the period covering the rise of network communications has been the rise of dataveillance, and its corollary, the real subsumption of consumption under capital. With the approaching exhaustion or higher risks associated with the extraction of natural resources, capital turns to the exploitation of human nature, notably through mapping behaviours as predictors of future activity, exploiting the creativity of interactors as unpaid sources of innovation, and personal debt. The derivatives market in debt produces the singular temporality of contemporary network capital and its subjectivity.

This paper follows the histories that have produced this condition, including those of individuation, the construction of states of affairs as data, and the variety of terms frequently used as binary opposites of truth, each constitutive of a different kind of subject. This analysis prompts a definition of ideology as the intersection of the wishful and the paranoid, a position characterisable as subjunctive that should be taken as the typical form of network subjectivity as liminal. This in turn suggests two further hypotheses, that the category and the reality of the human has become environmental, that is treated as economic externality and as divorced from the core of the social; and that this alienated, subjunctive, mass subject is now in process of dissolving its links with the subjectivity as sovereignty, to replace it with the grounds for a new sociality. The challenge of the present conjuncture is therefore to construct a new 'we' capable of expressing the newly interdependent networks, not only of communications, but of ecological and technological imbrication of humans and non-humans, in a new politics.

Contributor: Sean Cubitt is Professor of Film and Television at Goldsmiths, University of London and Honorary Professorial Fellow of the University of Melbourne. His publications include *The Cinema Effect*, *Ecomedia*, *The Practice of Light: Genealogies of Visual Media* and *Finite Media: Environmental Implications of Digital Technology*. Series editor for Leonardo Books at MIT Press, his current research is on political aesthetics, media technologies, media art history and ecocriticism.

s.cubitt@gold.ac.uk. Department of Media, Communications and Cultural Studies, Goldsmiths, University of London, New Cross, London SE14 6NW.

The thresholds between worlds are by nature sacred. Passage between the worlds of the living and the dead is strange and holy. For the ancients, and for the religions of the book, precise places of transition to another world are scenes of veneration. Messenger angels may pass when and where they desire, but precise places and times (solstice or Walpurgisnacht) mark the portal that allows traffic between human and other universes. Early examples of portable portals, oil paintings liberated visions of heaven and hell from their anchorage on church walls. In 1913, Kasimir Malevich, attempting an equally ambitious route to the other side of mind, made his emblematic portal out of a black square: 'Even I was gripped by a kind of timidity bordering on fear when it came to leaving "the world of will and idea," in which I had lived and worked and in the reality of which I had believed'. (Malevich 2012: 118). Film too made the blank rectangle of the screen a passageway to other worlds. In the 21st century, the screen is no longer replicated in dedicated theatres but multiplied towards ubiquity. One hundred years after Malevich, Christopher Nolan's *Interstellar* (2014) has its characters travel through two portals: a wormhole in space, and a 4-dimensional tesseract in time, the geometric equivalent, of Malevich's 2-dimensional square. In *Interstellar* and a number of other 'irreality' films, in mutated accordance with Malevich's desert 'where nothing is real except feeling' (Malevich 2012: 118), undying love for a wife or child is the clew that retains for a suddenly granular and vertiginously fluid world a final rationale. The differences between 1913 and 2014 suggest that we may seek out a history of subjectivity through a history of imaginary media from Malevich to Nolan: a history that takes us from modernism's alternate history of mystical engagements to the *mysterium* of the digital.

Jeffrey Sconce (2000) suggests that spirits learned the art of table-tapping only after the adoption of Morse code telegraphy. In alliance with the phonograph, telegraphy ensured that they could communicate in any living room or hall. As the phonograph allowed the voices of the dead to persist beyond their time, telegraphy and later radio ensured that they were no longer bound in space. Even so, Verne's *Voyage to the Centre of the Earth* (and its 1968 film adaptation) and the novels of the great mediaevalist CS Lewis (and their 21st century film adaptations) still preserved the ancient faith in the passageway anchored in place. The portable gateway only really became a possibility with the advent of telecommunications, and really takes off in the era of mass computing. This may help explain why William Gibson's cyberspace is introduced in the opening line of *Neuromancer* (1984) as the colour of

'television tuned to a dead channel' – television, the ground metaphor for electronic communication, tuned to the channel of the dead. The continuity between the oldest of narratives, the Epic of Gilgamesh, and the most recent of science fiction (the haunting and portals of Corey's *Expanse* novels starting with *Leviathan Wakes* [2011] and their current TV adaptation), is undone by the end of place as the absolute of transport between worlds. Displacement of the portal, its divorce from the tightly specified locations of myth, accelerates and intensifies between telegraph and smartphone, leaving even the domestic hearth with its memories of *lares et penates* behind.

*

Networks are other worlds. Like the posthumous world of the ancestors, networks permeate our world. Though Christianity taught that death is the 'bourne from which no traveller returns', it never wholly abandoned the resurrection of the body or the intercession of the saints. The dead have always been able to visit the land of the living. The reverse journey has always been more difficult: only the dying pass that way. Network subjectivity, like Lewis's *Wood Between The Worlds*, allows us to pass easily from this world to others that shadow it. No dangerous voyage, no blood sacrifice, no dying. The threshold is everywhere and nowhere. It is easy to forget which side of it we are on. We – by which I mean those of us who pass between a physically networked existence and an ostensibly dematerialised existence online – no longer know who is haunting whom. We pass between various networks – televisual, professional, sporting, gaming – in both physical and online modes. If we live in a thoroughly networked condition, we also live with a condition of permanent passage through portals from one network to the next. A cellular network call taken on the network rail service via wifi network services is no longer strange, or sacred. The challenge only becomes the greater when we try to answer Escobar's challenge, drawn from his work with indigenous networks of the Columbian Pacific: 'Is it possible to differentiate between dominant and oppositional networks, for example? Or are they all so inextricably tied that even an analytical separation of them becomes useless?' (Escobar 2008: 11). Network topologies make it hard to identify 'sides' in any of the word's many senses; the changing condition of the portal into networks, increasingly a node where networks meet, shares that topological and categorial embarrassment.

Malevich seems not to have been embarrassed that in his pursuit of the non-objective, his black square was itself an object, an *analogon* (Sartre 2004: 57-94). Its function was to negate, but it was not itself non-existent. In this sense it truly functioned as an icon: as the

visible presence of an immaterial, invisible otherness. The condition is more complex with *Interstellar*, where the wormhole is simultaneously 'here' (with spatial coordinates near Saturn) and elsewhere but does not itself exist except as a negation of place. This condition is, like the icon, emblematic of a new constellation of subjectivity at a threshold. Not only is the *limen* no longer anchored in place, geographical or legal; it is no longer a firmly inscribed border marking off the distinction between this side and that. Such borders are no longer simply porous but exceed and confound any cartography of cis and trans, as the Alps that once defined a major military and administrative boundary between Cis-Alpine and Trans-Alpine were not only turned into a thoroughfare by Hannibal but constitute in themselves a timeless persistence between hither and yon. Though we still fear dying, our secular culture fears it not as the transition to a new condition, that of death, but as a terrain between life and nothingness. We no longer respect it as religious or mythic thought did: as a transition whose core characteristic was to alter fundamentally but not to terminate the relation that marks us as living: communication. Now communicative networks are invisible and omnipresent, we experience transition between modes of being as banal. They signal almost nothing more ritual than a slight change of behaviour, and it is hard to say whether the transition triggers the ritual performance of the suitable role, or adopting the role triggers the transition. The first challenge therefore of network subjectivities is the conceptualisation of networks.

We may not be able to supply spatial coordinates but, if networking implies a change of state then, unlike Malevich's escape from the objective, it implies a subjectivity tied to the time of change. When is network subjectivity? If its spatial coordinates are no longer critical to the ritual of transition, and allowing for the abandonment of any semantically significant calendar (now entirely defined by arithmetically interchangeable units of time), yet still convinced phenomenologically that the moment or instant of transition matters and signifies, then when does it occur? When is the 'now' of transition between worlds, which today means of transition between networks?

Reflecting on the postmodern turn against structuralism and functionalism in the 1970s and 1980s, Moishe Postone argued at the brink of the new century that

The challenge for theory today is to adequately grasp contemporary historical dynamics in a way that avoids the unhappy choice between adopting a reified conception of structural dynamics that leaves no room for agency, or attempting to preserve agency by denying the very

existence of such dynamics (Postone 1999: 5).

If the question of network subjectivity is temporal, then it is also historical, concerning the history of both networks and subjectivity. Postone's eve-of-millennium paper analyses two influential texts by Daniel Bell (1973) and Ernest Mandel (1972), published at the moment of the 1973 "oil crisis" today largely counted as the event that ushered in the period – in which we now live – of neoliberalism, globalisation and financialisation. Bell, radically oversimplifying Postone's subtle reading, was ultimately a technological determinist, while Mandel, arguing that 'late capitalism thus constitutes *generalized universal industrialization* for the first time in history (Mandel 1972: 387), asserted financialisation and the increasingly intrusive capitalisation, commodification and industrialisation of more and more domains of life. Like Postone, a more recent attempt at periodisation argues that both approaches have to be assimilated if we are to get a handle on the contemporary. Jason W Moore (2015) argues that science and the state are key instruments in the permeation of capital. Moore's central task is to include nature, not as external victim, but as integral factor in the history of capital accumulation (a theme in Marxism since Rosa Luxemburg [1951]) and its dependence on unpaid work and energy.

The integration of more and more aspects of human activity into capital depends on keeping various 'natural' free sources of work and energy outside the commodity relation and wage labour for as long as possible. This is as true, Moore argues, of women's work as it is of 'natural' resources. But at certain critical points, the extraction of that work begins to require capitalisation: a clear example is that once a forest has been felled, the land farmed, and the soil exhausted, continued exploitation demands capitalisation in the form of machinery and fertilisers. In our time, the commodification of child-care and cookery corresponds to a transition from unpaid domestic labour to women's entry into the labour force. Nature is definable as what was available for free: timber, soil, reproduction. As reserves are exhausted, capital must either capitalise these resources, or find new ones – the fantasy that powers exodus from an exhausted Earth in *Interstellar*. As geographical frontiers become fewer and more extreme (polar oil extraction for example), the turn is towards another form of nature: human nature, and in particular – here my argument extends and departs from Moore's – human creativity. Contemporary capital is marked as a historical period by its expropriation, unpaid, of human creativity in the form of network subjectivity. The first form this takes is that of derivatives in the finance market, exploiting data about present and future buying and selling as a source of wealth. The second exploits the inventiveness of social media, online

gaming, video sharing, microblogging and all the other unpaid creations of online work.

This new mode of accumulation by dispossession (Harvey 2004) is premised on massive quantities of data, but also on its exceptionally granular form. The mass of online data is comprised not of subjects (individuals) but of behaviours. The individual subject is no longer of interest to advanced capital, save as an aggregate of behaviours. The attack on Cartesian subjectivity so central to 1970s post-structuralists thus arrives at its ironic destination: but the self has not been dissolved but distributed. In the first instance, the entire value of this distributed subjectivity rests on its real-time activities. Capital chases the new, both in order to commodify it, and because it is only in the present that labour acts, not only producing its end-products but also the labour-value from which capital extracts its profit. At the same time, the accumulation of data from the past becomes tradable in the present because it is held to predict the future. Nolan's *Interstellar* tesseract, that allows direct mining of the past and future in an eternal present for which time is unpaid raw material, is not a fantastical economy but expresses a historic present no longer capable of production, only of expropriation. This accumulation is only of value in relation to living behaviours, in the same way that the 'dead labour' of machinery is only valuable when employed by living labour. Thus online behaviours are productive once in the living present and instantly in their accumulation as a reserve, knowledge of which is a proprietary good monopolised by the platform enterprises that exploit it. This unpaid and to that extent uncommodified work thus operates simultaneously as living and fixed capital, as real-time action and as accumulation of the past in the form of property.

What is shocking in this is the absence of potential: of the capacity of work and creativity specifically, to produce the future, definable as the unforeseen. As the second mode of network subjectivity, financialisation, ties behaviours to the market in debt. Debt is accrued by borrowing from the future. As consumer discipline, debt locks the debtor into perpetual labour, in order to earn the wages she has already spent in the present. Debt depends on spending future earnings in the present, foreshortening the possibility of any future whatsoever (the same principle that governs ecological exhaustion: the environmental is for capital always future, so has no place in present accounts, and therefore has no existence). The temporality of subjectivity clarifies the nature of contemporary networks, simultaneously technological, economic and political, so that we can understand what they may signify culturally – and what cultural interventions might be able to undertake in this nexus.

The argument is that the mass psyche created and stored in network databases and architectures (which are themselves repositories of behaviours) is the critical mass for exploitable creativity, required because other forms of creative labour (athletes, cultural performers, celebrity engineers) have become prohibitively expensive. Unlike artisan production, mass production of cultural innovation no longer requires research and development laboratories, partly because universities can be forced by policy levers to perform the same tasks far more cheaply, and partly because mass consumption has become mass presumption. In both instances, interacting with online environments has become exploitable and unpaid work. The portal to the latest great reserve of unexploited labour is human data productivity. The tragedy is that this was itself the vision of some of the greatest prophets of technological liberation, like them Teilhard de Chardin's noosphere (1961: 278). What should have been the greatest outcome of capital's communications revolutions, the global village (McLuhan and Powers 1989), has instead become the biopolitical equivalent of an oilfield, a vat of undifferentiable behaviours.

The 1973 oil crisis was resolved by creating new instruments for debt, which in turn created the 2007/8 debt crisis. The debt crisis, which has outlived the 'critical' term by a decade at time of writing, seeks a new resolution in the form of information. There are no more environmental freebies, and the expedient of spending future money is, if not foreclosed, increasingly expensive, like all resources near the end of the period of savage dispossession. In its place is a modification of the consumerism fostered by Keynesianism as the resolution of the 1929 crisis. The new form of the consumer is the prosumer, as critical today as the emergence of the disciplined consumer of Fordist production was in the rescue of capital from the Wall Street Crash. Not just completing choices but generating new commercialisable forms, free creative labour – in the form of behaviours – is the new resource frontier. As the human biomass has as its last biopolitical function to supply globalisable information on its genetics to fuel the freeloading pharmaceutical and genomics industries, so creativity is a massive generator of information, which by definition must include a healthy dose of the unexpected, which an increasingly universalised and normalised commodification militates against. The work and energy that Moore emphasises is now supplemented by information. The environment, whose resources can no longer be seized without capital- and labour-intensive operating costs, becomes, in Jennifer Gabrys' (2016) term, programmable. Information is the latest and perhaps the last get-out-of-jail-free card. However, mining

everything for its data belongs to the monopoly tendency of capital accumulation. Capital intends to resolve the 2007 debt crisis through primitive accumulation of information capital, but here is no reason to believe that information is an infinite resource. But the information that is being turned into commodities includes information which is not even in development but merely conceptual possibility, the case with pre-emptive patents (for example on molecules that have not yet been synthesised and whose possible applications are unknown). The self-destructive logic of information capital is visible in its commitment to investing in fantasies.

The form under which information is accumulated and exploited is data. Data are not qualities of the worlds but statements about it. Their value to capital is not based on their accuracy but on their form. Human behaviour seen phenomenologically or anthropologically is constituted by relationships between actors and between actors and their worlds. Data abstracts from these mediations only points of action which can be described in unit form: a gesture such as a swipe on a dating app; a calculation such as a bid on an auction site; an imagined action such as might be included in a posting to a story-telling forum. Its only determination is that the unit of data is well-formed, that it can be isolated, accumulated and counted. However, from the point of view of the subjects engaged in these behaviours, they can be categorised according to their kind. Certain data propose themselves as truths. In the permanent state of argument established by internet culture's filter bubbles and echo chambers, the defining quality of these truths is that they are not lies, which are the data of opposing factions in politics or any other field of combat. Other data either propose themselves as fictions or are ascribed fictional status, while others still are clearly fantasies. One way of establishing the relation between these terms is the Greimas semiotic square.

[FIG 1: truths0.png]

Truth defines itself in opposition to various modes of untruth. If it is to pass, a lie must have the same formal properties as a statement of truth. In this instance the criterion of truth is not its reference to an indisputable state of affairs beyond the statement itself: for present purposes truth is the quality of a statement that allows it to be considered true in the discourse it forms part of. Similarly, lies are discursive forms. They have the same shape as a true statement. The difference is that the speaker does not believe the statement (and therefore opens the possibility for the hearer to disbelieve). Lies are distinguished from

fictions, which are also disbelieved, because fictions do not have the shape of discursive truth. Instead, in the same way that intellectual property law allows patents on concepts that are only developmental possibilities, they operate in the subjunctive mood, expressing a possible state of affairs that doesn't exist but is feasible or desirable. The same is true of fantasies, which similarly express non-existent states of affairs, with the distinguishing feature that they are believed, at least for the duration of the fantasy (a dream or a gambler's belief in his luck, for example). This gives us a neat set of categories to qualify relations between subjects and statements.

[FIG 2: truths1.png]

In the terrain in the centre of the square, the link between fantasy and lie is that of the self-deluded: who either believe they have the right to lie, or actually believe the lie. The former might be the case of a narcissistic politician granted apparently unlimited power. The link between truth and fiction, on the other hand, is the liberal axis of faith in a future which however remains unrealised. This might be the case of an idealistic politician who recognises that his power to effect major change is impossible but nonetheless makes it his mission. If the fantasies-lies axis is pathological, it is in part because of its categorial confusion. The truths-fictions axis is utopian, in the liberal sense of the word. Between them these two axes describe, in part, the terrain between the cardinal points of the square as the field of ideology.

By treating both humans and their environments equally as data sources, the network mode of production invokes a potentially utopian network subjectivity; but at the same time its dialectic is unevenly impacted by a pathological engagement in, for example, neo-populism, placing the transitional moment of entry into network subjectivity firmly in the terrain of ideology, typically torn between the wishful and the paranoid. This is the terrain of high productivity mined by contemporary network capital.

The risk is that human nature as resource may be as rapidly exhausted as previous free natures, potentially through processes of normalisation associated with the commodity cycle, effected through the increasing standardisation of algorithms and software, leading to lower productivity and higher unit costs to extract the same value in innovation, and/or lower quality innovations requiring more capitalisation to marketise. This risk is itself future, and to that extent risks becoming itself mere ideology. What must be marked however is that the

historical arrival of contemporary network subjectivity is not an act of production or even of exploitation but one of appropriation. The old human/natural divide casts only the palest shadow of its former clarity. The *human has indeed become environmental*. The commons of human nature, the wellsprings of shared creativity and cultural making, are in process of being enclosed. The result is no healthier than the late mediaeval enclosures and the early capitalist colonies before.

The significance of the threshold in this nexus arises from the internal contradictions in the temporality and multiplicity of network subjectivity, which destabilises the four-square stability of the Greimas diagram by introducing time as an essential component (in this also having to confront the end of consciousness as the solid form of the 'I' which no longer provides a solution in the age of distributed behaviours). Sociologically, the subject-in-nature has been so profoundly alienated that it seeks an infinite freedom in the network, which is incapable of supplying it except as a multiplication of network 'worlds'. Only the experience of transition into a new world provides that instant of self-identity which however is betrayed by the quality of the transition: that it is an instant rather than a moment. Nonetheless the repetition provides the subject with a sense of its own dissatisfaction. This is no longer the incompleteness of the subject outlined by Lacan and Deleuze. Rather it is the dissatisfaction of an already dissolved subjectivity that nonetheless finds itself neither reunited with its primal environment (womb, mother's arms, nature as all-embracing union of bodily and world) or permitted possession of its own behaviours, already algorithmically isolated from it as data. At the threshold of (another) network subjectivity arises the intuition that the lack is fundamentally social: not my possession of things, capacities or knowledge but my possession by them. This is the satisfaction that network capital cannot assuage and that therefore becomes a profound, existential demand of the distributed subject.

Every point in a network is its centre. At present, the data-generating subject feels itself being exploited from all points of the compass, rather than nurtured and embraced. This is the source of the felt demand to perform accordingly: to play being entertaining, happy and successful online. Where today the pressure to inauthenticity generates on the one hand profit for online capital and mental illness for its proletariat, in a trajectory towards exhaustion, the same contradictions begin to indicate the contrary: the possibility of a post-individualist dissolution in the noosphere. In itself this position risks the status of mere ideology, unless it is clear that what is at stake in network subjectivity is no longer the truth

or falsehood of the data subject, but instead the subjunctive mode of existence which the very move to information capital has made central to human experience. In place of being subjected to technology and alienated nature, including the alienation of the commons of human nature in its enclosure in network capital's rush to appropriation, the mass subject of the network is in process of releasing itself from nostalgia for a lost, and never satisfactory, Self; instead, as Toussaint L'Ouverture rejected Africa in favour of re-appropriating the logic of Enlightenment for the Haitian revolution, so we must seize the condition of massification that is our inheritance as the basis for a new sociality beyond the gross expropriation. The difference between this proposal and oceanic oneness with the world of both primal fantasy and neoliberalism's market model is the proliferation of inauthentic pseudo-selves, a tactic of proliferating subjunctive actions and statements whose very inauthenticity undercuts the possibility of there being, within the regime of commodification, self-identical particulate behaviours. Already 'farming' (click farms, goldfarmers) upset the ethos of the network. At least as a preliminary method for realising the lost potential dimension, and therefore a future as it fails to exist in either the semiotic square cartography or the insistent actuality of real-time enclosures, it has the virtue of discomfort. That discomfort arises in particular from the discursive construction of an 'I' as unit of reward. The fact that this 'I' has not yet earned the right to say 'we' drives its profound unhappiness and therefore its demand for more, for better, and most radically of all for happiness. The challenge of the present moment is to create the conditions for a 'we' that embraces all that has been enclosed, the environment, dead labour and human nature, in a shared trajectory towards a 'we' that cracks the structures of property in all its senses.

REFERENCES

- Bell, Daniel (1973). *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. New York: Basic Books.
- Cubitt, Sean (2014). 'Source Code: Eco-criticism and Subjectivity' in Amy Herzog, John Richardson and Carol Vernallis (eds), *The Oxford Handbook of Sound and Image in Digital Media*. Oxford: Oxford University Press. 482-500.
- De Chardin, Pierre Teilhard (1961). *The Phenomenon of Man*. Translated by Bernard Wall. New York: Harper Torchbooks.
- Escobar, Arturo (2008). *Territories of Difference: Place, Movement, Life, Redes*. Durham NC: Duke University Press.
- Gabrys, Jennifer (2016). *Program Earth: Environmental Sensing Technology and the Making of*

a Computational Planet. Minneapolis: University of Minnesota Press.

Gibson, William (1984). *Neuromancer*. New York: Ace.

Corey, James SA (2011). *Leviathan Wakes*. New York: Orbit.

Harvey, David (2004). 'The 'New' Imperialism: Accumulation by Dispossession'. *Socialist Register* 40: 63-87.

Luxemburg, Rosa (1951). *The Accumulation of Capital*. Translated by Agnes Schwarzschild. London: Routledge.

Malevich, Kasimir (2012). 'Suprematism'. Robert L. Herbert (ed). *Modern Artists on Modern Art*. Second edition. New York: Dover. 116-124.

Mandel, Ernest (1972). *Late Capitalism*. London: Verso.

McLuhan, Marshall and Bruce R Powers (1989). *The Global Village: Transformations in World Life and Media in the 21st Century*. Oxford: Oxford University Press.

Postone, Moishe (1999). 'Contemporary Historical Transformations: Beyond Postindustrial Theory and Neo-Marxism'. *Current Perspectives in Social Theory*, Volume 19, 3-53.

Moore, Jason W (2015). *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. London: Verso.

Sartre, Jean-Paul (2004). *The Imaginary: A Phenomenological Psychology of the Imagination*. Translated by Jonathan Webber. Introduction by Arlette Elkäim-Sartre and Jonathan Webber. London: Routledge.

Sconce, Jeffrey (2000). *Haunted Media: Electronic Presence from Telegraphy to Television*. Durham NC: Duke University Press.