A conceptual map for the study of value

An initial mapping of concepts for the project 'Human, non-human and environmental value systems: an impossible frontier?'

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Abstract. In lieu of an annotated bibliography, we have compiled a conceptual map for the project 'Human, non-human and environmental value systems: an impossible frontier?' The map itself is a visualisation of the relationship between the variety of ideas and concepts being deployed by the various researchers working on subthemes within this overarching research programme on value. The map is intended to highlight the spaces of overlap, connection and cross-fertilisation between concepts we are using in our respective case studies, while also respectfully maintaining potential points of distance and/or difference between them. The map is preceded by a glossary of concepts, in which each concept appearing on the map is briefly explained in relation to the study of value and a list of further readings on the concept provided. We are currently using the map to establish how far concepts existing in one epistemology or paradigm can travel and have utility in another. It is also a means to communicate across paradigms and ontologies in order to explore how far differences in researchers' standpoints on how to define and study value exist as creative frontiers of theory, or as insurmountably independent positions.

Keywords: conceptual map, theories of value, social value, environmental value

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[1] When citing from Sections 1 and 3 of this working paper please cite the Section title and author/s. When citing from Section 2, the Glossary of terms and concepts, please cite the individual entry title and author/s.

[2] *Contribution statement*: Aurora Fredriksen worked on incorporating all the individual entries and generating the conceptual map (Figure 2). Sarah Bracking additionally edited the work. Sarah Bracking and Aurora Fredriksen co-authored chapters 1 and 3. Chapter 2 is in various combinations of authorship, attributed individually as noted in the table of contents.

1. Introduction

Sarah Bracking and Aurora Fredriksen

At the Leverhulme Centre for the Study of Value, we are collectively and individually researching the ways in which value is being created, assessed, assigned and understood in a variety of contexts within the social development, conservation and environmental domains. Under the umbrella research programme, "Human, non-human and environmental value systems: an impossible frontier?" (Leverhulme Trust award no. RP2012-V-041), we began by pursuing five separate case studies in development, conservation and environment policy, which has since grown to fourteen separate enquiries and work packages (LCSV, 2013; Bracking et al., 2014). Centrally we are studying valuation processes which attribute a value and price to carbon emissions, and biodiversity offsets in varied contexts, as well as to land and water in case studies in Africa. We are also studying how valuation processes within specific policy responses affect the harm or care of people. We thus have work packages in climate change governance (and the valuation system emerging for climate finance within the Green Climate Fund) in social development (and the valuation of human life in the context of people living with HIV in Zimbabwe), in humanitarian responses, in international development (the calculation of 'value for money' in the contexts of private sector development and in international development funding decisions), and in the creation of new values from 'biodiversity' through the application of new biodiversity offsetting policies in the UK. In these case studies we are variously exploring the production of value through new markets and prices (i.e. emerging land and water markets in Africa), the associated quantification of values, legitimacy and care through the creation of markets aimed at providing environmental and social goods (i.e. carbon markets, biodiversity offsetting), and the interplay of ethical and moral framings of quantified values (such as in the valuation of human life and calculation of value for money in aid decisions).

In most of our case studies, we are seeking to understand how valuation technologies are designed, and the ways in which actors fix calculative devices and technologies so as to condition future outcomes. By studying how valuation processes proceed empirically we aim to understand the deficiencies and possibilities of contemporary valuation practices in political, social and environmental terms. There is a focus here on the production of 'value' through the creation of new 'valued entities' that can be accounted for, costed and also circulated in monetised and financialised forms, such as within a market in which they have a price. In the first working paper in this series (Bracking et al., 2014), we described our research protocol as the common framework with which LCSV researchers approach the empirical study of valuation processes, identifying calculative devices, calculative technologies, institutional assemblages and discursive framings, all part of the

process of producing new 'value entities'. We were inspired in this by the concept of a socio-technical arrangement developed by Callon and others (Callon, 2007; Çalişkan and Callon, 2009), as detailed in the glossary that follows.

To ensure that the research develops beyond empiricism, however, we also seek to map theoretically the *why* of valuation, that is, what causes valuation to be done in a particular way and with what effects on whom. This requires research on the context within which these socio-technical arrangements are themselves formed, in terms of power, political economy, race, inequality and social behaviour – considerations largely missing from earlier literature by economists and economic sociologists. In short, although signifying an extensive body of work, we have found that we are in need of a wide lexicon of concepts due to this need to work out why valuation is happening in the way that the empirical data is tending to suggest, which is to create commodities with prices in a whole range of frontiers where objects and subjects were previously unpriced (although not necessarily unvalued). To explain this requires that we understand a bigger value system, that of global capitalism, in relation to, and as providing the conditioning context for, our discrete sites of valuation. Thus we are studying processes by which value is determined across a range of social, conservation and environmental contexts, placing the empirical knowledge we generate in relation to wider theories of global capitalism, in order to eventually propose ways of doing value calculations and judgements better, that are less harmful for humans and the non-human world. Because the project has an ultimate goal to improve care for the objects and subjects we study, we need to engage with how economic resources circulate, how power relations order outcomes, how ideology, black boxes and firewalls order the appearance of power and material wealth, and the possibilities for change that can be deduced from understanding this wider cultural and political economy of modern markets and capitalism.

By way of a first step in organising our collective research efforts, and in lieu of an annotated bibliography, with this working paper we present an initial conceptual map of our study of value. The arrangement of terms and concepts in this map (Section 3, Figure 2) is not an attempt to give a full delineation of all the social theoretical approaches to the study of value, but rather to provide an early mapping of the variety of ideas and concepts we have initially identified as most relevant for our various case studies. Similarly, the glossary entries (Section 2) are not meant as exhaustive or definitive accounts of the concepts they describe but as overviews of concepts from the map as they are being understood and used in the context of our collective and/or individual studies of value. As such, the map and glossary together represent an initial positioning for our collective and individual approaches to the study of value in such a way as to highlight the spaces of overlap, connection and cross-fertilisation between our respective cases, while also respectfully maintaining potential points of distance and/or difference between them.

The paper proceeds as follows: Section 2 comprises a glossary of the terms and/or concepts that we have chosen as most apposite to theorise value in a multidisciplinary way, in a highly complex financialised era of transborder networks and assemblages. The glossary entries are arranged in alphabetical order and provide overviews of each concept. Each glossary entry is followed by a list of related glossary entries and further readings and is attributed to its particular author or authors. While not all members of the project agree precisely on the definition or use of each concept (such that the specific entry author's name should be used in citation), these are terms on which we have the most agreement, and where outstanding differences have been noted, and are being carried forward into future work.

Section 3 then presents our 'conceptual map' as a visualisation of the clustering and connections between concepts related to our study of value, which includes all the entries in the glossary represented by their interconnections. This is accompanied by a brief explanation of the origins of the map in relations to our research and the methods used for compiling it.

2. Glossary of terms and concepts

Actor-Network Theory (ANT)

Actor-Network Theory (ANT) names a particular post-structural, anti-essentialist approach to social scientific inquiry originating in the field of Science and Technology Studies (STS) in the 1980s (see, especially, Callon and Latour 1981; Callon 1986; Latour 1987; Law 1986). Influenced in part by Deleuze and Guattari's work on assemblages and rhizomes (e.g.,,1987), ANT would later became most associated with the work of Latour (e.g.,, 1987, 1988, 1993, 2005), and specifically came to present a programme of research that does away with *a priori* assumptions about what things are like or how they relate to one another, instead insisting on following actors themselves as they enter into relationally networked associations with one another. Critically, the 'actors' in ANT are defined most widely to include humans as well as non-human entities (e.g., artefacts, non-human organisms, texts, technologies and so on), being "*any thing* that does modify a state of affairs by making a difference" and so can be classed as "*participants* in the course of action" (Latour 2005: 71, emphasis original). Intentionality, of humans or things, is not a prerequisite for action in ANT's conceptualisation of agency. To emphasise this inclusive stance towards who or what might participate in the course of action, and avoid implications about intentionality, the term 'actant' is often used in ANT works in place of 'actor'.

Along with this rejection of the divide between human and non-human, ANT rejects all essentialist divisions and dualities, many of which have long served as the starting points of social theory – nature/culture, material/social, micro/macro, agency/structure and so on. Moreover, ANT also rejects the theoretical impulse to locate in advance of empirical research the location and nature of power. Critically, it is not that ANT does not allow that any such divisions, dualities or power asymmetries exist, but that, instead, it holds that these are the *achievements* or *effects* of particular socio-material relational networks that require specific work to establish and stabilise and as such are not (cannot be) inevitable, invariant nor in any way pre-given in the order of things (Law 1999: 3).

By following actors/actants and tracing the associations and arrangements they make with each other, ANT seeks to identify how it is that particular relational networks are made to hold together, stabilise, and replicate themselves over time and across space. Notably, the name 'actor-network theory' was not originally attached to this approach, which in its earlier iterations was more commonly associated with a terminology of enrolment, translation (from the French, '*traduction*'), and transformation, all of which focus attention on *practices in action rather than settled states*. Enrolment highlights the work of forging associations between heterogeneous actors – actors/actants are enrolled into relational networks, often intentionally through the work of other actors in the network.

Translation, meanwhile, names the process or work of making things that are different appear to be equivalents (Law 1999), for example when units of carbon are used to create apparent equivalences between sites of industrial emission of CO_2 and sites of carbon stored in standing forests somewhere else. The associated term 'immutable mobile' refers to the translation of form – for example, into a visual or textual inscription – through which an entity may travel easily over time and across space and thereby extend and stabilise the relational network in which it travels (see Latour 1987). In certain instances complex elements of a relational network may, through translation, appear as a single, simplified entity, even to the point where this appearance obscures underlying complexities. When this process matures, complexity, even over politics and distributional outcomes, becomes no longer subject to controversy or questioning, at which point such entities become what is referred to in ANT as a 'black box' (see entry for 'Black box').

Thus, early iterations of ANT – before it was called ANT – were concerned primarily with tracing the practices of enrolment, translation and transformation through which relational networks were established, made coherent, stabilised and replicated; they aimed at opening up spatial and relational possibilities beyond the un-thought Euclideanism dominating much of social theory at the time. However, as John Law writes, once 'actor-network' (translated from the French '*acteur reseau*') came into common use (around the mid-1990s),

> The term took on a life of its own. And other vocabularies also associated with the approach—'enrolment' or 'traduction' or 'translation' got displaced. For, like some kind of monster, the term 'actor-network theory' grew and it started, like a theoretical cuckoo, to throw the other terms out of the nest" (1999: 5).

Once turned into a fixed, transposable theory, then, ANT's alternative topological assumptions themselves became centred, imposing their own set of limits on spatial and relational possibilities with all the attendant homogenisation that it had emerged in resistance to (Law 1999). Noting this problem early, Law was concerned that through the twinned acts of naming and fixing, the nuance and intellectual flexibility of the original vocabulary would be lost and the approach would turn into "a specific strategy with an obligatory point of passage" (*ibid.*: 2).

Latour gave a more blunt assessment of the fixed name ANT: "there are four things that do not work with actor-network theory; the word actor, the word network, the word theory and the hyphen!" (1999: 15). As Latour elaborated, the word 'actor' hyphenated with network inevitably brings to mind (and thus cannot help but reinforce) the old agency/structure divide posed by so much traditional social theory and that ANT outright rejects as one of many essentialist dualisms. In addition, the word network – originally used by ANT to designate a non-Euclidean formation resulting from the transformations and translations of heterogeneous associations – has since entered into popular usage to mean something very different: rather than the relationally flexible traces of transformations, 'network' more typically brings to mind a more rigid linking of

points on a Euclidean plane between which information or things may travel *without* transformation as with transnational communications or transport networks. Finally, Latour argues that ANT is not a theory *of* anything, but more accurately an alternate ontology of the social (1999).*

Despite such prominent objections, however, the designation ANT has persisted – though perhaps more often by its critics and casual observers than by those whose work is thus labelled (tellingly, Callon – one of the biggest names associated with ANT – does not use the designation, sticking instead to his original name for the approach 'the sociology of translation' or, in his more recent work on performative economics, the somewhat vague – and therefore open – designation of 'social studies of finance'). And, confirming Law's concerns, once ANT was fixed down as a singular, coherent approach it became an easier target for its critics. Work that highlighted strategic aspects of actor-networks without taking a stance on power relations therein led to critiques that ANT as a whole was managerialist, complicit with existing power relations, and even Machiavellian in implication. Lost in such mechanical readings of ANT was the approach's critical potential. Seeking to break away from this heavy intellectual baggage of the now fixed idea of what ANT was or could be, many of its original proponents and intellectual co-travellers have simply pressed on, generating a further body of loosely cognate thought which is sometimes referred to as 'after-ANT' (see Law and Hassard 1999; see entry for 'After-ANT and non-dualism'). 'After-ANT' is more explicit in its ontological commitments to multiplicity and/or hybridity and tends to draw heavily on the theoretical work of Gilles Deleuze and Félix Guattari (e.g., 1987, see entry for '*Agencement*/assemblage).

* Latour later took the tack of reclaiming the name ANT, noting ironically of his approach to social inquiry that "[a]las, the historical name is 'actor-network theory', a name so awkward, so confusing, so meaningless that is deserves to be kept" (2005: 9) and proceeding in *Reassembling the Social* (2005) to reclaim, clarify, and thus attempt to rehabilitate, ANT. The effort in that book, however, is much advanced from the earlier iterations of ANT from the 1980s and -90s, and is thus often grouped together with work referred to as 'after-ANT' (see entry for 'After-ANT').

See entries for 'After-ANT and non-dualism', 'Agencement/assemblage', 'Black box', 'Calculation and qualculation', 'Device', 'Economization', 'Marketization', 'Overflows/counterperformativity', 'Perfomativity/performance/enactment', 'Pragmatism', 'Socio-technical agencement', 'Valuation'

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(Entry: A Fredriksen and S Sullivan)

After-ANT and non-dualism

The loosely grouped body of work sometimes referred to as 'After-ANT' builds from ANT's original rejection of pregiven dualisms and 'asymmetries' and shares its attention to the empirically traceable and its original openness to alternate spatial and relational possibilities (see entry for 'Actor-network theory (ANT)'). In particular, after-ANT generally builds from what Law (1999) identifies as the two critical 'stories' of ANT: First, the story of *relational materiality*, that is the semiotic insight that all "entities achieve their form as a consequence of the relations in which they are located" coupled with an attention to the role of the material in these relations (Law 1999: 4). Second, the story of *performativity*, that is the ongoing work of 'performing' entities through relational materialities, and through which entities sometimes achieve durability (*ibid.*; see entry for 'Performativity/ performation/ enactment').

At the same time, as the name 'after-ANT' suggests, this work seeks to move on from the intellectual fixity of what John Law calls the "have theory, will travel" (1999: 8) version of ANT, where actors are shown to be either enrolled or not, connections as forged or not, and one is either inside or else outside the 'actor-network' (Mol 2002). Rather than attending to the stabilising of relationships in an actor-network, then, after-ANT work has tended to highlight topological difference and the fluidity of certain associations and arrangements (e.g., de Laet and Mol 2000; Law and Mol 2001; Mol and Law 1994) as well

as the multiplicity and/or hybridity of practice and association (e.g., Mol 2002; Whatmore 2002, respectively).

In highlighting the multiplicity and indeterminacy of socio-material associations and relationships, much after-ANT work draws more directly from the assemblage thinking of Gilles Deleuze and Félix Guattari (1987; see also, Deleuze 2003[1988]; 2004[1968]) – an important intellectual precursor to ANT – than on ANT itself. Given that ANT is not always the most salient influence on what is called after-ANT and that there are a number of cognate approaches whose lineage is notably distinct from ANT (though ANT may have helped to clear the intellectual ground for them), Castree (2003) has proposed the more precise label of 'non-dualist' for this loosely grouped body of work. As Castree explains, non-dualist approaches are not so much united by a common intellectual lineage (e.g., ANT), but by a shared central "concern with *materiality*, shorn of both the traditional Marxian distinctions between the ideal and the real and the neo-Kantianism of post-structuralism" such that "[t]he common denominator here is a focus on being and things that are all seen as material, but possessed of different capacities by virtue of their entanglements with other beings and things" (2003: 207). One might add to this description a shared concern with immanence or becoming (e.g., Deleuze and Guattari, 1987; Massey, 2005) and with multiplicity (Mol, 2002). To give just a few prominent examples of such 'non-dualist' approaches that have distinct intellectual lineages from ANT and yet share certain ontological assumptions with what might be more properly labelled as 'after-ANT', there is Jane Bennett's 'vital materialism' (e.g., Bennett 2005a; 2010); Nigel Thrift's 'non-representational theory' (e.g., Thrift 2008); Donna Harraway's cyborg (e.g., Haraway 1991; 1997) and Tim Ingold's notion of dwelling (e.g., Ingold 2000; 2011).

See entries for 'Actor-network theory (ANT)', 'Agencement/assemblage', 'Animism', 'Commodity enchantment', 'Device', 'Economization', 'Marketization', 'Overflows/ counterperformativity', 'Perfomativity/ performance/ enactment', 'Valuation', 'Vital materialism'

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(Entry: A Fredriksen)

Agencement/assemblage

In social theory, '*agencement*' has commonly been translated into English as 'assemblage', the former being a French word with no English equivalent. This is despite the general consensus that assemblage is, in fact, a poor translation of *agencement*, which connotes something more similar to 'arrangement', 'fitting' or 'fixing' (as in affixing two or more parts together) (Phillips 2006). Further, while assemblage (or indeed arrangement, fitting or fixing) may suggest a separation between that which is assembled (or arranged, fitted or fixed) and some external body or force doing the assembling (or arranging, fitting or fixing), *agencement*, sharing its root with agency, implies a capacity to act through the coming together of things, wherein this coming together of things is "a necessary and prior condition for any action to occur" (Braun 2008: 671; see also Dewsbury 2011). Thus, *agencement* emphasises that agencies and arrangements are not separate. As Michel Callon writes, "*agencements* are arrangements endowed with the capacity of acting in different ways depending on their configuration. This means that there is nothing left

outside *agencements*: there is no need for further explanation, because the construction of its meaning is part of an *agencement*" (2007: 320).

The concept of *agencement* and its (mis)translation as assemblage in social sciences originates with the work of Gilles Deleuze and Félix Guattari (indeed it is because an early translation of their work translated '*agencement*' as 'assemblage' that the usage has stuck (Phillip 2006; Anderson and McFarlane 2011)). For Deleuze and Guattari (1987), *agencement*/assemblage denotes a specific relationship between arrangements of heterogeneous elements and statements that can be made about them. A key aspect of Deleuze and Guattari's specific conceptualisation of *agencement*/assemblage is 'tetravalency'. Employing an analogy from chemistry and biology, where 'valency' refers to the combining power of elements or molecules, Deleuze and Guattari explore four ('tetra-') ways in which the heterogeneous elements comprising their version of *agencement*/assemblage combine. As Dewsbury sums it up,

> The tetravalent systemisation works along two distinct axes comprising the four types of valence: first, between the intermingling *machinic assemblage* of bodies, actions and passions (content) and that of a *collective assemblage of enunciation* of acts and statements (expression); and second, between territorial stabilising *lines of articulation* and that of deterritorialising *lines of flight*. (Dewsbury 2011: 150, emphasis original).

Importantly, the interplay between content and expression on the one axis, and deterritorialisation and (re)territorialisation on the other is not meant to imply dichotomies or opposing forces, but rather something altogether more fluid. Lines of articulation involve the coming together of things – bodies, actions, passions (content) as well as expressions – an encounter through which a certain (metaphorical, material, or otherwise) territory is staked out, or *territorialised*. Lines of flight, on the other hand, suggest a dispersion of content and/or expressions through which the territory formerly staked out through their encounter is also dissolved, or *deterritorialised*. While the latter is sometimes taken as the more important movement for the dynamism, multiplicity and ephemerality of assemblages, this is not necessarily so; just as lines of flight and deterritorialisation allow for openness and possibility, the coming together of content and expression in a new territorialisation allow for "potential transformative worldings" (Dewsbury 2011: 150). Deleuze and Guattari offer the metaphor of nomadism as such a potentially transformative territorialisation in its unbounded and non-predictable trajectories through space which also act as "vectors of deterritorialisation" (1987: 421), thus illuminating the twinned nature of the two movements. The opposing tendencies in Deleuze and Guattari's conceptualisation of assemblage, then, are not territorialisation and deterritorialisation, which are twinned and fluid, but are instead nomadic (smooth) and sedentary (striated) space: sedentary space "is striated, by walls, enclosures, and roads between enclosures, while nomad space is smooth, marked only by 'traits' that are effaced and displaced in the trajectory" (1987: 420). Thus it is striation, and not territorialisation as such, that "is both limited and limiting… it is limited in its parts, which are assigned constant directions, are oriented in relation to one another, divisible by boundaries, and

can interlink; what is limiting … is this aggregate in relation to the smooth spaces it 'contains,' whose growth it slows or prevents, and which it restricts or places outside" (*ibid.* 422).

Though the common forbearer of assemblage thinking in the social sciences (if sometimes a few theoretical 'generations' removed), the very specific philosophical conceptualisation of *agencement*/assemblage by Deleuze and Guattari rarely appears in its entirety in social theory. Instead, the concept *agencement*/assemblage in social theory has tended to be more loosely conceptualised, more generally understood to connote an assemblage or arrangement of things "which are simultaneously human and nonhuman, social and technical, textual and material—from which action springs" (MacKenzie et al., 2007: 14-5). Critically, however, in both Deleuze and Guattari's original formulation and in other usages, the concept *agencement*/assemblage is "used to emphasize emergence, multiplicity and indeterminacy" (Anderson and McFarlane 2011: 124). Following from this observation, Anderson and McFarlane (2011) identify four interrelated processes that they suggest are typical of most uses of 'assemblage' in social theory: First, the concept emphasises gathering, coherence and dispersion, as in the work of *assembling* and *reassembling* diffuse, tangled, contingent sociomaterial practices (see, for example, Li 2007; *cf.* Massey 2005); second, it connotes groups, collectives and disputed and/or distributed agencies (see, for example, Bennett 2005b; 2010); third, it emphasises emergence rather than the resultant formations, setting it apart from similar concepts like apparatus/*dispositif* (although, *cf.* Legg 2011; see entry for 'Apparatus/*dispositif*'); and forth, the concept of assemblage emphasises "fragility and provisionality; the gaps, fissures and fractures that accompany processes of gathering and dispersing" (Anderson and McFarlane 2011: 125).

See also, entries for 'Actor-Network Theory (ANT)', 'After-ANT and non-dualism', 'Apparatus/ dispositif', 'Device', 'Overflows/counterperformativity', 'Performativity/ performation/ enactment', 'Scalability/ non-scalability', 'Socio-technical agencement', 'Valuation', 'Vital materialism'

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(Entry: A Fredriksen and S Sullivan)

Animism

The Nobel Laureate and molecular biologist Jacques Monod wrote in the 1970s that science necessarily 'subverts everyone of the mythical ontogenies upon which the animist tradition... has based morality'. He asserts further that this 'subversion' has worked precisely so as to establish 'the objectivity principle' as the value that defines 'objective knowledge itself' (Monod 1972: 160-4, quoted in Midgley 2011(2004): 4). Apparently universal scientific certainties thus are created through the value of objectivity, and this in turn is associated with the universalising value abstractions of neoclassical and market economics. As such, it is relevant for a research project interested in value pluralism to consider what may have been 'subverted' so as to create these particular yet seemingly transcendental 'value universals' (Sullivan in press).

'Animism' describes an amodern assumption of the alive sentience of 'other-than-human natures' as animate and relational subjects, rather than inanimate and atomised objects. Used derogatively in the late 1800s by European theorists of religion to describe the worldview of indigenous peoples encountered globally through colonial adventure, it became synonymous with the 'irrationality' of 'mistaken primitives', apparently positioned prior to the attainment of Enlightenment rationality (Tylor 1913(1871); also Gilmore 1919). Anthropological research in more recent decades instead has embraced and positioned animism as a coherent rationality deriving from arguably different ontological assumptions about the 'nature of nature', that also guide a different array of appropriate ways of knowing and acting in relation to these assumptions (see, for example, Bird-David 1992, 1999; Harvey 2005; Lewis 2008, 2008/9).

In connection with the entries on ANT and *agencement*/assemblage above, 'animist' ways of knowing also resist the culture/nature dualism and accompanying assumptions of either environmental determinism (over cultural activity), or of a passive Nature as background to cultural dominion (Descola and Pálsson 1996; Hornborg 2006). Key instead are a plethora of possibilities in which humans are envisaged as sharing ontological social space with the beings that 'western human ontology' (cf. Glynos 2012)

frames as 'nonhuman'. This is also entwined with a sense that what exists is brought into being through ongoing participation in relationship by all entities (Ingold 2006). Agency, while differentiated, thus is present everywhere, such that all activity is simultaneously imbued with a moral, if frequently ambiguous, dimension (Ingold 2000).

As Ingold puts it, animism is not a matter of giving or imagining agency into something which in reality has none, "but of restoring them to the generative fluxes of the world of materials in which they came into being and continue to subsist" (2011: 29). For Ingold understanding animism involves moving away from simply viewing and assessing 'animist beliefs' through the lens of Enlightenment rationality, and instead taking it seriously as a different orientation to the world; on this it is worth quoting him at length:

> First, we are dealing here not with a way of believing about the world, but with a condition of being in it. This could be described as a condition of being alive to the world, characterised by a heightened sensitivity and responsiveness, in perception and action, to an environment that is always in flux, never the same from one moment to the next. Animacy, then, is not a property of persons imaginatively projected onto the things with which they perceive themselves to be surrounded. Rather – and this is my second point – it is the dynamic, transformative potential of the entire field of relations within which beings of all kinds, more or less person-like, continually and reciprocally bring one another into existence. *The animacy of the lifeworld, in short, is not the result of an infusion of spirit into substance, or of agency into materiality, but is rather ontologically prior to their differentiation.* (2011: 67-8, emphasis added)

Here Ingold's work resonates with that of Jane Bennett (e.g., 2010; see entry for 'Vital materialism') in its recognition of the ongoing vitality of material things as they constantly act and interact with persons, nonhuman lives, and other things. It also resonates with the work of Doreen Massey (e.g.,, 2005) in its vision of a world of ongoing flux and ever changing encounters and relationships between persons, non-human lifeforms and things, where things are never fixed but always in process of becoming.

Animism thus proposes an uncynical ontology that experiences all dimensions of existence to embody and enact agency in inter-relationship, whilst acknowledged in many contexts to also be animated and alive with connective and even 'sacred' meaning. Arguably, such different culturenature ontologies have actualised lively embodied and 'immanent ecologies' that favour the maintenance of biological and other diversities (Sullivan 2010). As such, some authors suggest that at this critical and possible ecocidal Anthropocenic moment they warrant re-engagement, 're-animation' (Ingold 2006: 19) and 're-countenancing' (Sullivan in press). 'Animism' is both 'a knowledge construct of the West' (Garuba 2012: 7), and a universalising term acknowledging a 'primacy of relationality' (cf. Bird-David 1999; Ingold 2006) that encourages a set of affirmative practices that 'resist objectification' by privileging an expansionary intersubjectivity (Franke 2012: 4, 7). These dimensions are stimulating (re)uptake by postmodern 'eco-pagans' of the industrial west, for whom animism is a contemporary eco-ethical 'concern

with knowing how to behave appropriately towards persons, not all of whom are human' (Harvey 2005: xi; also Plows 1998; Letcher 2003; Harris 2008).

See also entries for 'After-ANT and non-dualism', 'Agencement/ assmeblage', 'Biopolitics', 'Commodity enchantment', 'Commodity fetishism', 'Vital materialism'

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<div align="right">(Entry: S Sullivan and A Fredriksen)</div>

Antipolitics

Antipolitics refers to "suppressing potential spaces of contestation" and "placing limits on the possibilities for debate and confrontation" through the reframing of political issues and questions as matters of technique (Barry, 2002, page 270; see also Barry, 2001; Ferguson 1994). Antipolitical effects are often achieved through expert practices of measurement and calculation. The role of measurement and calculation on delimiting political space has a long intellectual pedigree in the social sciences and identifying the politically stifling effects of the advance of rational calculation in modernity was among the founding concerns of European sociology (see, especially, Weber 1930[1905]; Simmel 1950[1903]). The concept of antipolitics draws on this tradition and is also a clear conceptual relative of Foucault's concept of governmentality (e.g., 1977; 2003; see entry for 'Governmentality'). More contemporary work has focused on identifying the antipolitical effects generated through processes of technicalisation, wherein a focus on finding technical solutions to problems of governance overtakes or obscures debate or negotiation over the definition of problems or what might constitute appropriate responses in the first place (e.g., Barry 2002; Davis, et al. 2012; Ferguson 1994; Barry et al., 1996). Such antipolitical tendencies, for example, have been identified by a number of authors looking at conservation and development interventions, which are "often subject to 'depoliticising tendencies,' focusing predominantly on associated techniques of rationalising and rendering technical what is in fact political" rather than questions of whether the intervention itself is appropriate or not (Büscher 2013: 20; see also, e.g., Büscher 2010; Li 2007).

See entries for 'Appearances, the economy of', 'Blackbox', 'Calculation and Qualculation', 'Commodity fetishism', 'Governmentality', 'Firewall', 'Spectacle', 'Socio-technical agencement *(STA)', 'World making'*

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(Entry: A Fredriksen)

Apparatus/*dispositif*

Foucault uses the term 'apparatus' (*dispositif*) to denote

> a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – in short, the said as much as the unsaid. Such are the elements of the apparatus. The apparatus itself is the system of relations that can be established between these elements. (1980b: 194)

Although it resembles 'assemblage' (*agencement*) in its focus on heterogeneous elements, the concept of apparatus/*dispositif* departs from that of assemblage in that it is generally used to denote something more or less settled, ordered, and usually associated with the application of power over subjects.

Emphasising the centrality of power, Georgio Agamben, in his reflection on and extension from Foucault, defines an apparatus as "literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviours, opinions, or discourses of living beings" (2009a: 14). More so than Foucault's original formulation, Agamben's concept of apparatus is totalising in its power to entrap people in its fixed ways (see Legg 2011: 130).

Moving away from such totalising visions, and recognising the mutual intellectual influence of Deleuze and Foucault, Legg suggests that Foucault's 'apparatus' be thought of as more or less a type of assemblage that tends towards territorialisation, striation,

scaling and governing (2011: 131). In this way, rather than set apart from or in opposition to assemblage, an apparatus might instead be conceptualised as existing in a dialectical relationship with more ephemeral assemblages tending towards deterritorialisation, lines of flights and descaling (*ibid.*). In this proposition Legg is careful to clarify his use of 'dialectic' to emphasise "relational ontologies, heterogeneity, relational causality, constant change and space-time relationships" rather than the classical Marxist dialectic of thesis and antithesis moving towards synthesis. That is, the dialectic between assemblage and apparatus suggested by Legg is one that, in keeping with a central tenant of assemblage thinking, is "necessarily against (even temporary) dialectical resolution of opposing forces" (Legg 2011, 129). Indeed, in disposing of the binary ontologies of historical materialism that re-centre 'opposing forces' in the capital/labour, bourgeoisie/proletariat relationships, assemblage and apparatus "stress that each state contains the traces, remnants, seeds and potential for the alternate state, and need not exist in hostile opposition" (*ibid.*).

See entries for 'Agencement/assemblage', 'Biopolitics', 'Device', 'Governmentality', 'Scalability/ non-scalability'

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(Entry: A Fredriksen)

Appearances, the economy of

Anna Tsing (2005) writes about the 'global economy of appearances' wherein "dramatic performance has become an essential prerequisite of economic performance" (2005: 57). As Tsing (2000: 118) elaborates,

> In speculative enterprises, profit must be imagined before it can be extracted; the possibility of economic performance must be conjured like a spirit to draw an audience of potential investors. The more spectacular the conjuring, the more possible an investment frenzy. Drama itself can be worth summoning forth. Nor are companies alone in the conjuring business in these times. In order to attract companies, countries, regions, and towns must dramatize their potential as places for investment. Dramatic performance is the prerequisite of their economic performance.

In addition to 'conjuring' profits or profitability, the appearance of scale – especially the local and the global – and the relationship between scales are also performed as part of this spectacular conjuring (see entry for 'Scalability/nonscalability').

This economy of appearances both obscures reality (e.g.,, actually existing arrangements and relationships between people and other people, environments and non-human natures) *and* partially remakes realities in its own image (*cf.* entries for 'Performativity/ performation/ enactment' and 'Spectacle').

See entries for 'Antipolitics', 'Commodity Fetishism', 'Financialisation', 'Performativity/ performation/ enactment', 'Scalability/nonscalability', 'Spectacle', 'Value', 'World-making'

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(Entry: A Fredriksen)

Biopolitics

As the word suggests, the concept of biopolitics refers to power over life. In his genealogical accounts of biopower, Foucault (e.g., 1977, 1980a) contrasts the biopower of modern states with the power over life wielded by the sovereign of earlier forms of rule: whereas the latter exercised the power to make die or let live, the former busies itself with the power to make live and let die. Biopower, Foucault explains, operates "not at the level of political theory, but rather at the level of the mechanisms, techniques, and technologies of power" (2003: 241). These techniques of power are directed on the one hand at individual bodies through logics of discipline and on the other at populations as a whole through logics of regulation. In this account, disciplinary power over individual bodies preceded regulatory power over populations, the former occurring first within institutions such as schools, military barracks, hospitals and prisons where it could proceed without disrupting the power of the sovereign, whereas the latter proceeded after, in the late 18th century, requiring significant centralisation and bureaucratisation at the level of the state (Foucault 1980b). Though operating on separate registers – the individual body and the population – both disciplinary power and regulatory power are posited, at least in Foucault's relatively earlier formulations, as operating towards a singular logic of *normalisation* (see Collier 2009).

In relatively later formulations (e.g., 2007[1978]; 2008[1979]), Foucault replaces the discussion of 'regulatory power' with security. While some have taken this as a simple extension of earlier work, Collier argues that this move, along with other subtle adjustments and additions to the argument, signals a shift away from the epochal implications of a single logic of normalisation and instead "suggests a configurational principle that determines how heterogeneous elements – techniques, institutional arrangements, material forms and other technologies of power – are taken up and recombined" (2009: 89). In this reading of Foucault, the concept of biopower becomes less totalising in later works, turning away from establishing a single logic of normalisation and instead asking "how existing techniques and technologies of power are re-deployed and recombined in diverse assemblies of biopolitical government" (Collier 2009: 79; *cf.* entry for 'Apparatus/*dispositif*'). At the same time, Foucault's move towards biopolitics/biopower can be seen as linked with an understanding of the subsuming impetus and biopolitical control of the smooth flows of capital associated with globalised finance and legitimised by 'the truth regime of the market' that makes entities and actions intelligible and governable through insertion into financialised logics (*cf.* discussion in Nealon, 2008, and Sullivan 2013: 209-2012).

Another significant rendering of biopolitics comes from Georgio Agamben (2009b), who, in contrast (and response) to Foucault, theorises a continuity of biopolitics from early sovereign power to the present. Building in part from Arendt's (1958) insights on the political consequences of accounting for specific biographical lives versus human life in general, Agamben's conception of biopolitics rests on the binary distinction between *zoë*, or 'bare life' as mere physical/biological existence, and *bios*, or life as elaborated human existence. The latter is conferred by the state through the status of citizen to those who it governs, while the former lacks or is stripped of that status. Agamben's distinction between elaborated and bare life resonates with (and reflects the influence of) Arendt's observation that:

> The concept of human rights, based upon the assumed existence of a human being as such, broke down at the very moment when those who professed to believe in it were for the first time confronted with people who had lost all other qualities and specific relationships—except that they were human. … If a human being loses his political status, he should, according to the implications of the inborn and inalienable rights of man, come under exactly the situation for which the declarations of such general rights provided. Actually, the opposite is the case. It seems that a man who is nothing but a man has lost the very qualities which makes it possible for other people to treat him as a fellow-man… The paradox involved in the loss of human rights is that such a loss coincides the instant a person becomes a human in general. (1973: 336).

Notably, whereas Foucault's interest in biopolitics is focused on processes of normalisation and, more generally, the *normal* conduct of governance, Agamben's focus is on states of exception, drawing from Carl Schmitt's (e.g., 1976; 2001) definition of the sovereign as one who can declare a state of exception and suspend rights to citizens through removal of citizenship. Significantly in terms of our research on human life

valuation, work on biopolitics, inspired from Foucault also led Achille Mbembe (2003) to write extensively on necropolitics, and the means by which biopolitics is enacted through state sovereignty.

*See entries for 'Aparatus/*dispositif*', 'Governmentality'*

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(Entry: A Fredriksen and S Sullivan)

Black Box

The term 'black box' is used in actor-network theory and related approaches to indicate any set of relations – as in a large or small device, apparatus or assemblage – that have become stable and accepted to the point where they are no longer subject to questioning. In Callon and Latour's formulation, "A black box contains that which no longer needs to

be reconsidered, those things whose contents have become a matter of indifference. The more elements one can place in black boxes – modes of thoughts, habits, forces and objects - the broader the construction one can raise" (1981: 285). At the same time, black boxes are never fully closed, elements leak out, uncertainties creep in. A central tenant of ANT is that social scientists should take advantage of these openings, always seeking to look inside black boxes to see how it is that things have come to be ordered and stabilised rather than simply taking a current arrangement or state of affairs for granted. For example, Donald MacKenzie shows how the original ratios at which the United Nation's Framework Convention on Climate Change (UNFCCC) calculated the global warming effects of 26 other gases to carbon, in order to make gases commensurable in the making of a market for certified emissions reductions (CERs) under its Clean Development Mechanism, came to be placed in a 'black box'. While it was subsequently shown that some of these ratios were derived from dubious, if not flawed environmental science, each ratio now underwrites the value of various mitigation and adaptation projects funded through the CDM, and the carbon trading market that results, such that there is intractable pressure to keep the box shut, whatever the science embedded in it (Mackensie, 2009).

See entries for 'Actor-network theory (ANT)', 'Antipolitics', 'Calculation and qualculation', 'Device', 'Firewall', 'Overflows/ counterperformativity', 'Socio-technical agencement'

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(Entry: A Fredriksen and S Bracking)

Calculation and qualculation

Calculation is often opposed to judgment with the former assumed to be a type of rational accounting and the latter an affective estimation. Many scholars have traditionally viewed calculation as quantitative and derived from positivist approaches, while judgement has been viewed as intrinsically normative, qualitative and derived from interpretative approaches. However, Callon and Muniesa (e.g.,, 2003; 2005) have sought

to overcome this sharp distinction, adopting instead a three part definition of calculation wherein entities are first detached and arranged, ordered and displayed in a single space, then subjected to manipulation and transformation and, finally, a result extracted. This broadened definition suggests an interplay and continuum between quantitative (numeric) calculations and qualitative judgements: "Depending on the concrete achievement of each calculative step, calculation can either meet the requirements of algorithmic formulation or be closer to intuition or judgement" (Callon and Muniesa 2005: 1232). The qual/quant debates and invention of Q-squared research attempted a similar objective of bringing qualitative and quantitative approaches together in mixed methods research and research designs that would overcome the binary classification (Kanbur, 2004; Shaffer, 2013).

Useful for our research on valuation is work by Franck Cochoy (2002, 2008) which seeks to capture the intermediate situations where quantitative calculation and qualitative judgment are co-implicated in decision making or evaluative practices, a practice he termed 'qualculation'. The advantage of the term 'qualculation' is that it "collapses the distinction between the quantitative and the qualitative" (Callon and Law 2005: 719), thus indicating the expanded definition of calculation proposed by Callon and Muniesa without the potential confusion with more conventional understandings of calculation (that is, as necessarily quantitative and numerical).

Both Callon and Muniesa's definition of calculation and Cochoy's 'qualculation' emphasise the role of material devices, from screens that display important pricing information to traders on trading room floors to shopping carts that allow volumetric estimates to shoppers in grocery stores, without falling into what they see as the reductive trap of handing over all agency to the material device (*cf*. Carruthers and Espeland 1991; see entry for 'Device'). Instead, calculative agency is distributed between human users and non-human materials (and formulas, discourses, beliefs and so on, see entry for 'Socio-technical *agencement* (STA)). In focusing on the role of material devices, this expanded definition of calculation opens up the possibility of a diversity of calculative forms as well as pointing to the political dimensions of calculability. With regards to the latter, Callon and Law explain that "[t]he power of a qualculation depends on the number of entities that can be added to a list, to the number of relations between those entities, and the quality of the tools for classifying, manipulating, and ranking them" (2005: 720). In other words, if calculative devices are diverse, some will be more intricate, advanced and costly than others, giving those with the means to possess them greater power than those with more limited or basic calculative devices at their disposal. To give just one example, consider the massive calculative power behind the marketing department of a mass retail brand compared to that of the average individual consumer being targeted, particularly when individual consumers are voluntarily inputting data through their use of store 'loyalty cards'.

Ultimately, as Callon and Law (2005) suggest, the important distinction is not between quantitative calculations and qualitative judgements, whose boundaries are thoroughly blurred, but between calculation (or 'qualculation') and noncalculation (or 'non-qualculation'). Or, more precisely, the distinction to be made is between arrangements that make calculation/qualculation possible and the arrangements that make it impossible. The latter "refuse the provisional capacity to enumerate, list, display, relate, transform, rank, and sum" either by withdrawing the resources needed for calculation/qualculation or by allowing these resources to proliferate to the point where their interaction undermines the ability of each to make meaningful calculation/ qualculation (Callon and Law 2005: 731).

See also entries for 'Legitimation', 'Marketization', 'Orders of worth', 'Socio-technical agencement', 'Valuation', 'Value'

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(Entry: A Fredriksen and S Bracking)

Commodity enchantment

While agreeing that the concept of commodity fetishism is useful for demystifying the unjust social relationships embodied in consumer products, Jane Bennett argues that "the theme of commodity fetishism is not capacious enough to account for our fascination with commercial goods" (2005: 113). Thinking through the lens of commodity fetishism, she explains, entails the modernist distinction between the 'pagan' world of enlivened objects and the enlightened analysis of the rational, debunking critical theorist. This

"onto-story in which agency is concentrated in humans" fails to attend to the liveliness of matter, that is, its ability to affect, and produce effects in, the world (*ibid*.: 118, see also Bennett 2010). In Bennett's alternate ontology, then, the animation of artefacts "might have all of the following incompatible effects—pressing people to submit to the call to consume, distracting them from attending to unjust social relations embodied in the product, drawing them to the wonders of material existence, and opening them to unlikely ecological connections and political alliances" (2005: 126-7).

This expanded conceptualisation of our relationship with commodities resists ascribing capitalism with the totalising power sometimes afforded it by its critics and instead, following from Deleuze and Guattari (1987), looks for "the openings, ambiguities, and lines of flight within systems of power", including systems of commodity exchange and culture, as sources for building resistance and effecting positive change (Bennett 2005:116).

See entries for 'After-ANT and non-dualism', 'Agencement/assemblage', 'Animism', 'Commodity fetishism', 'Vital materialism'

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(Entry: A Fredriksen)

Commodity Fetishism

Commodity fetishism emerges in Marx's writings to clarify 'the relationship between exchange value and use value as it is embodied in the commodity' (Holert 2012:4), whereby the value of an object is seen as residing in the thing itself in a manner that obscures and thus alienates the labour (and nonhuman life) from which it is made (Graeber 2001: 65). The systemic screening-out of materiality and labour relations from commodity production and consumption under capitalist commercialism and accumulation creates a logic that endows commodities with something akin to a soul, wherein they appear to assume human powers and properties and thus to act with agency and intentionality to satisfy wants. Marx derived his theory of commodity fetishism from interpretations of the fetishistic abstractions of objects amongst non-capitalist societies at the colonial frontier, stating that "fantasy arising from desire deceives the fetish-worshipper into believing that an 'inanimate object' will give up its natural character in order to comply with his desires" (Marx 1975: 189 in Nancy 2001:4). He extended this to

the abstracted commodities and currencies produced under capitalist relations of production, including money – hence "the magic of money" (in Nancy 2001: 5). A corresponding attribution of agency to capital, capitalism and markets has led Michael Taussig (1987) to speak of a 'capitalist animism' (see discussion in Holert 2012; see also, Jones 2013).

A 'post-capitalist animism' (cf. Holert 2012) instead might note that a modern removal of subjectivity and intentionality from nonhuman entities was itself an historically embedded discursive move that facilitated the creation of a scientifically knowable, exploitable and tradable world of objects (see entry on 'Animism'). Marx's understanding of 'primitive' fetishistic practices and 'the brutalising worship of nature' (Marx 1962(1853)) derive from this context. Whilst foregrounding the 'truths' that are screened out by the activities of commodities and capitalisms, it is worth noting, then, that the concept of 'commodity fetishism' is steeped in particular understandings of the 'fetish' as a component of 'primitive' and animist thought, and is associated with a broader modern dismissal of amodern animist ontologies as 'savage' and irrational (Sullivan, in press; Bennett 2005). It is worth also noting that the apparently exterior 'matters of fact' and commodity objects of the modern are themselves fetishised 'factishes', as Latour (2010) puts it - brought into being through human work but charged with acting from a distance as exteriorised facts animated technically and socially with authoritative, objective power. We may never have been modern, because we are all fetishists, endowing the materialities we create and with which we are embedded, the powers to shape our actions, choices and affects (see Sullivan, in press).

See entries for 'Animism', 'Appearances, global economy of', 'Commodity Enchantment', 'Labour Theory of Value', 'Spectacle', 'Value', 'World-making'

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(Entry: S Sullivan)

Counterperformativity

See entry for 'Overflows/counterperformativity'

Device

Device appears in many ANT and after-ANT works, where it is used following Callon and Latour's original work on actor network theory, that is as a calculative technology, or a '*dispositifs* de calcul' (Callon and Muniesa, 2003) or, more broadly, any particular socio-technical object of study. A device can be small or large, and more latterly defined through a set of associations between things, a sort of "rough and ready" type of assemblage/*agencement* (Law and Rupert 2013; see entry for '*Agencement*/assemblage'). Device is also sometimes the English translation given to the French word *dispositif* in the works of Foucault (see entry for 'Apparatus/*dispositif*').

Seeking a definition broad enough to account for assemblage theory and Foucauldian uses of 'device' as well as other potential approaches like Bourdieusian fields (e.g., Bourdieu 1993; see entry for 'Valuation'), Law and Rupert define devices as 'patterned teleological arrangements' – teleological not in the sense of moving toward a definite endpoint or having final causes, but more simply in that "they *do* things… *devices assemble and arrange the world in specific social and material patterns*", although not always in an explicit, expected or predictable manner (Law and Rupert 2013: 230, emphasis original; see also Marres 2012). Devices are patterned arrangements in that they are materially heterogeneous arrangements of things, though not necessarily (indeed, rarely) consistent or internally coherent – again, in this sense they are similar to assemblages. The boundary of a device is not usually definite, but is a matter of analytic framing such that the same device may be given different edges depending on whether it is being viewed through the lens of a Deleuzian assemblage, a Foucauldian *dispositif* or a Bourdieusian field, not to mention the particular concerns and interests of an individual researcher (*ibid.*). The original research design of this programme follows a more limited tradition, where a calculative device is defined as a distinct way of calculating, within a socially articulated calculative technology, embedded in an assemblage, due to the utility of this usage in terms of our empirical research on valuation (Bracking et. al, 2014; see Çalışkan, K. and M. Callon. 2010; Muniesa et al., 2007).

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(Entry: A Fredriksen and S Bracking)

Economization

Michel Callon and Koray Çalişkan proposed the term 'economization' "to denote the processes that constitute the behaviours, organisations, institutions and, more generally, the objects in a particular society which are tentatively and often controversially qualified, by scholars and/or lay people, as 'economic'" (Çalişkan and Callon 2009: 370; see also 2010; Muniesa, 2010). That is, they propose to examine how particular institutions,

objects, actions, devices, descriptions and so on come to be assembled and qualified as 'economic'. By using an active construction (i.e., '-ization'), the intent is to imply the quality of being economic is something that is achieved – or performed (see entry for 'Perfomativity/performance/enactment') – through actions and arrangements (*agencements*), rather than something pre-existing, already 'out there' to be revealed or acted upon. This reflected and contributed to the pragmatic turn in economics and economic sociology more generally, whereby researchers desist from a form of enquiry based on identifying 'the economic x', to one of asking how the economic is made, or how the 'economic x' comes into being (Çalişkan and Callon, 2009; Callon, 2007; see also MacKenzie, 2006; Mitchell, 2008). Drawing from the work on economization and marketization, other researchers have also applied this epistemological change of stance to study processes of financialisation and neoliberalisation. As Bracking noted in her study of how financialised environmental care is made, "it is less interesting to ask what is the 'financialized x', or even worse the ubiquitous 'neoliberalized x', in favour of empirical studies of how financialized things are made" (Bracking, 2012b: 284). But there arguably remains an epistemological challenge arising from following the pragmatic turn in that "by erasing the boundaries of the 'social x' and 'the economic x' it may become harder to imagine a 'space outside' or 'way beyond' the processes of economization in capitalism" (Bracking, 2012b: 289; see also Muniesa, 2010). In this way, the pragmatic turn to explore economics as fluid and in process, which implies a return of agency, which neoclassical economics has traditionally removed, may be limited in utility if economisation and the STA are viewed as principally apolitical technologies in motion. For this reason the research design allows for an 'outside' to the economisation process, where issues of class and power can still condition change, restored to an ability to transform economisation from an imagined outside (Bracking, et. al. 2014).

See entries for 'Agencement/assemblage', 'Marketization', 'Performativity/ performance/ enactment', 'Pragmatism', 'Socio-technical agencement', 'Valuation'

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<div align="right">(Entry: S Bracking and A Fredriksen)</div>

Enactment

See entry for 'Performativity/performation/enactment'

Financialisation

Financialisation refers, in general, to the increasing growth and spread of financial markets as well as the growing array of complex financial products (Bracking, 2012a, forthcoming). Financialisation can be conceptualised as partially akin to Marx's theory of commodification, wherein things are progressively and seemingly unrelentingly brought into systems of Capitalist exchange as commodities. At the same time, however, financialisation stands in contrast to commodification in that it refers to the trading of abstracted forms of value (in complex derivatives, futures, etc.) in financial markets as opposed to the exchange of products/productive capital in commodity markets (i.e., 'fictitious capital'). This tendency permits capital accumulation to be generated through the movement of interest-bearing capital into new areas of social and economic (re)production, even as other areas of production are stagnating (Bellamy and McChesney 2009; Fine 2010). Diverse commentators agree that key interconnected aspects of this process include deregulation of lending (i.e., money creation) practices; intensification of money creation through computer-assisted parcelling out and exchanges of debt, prevalent since the 1980s through the 'securitisation' and privatisation of mortgage lending (particularly in the USA and the UK); and the repeated bailing out with public sector resources of associated irresponsible lending and investment practices of a finance elite (e.g., Ferguson 2009a; McNally 2011). In October 2008, for example, a staggering £500 billion in liquidity, with £50 billion of it used directly to buy bank shares, was provides by the British government to 'bail-out' the banks (Darling 2008), which divided by the total population of the UK at that time[1] is equivalent to around £8,143 for every man, woman and child in the country.

This "increasing financialisation of everyday life throughout the globe" (Nealon 2008: 6) now also extends into discourses of environmental conservation and sustainability (*cf.* Sullivan 2012, 2013), combined in part with the financialisation of risk associated with environmental and atmospheric change (Cooper 2010; Lohmann 2012; Randalls 2010). As Jason Moore (2010: 390) observes, "the penetration of finance into everyday life, and above all into the reproduction of extra-human nature" is a key feature of contemporary capitalism. The process of financialisation occurs through both revisioning and rewriting previously non-financialised domains in terms of banking and financial categories, such that these domains can become entrained with new circuits of monetised exchange and financial instruments and thereby invested materially with financial value (*cf.* Sullivan 2013).

Financialisation has been formulated in abstract theoretical terms as a force or lens for analysing a current historical shift in patterns of capitalist accumulation, for example in Harvey's epochal statement that "Neo-liberalism meant, in short, the financialization of everything and the relocation of the power center of capital accumulation to owners and their financial institutions at the expense of other factions of capital" (2005: 24). This seems to suggest that the classical Marxist view of the circulation of capital, from money capital (M) to capital in production (C), where it acquires surplus value from the exploitation of labour, back to M' (more money), has become more complex with money staying within its own circuit and merely traded in ever more complex and virtual ways. However, this is not to say that financialisation lacks agency, as money is managed by financiers who act as a faction within the capital-owning class, in the boardroom of the 'house of trade', a term coined to describe the market economy of capitalism separated from, and managed by, the controllers of finance (Braudel , 1981; see also Arrighi, 1994). In this respect, Bracking proposes a definition where agency is restored to the term financialisation, by centring the people who 'move' money, and thus exercise power by means of their control of money. She argues that "financialization does not 'just happen', but has agency, and is a technology of power which uses the money form to quantify human and physical contexts; privilege financial parameters in decision-making; and ultimately return decisions over resources in favour of money-holders" (Bracking, 2012b: 274). In this process the quality and scope of democratic decision-making is deteriorated by a political economy characterised by unaccountable financiers, and exercised materially in and through secrecy jurisdictions (Bracking, 2012a).

While this approach is more concerned with the outcome of advancing financialisation on a global scale, others have attended to the historically specific processes and practices that have given rise to global financialisation (see, for example, Sassen 2001, 2008) or on empirical investigation of the rise of financial instruments in the valuation and exchange of previously uncommodified things such as carbon emissions, biodiversity and species (e.g., Sullivan 2012, 2013; Robertson 2011) or the rise of financial products and exchange for things that have long been the subject of vernacular negotiation, such as land titles,

sovereign procurement or political entitlements themselves (Bracking forthcoming). The rise of financial instruments and exchange for that which has not previously been commodified and that which was formerly the subject of vernacular exchange can be conceptualised as 'frontier processes' of financialisation (*ibid.*). Critically, "these frontier processes do not form in isolation from the more generic processes of financialisation occurring in mainstream markets, since it is largely direct regulatory measures imposed by governments for offsetting in older capital markets [and in the infrastructure and energy sectors] which has generated demand for biodiversity, species and sustainability banks, funds and products" (Bracking, 2012b: 11-12).

Drawing on social studies of science, the 'social studies of finance' approach to financialisation focuses on questions of *how* financial markets and financialisation work, how they come to be organised and how they are performative. Donald MacKenzie's work on carbon finance (e.g., MacKenzie 2002, 2006) is exemplary of this approach in its concern with the social, cultural, material and technical infrastructures of financial markets and their performative and counter-performative effects (see entries for 'Performativity/performance/enactment' and 'Overflows/counterperformativity'). This work has obvious affinities with Callon's work on socio-technical *agencements*, sharing its focus on heterogeneous arrangements, hybrid practices and calculative agencies (see Callon 2007; Law 2002; Knorr Cetina and Preda 2005).

A related approach to financialisation comes from the perspective of 'cultural economy', which refers broadly to "a variety of approaches to the analysis of economic and organizational life which exhibit a shared focus on the heterogeneous ways in which objects and persons (firms, markets, consumers) are 'made up' or 'assembled' by the discourses and *dispositifs* of which they are supposedly the cause" (Pryke and Du Gay 2007: 340; see also Du Gay 2004). Rather than drawing on grand theories, cultural economy approaches tend to focus at the level of practice, for example looking at the culture/s of trading room floors or specific material practices rather than at the financial system as a whole or at the macro-level. The cultural economy approach to financialisation thus generally explores the ways in which "financial culture has a specific materiality" (Pryke and Du Gay 2007: 344; see also Law 2002; Law and Hetherington 2000; Latham and Sassen 2005; Sassen 2002), including numerous anthropological works on finance/financialization as culturally specific and material practice (e.g., Miyazaki 2005; Maurer 1999, 2005; Tsing 2000, 2005; Zaloom 2003, 2006).

[1] The UK Office for National Statistics (ONS) estimates the population of the entire UK (including Northern Ireland) at 61.4 million for 2008 (ONS 2009).

See entries for 'Agencement/assemblage', 'Apparatus/dispositif', 'Appearances, the economy of', 'Black box', 'Calculation and qualculation', 'Commodity fetishism', 'Economization', 'Firewall', 'Marketization', 'Overflows/counterperformativity',

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(Entry: S Sullivan, S Bracking and A Fredriksen)

Firewall

The term 'firewall', as developed by Jim Igoe (2012, forthcoming), indicates a metaphorical filter, as in a computer's defense against viruses, malware and so on. Firewalls work to exclude many material things, qualities and relationships in the process of creating abstract commensurable values for circulation at the frontiers between materiality and abstraction. As such they are the flipside of those frontiers of value, which are boundaries that must be transgressed for new kinds of value to be created. Firewalls, conversely, are boundaries that must not be transgressed for new kinds of value to be created. They achieve this by fostering selective forgetting, ignorance ("knowing what not to know" as Taussig (1999) put it), misinformation, and disinformation in knowledge production processes. Finally, firewalls protect capitalist systems from their own contradictions by preventing elements of those contradictions from becoming fully and simultaneously visible.

With regards to value/s, the firewall is "the conceptual point at which many values get made (the edge of the black box) and it is doubtlessly also relevant to a diversity of struggles that accompany and sometimes oppose these processes of valuation" (Igoe 2012: 7). The metaphor of the firewall thus attends not only to the work of filtering out and excluding things but also "the ways in which these materialities are transcended by abstraction and reification and the ways they are visually connected via spectacle" (*ibid.*).

See entries for 'Antipolitics', 'Appearances, the economy of', 'Blackbox', 'Commodity fetishism', 'Financialisation', 'Overflows/ counterperformativity', 'Spectacle', 'Valuation', 'World-making'

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(Entry: J Igoe)

Governmentality

The concept of governmentality can be traced back to 17th century France and the term 'governance', but Foucault pioneered it in modern usage, with its distinct meaning. In *Disciple and Punish* (1977), Foucault describes how the discipline of individual bodies at

the level of institutions – schools, hospitals, prisons, etc. – came to be applied to populations for the purposes of governing. Governmentality is a key concept from this text, further developed by Foucault in his later lectures at the Collège de France (2003, 2007, 2008), referring, as the word suggests, to the mentality of governing (Lemke 2001); that is, to "a political rationality that shapes the 'conditions of possibility' for thinking and acting in a certain way" (Collier 2009: 96). The term has since frequently been used as a lens for analysing neoliberal rationalities and techniques of governance (e.g., Miller and Rose 2008; Rose et al, 2006; Larner 2000).

Collier argues that in Foucault's later lectures at the Collège de France (2007, 2008), governmentality is partially re-formulated in relation to a new focus on redeployments, recombinations and problematisations (Collier 2009: 99) such that, even under one type of governance such as neoliberalism, the rationalities, and techniques of governmentality are expected to vary (see Ferguson, 2009b). In other words, rather than exhibiting a unified or generalisable set of neo-liberal rationalities or techniques of governance, governmentality is expected to exhibit various and changeable forms even under similar regimes of knowledge/power, following a "dynamic process through which existing elements, such as techniques, schemas of analysis, and material forms, are taken up and redeployed, and through which new combinations of elements are shaped" (Collier 2009: 99).

See entries for 'Antipolitics', 'Apparatus/dispositif', 'Biopolitics'

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(Entry: A Fredriksen and S Sullivan)

Labour Theory of Value

Classical political economists developed the labour theory of value against earlier positions, such as that of the physiocrats who saw value as the surplus arising from natural fertility of the land; and of mercantilists, who considered it as the result of hoarding of this natural surplus. It was Adam Smith who first had the intuition that value is a product of human labour, seen as a conscious and purposeful human activity (Smith 2012[1776]). But for Smith, since in society there are two other elements – capital and land – which claim their share on labour's products, prices cannot be calculated out of this hypothetical value produced by labour. Thus, while labour is the source of value, it does not command full control over its own product, and the theory of value can be of little help to explain how economy and society function. On Smith's cue, Ricardo understood value as the product of human labour; more precisely, as the material embodiment of individual labour time in each given commodity, taken in isolation (Ricardo 2004[1821]). For Ricardo, the price of a single commodity derived from the individual labour time needed to produce it.

Marx increased the level of abstraction as he observed that value does not arise spontaneously from individual labour time, but is the embodiment of socially necessary average labour time, which is the average labour time needed to produce the commodity in a given productive sector. This makes Marx's theory of value a 'thorough social one' (Murray 2000), as value is a consequence of the prevailing social relations of production, from which socially necessary labour time is derived. Moreover, socially necessary labour time is a historically specific element and varies in each sector of production, although the price mechanism acts as a levelling agent. It is ultimately determined by labour productivity and thus by the continuous technological innovation induced by competition and mediated by price.

Fine sees Marx as rejecting two principles underlying classical political economy's labour theory of value: physicalism and instrumentalism (Fine 2012). Physicalism leads to seeing value as embodied labour, while instrumentalism considers labour theory as a tool to determine price formation. For Marx, value is to be analysed "in its social and historical preconditions and forms of existence in capitalist commodity society" (Fine 2012: 195).

Value is the form taken by wealth under the capitalist mode of production, primarily as a social form; while the value relation is a social relation which distinguishes capitalism vis-à-vis other, different modes of production and social organisation. The value relation, which is a social relation, appears to the individual "as a relation between things" (Pilling

1972: 283), as capitalism mystifies reality by fetishizing it (see entry for 'Commodity fetishism').

Yet both aspects are debated and there is no consensus on the levels of abstractions in Marx's analysis. The reaction against Ricardian readings of Marx in vogue in the 1970s has created a new consensus on the fact that abstract labour is a specific social form which is historically specific and distinctive of capitalism (Kay 1999) and that see the concept of embodiment as not referring to materiality. Others disagree and consider abstract labour as "a generic material form—a 'productive expenditure of human brains, muscles, nerves, hands etc.' (Marx, 1976: 134)" (Kicillof and Starosta 2007: 307).

Another dimension of this theory is the value form – the social aspect of a commodity producing society. Capitalist production brings into commensurability diverse, incommensurable types of concrete labours which happen in different times and places. Commensurability is superimposed on incommensurable, qualitatively different concrete labours through their normalisation, synchronisation and homogenisation under the social form of abstract labour. As capitalist production is generalised, concrete labours and use values gradually become increasingly dominated by abstract labour (Fine and Saad-Filho 2004: 103), although this process may never be complete. Thus value, as embodiment of units of socially necessary labour time, is established through commensuration of labour among the different branches of production. Socialised labour is made commensurable as in each productive sector the socially necessary labour time is different but universal equivalents, and the price mechanism, equalise its value among the sectors. Money becomes the measure of everything, as commensuration happens through the price mechanism; this common measure is applied to different concrete labours and to different branches of production.

Establishing that labour is the only foundational source of potential value (which might not be actualised due to the realisation problem) implies that "exchange does not create value" (Fine and Saad-Filho 2004: 37). Instead, value emerges in capitalist commodity production through the extraction of surplus value in the capital-labour relation (Fine 2012). This entails that inequality and poverty are not primarily caused by unequal exchange. Although uneven and combined development of capitalism creates also unequal exchange, it is important to stress that exploitation does not take place in trade, but in the productive process, because surplus value is extracted from labour. The law of value has the tendency of imposing itself on an ever-increasing geographical scale and over all the domains of reality. It operates as a homogenising factor over these specificities and differences while at the same time creating the conditions for counter-tendencies, such as labour struggle.

Saad-Filho contended that a focus on value realisation through market mechanisms of prices is misplaced, as Marx's theory of value does not deal primarily with price formation, which is a technical process, but instead with capitalist social relations in production (Saad-Filho 2002), because this is what is specific to capitalist production and

distinguishes it from previous, different historical modes of production. In contrast, neoclassical economists see production as a technical process and economy as dealing with the prime issue of allocation of scarce resources, with inequality arising from distribution of value in trade. In neoclassical economics, value is the mechanism underlying price formation – a sort of 'gravity centre' (Weeks 2010) around which the fluctuations of prices, given by demand and supply dynamics, gravitate. On the contrary, critical political economy assigns primacy to production over distribution (Kincaid 2007) and sees value as a social relation based on exploitation. Value is thus a relation among persons, epitomised by the wage-capital relation, which appears as a relation among things, that is, appearing as inherent in commodities, as a natural characteristic of things (see entry for 'Commodity fetishism').

The extraction of surplus value in the production process, its circulation in trade, its differential distribution across competing capitals in different sectors and among "industrial, commercial and financial capital and the landowning class" (Saad-Filho 2012) are interconnected processes. Different levels of analysis, such as "theories of price, profit, interest and rent" (*ibid.*) portray the metamorphosis of value across different stages and sectors and should thus not be analytically separated.

An enquiry on value goes beyond simply describing the social forms; it understands them as appearances and looks at the "plenitude of the objective transformative potentialities" (Starosta 2010: 448) which are immanent in these social forms. For historical materialism, value theory is not primarily a tool to understand price formation. The instrumental approach has led to a vast dismissal of value theory, both in contemporary neoclassical economics and in Marxist economics, where the transformation debate ended up dismissing value theory for its inability to explain price formation (Dostaler 1982).

In contrast to this, Harvey underlined the importance of rehabilitating value theory, as it explains the paradox of "how the freedom and transitoriness of living labour as a process is objectified in a fixity of both things and exchange ratios between things" (Harvey 1982: 23). Harvey stressed that the value relation explains the multiple ways in which labour is disciplined by forces which appear, but are not, both natural and necessary. Being historically specific,

> value cannot be defined at the outset of the investigation but it has to be discovered in the course of it. The goal is to find out exactly how value is put upon things, processes, and even human beings, under the social conditions prevailing within a dominantly capitalist mode of production. To proceed otherwise would mean 'to present the science *before* science' (Harvey 1982: 38).

Indeed Marx (1968: 208-9), would confer that "where science comes in is to show *how* the law of value asserts itself", a job which Harvey sees as calling for 'rigorous theorizing' (Harvey 1982: 38).

As the 'continuing value controversy' has been ongoing for over a century (Fine 2012: 199) it is important to restate that for historical materialism value is not a field of enquiry

separated from the rest of critical political economy, nor is it a concept in the sense of a mental generalisation.

The value relation is the relation to be uncovered through the dialectical method of enquiry. The extraction of surplus value and its accumulation on an expanded scale as the organising principle of capitalist society are to be analysed dialectically. If the dialectic method is disregarded and value wrongly operationalised as a generic concept, Marxism is reduced to "some form of 'sociological model building'" (Pilling 1972). On the contrary, the method of historical materialism is "to appropriate the material in detail, to analyse its different forms of development, to trace out their inner connexion. Only after this work is done can the actual movement be adequately described" (Marx: 1978[1873]: 301). Thus historical materialist analysis does not proceed from value as a concept, but rather shows how the law of value asserts itself by proceeding from the study of the commodity, the simple social form under which the product of labour is visible under capitalism (Marx 1989[1881]).

See also entries for 'Commodity fetishism', 'Financialisation', 'Land, property and rent', 'Value'

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(Entry: E Greco)

Land, property and rent

The origins of rent have been investigated by classical political economists such as Ricardo, who maintained that rent emerges as a consequence of the higher natural fertility and productivity of the best quality lands. Ricardo's conception is based on the assumption that these best quality lands produce a surplus which is appropriated by the landlord as rent, while rent is not levied on the worst or least fertile soils. Rent is the result of the differential fertility and productivity of different lands: it is only differential rent. Further to these observations, Ricardo argues that differential rent does not influence the prices of agricultural commodities, such that it also cannot affect the falling rate of profit. Instead, the prices of agricultural commodities depend on "the labour time embodied in the commodities produced on the least fertile cultivated land" (Murray 1977: 102).

Marx's theory of rent is distinctive in that it sees land rent as an economic form of a political fact: class relations to the land (Fine 1979). This is no minor point, as it clarifies that rent does not arise from features of the land itself, but from the political command over social relations which makes property appear as natural and legitimate. Rent is thus primarily the exercise of monopoly on the part of landowners, so in this sense all rent is monopoly rent. Marx further distinguishes between four components of rent: monopoly, absolute, differential I and differential II. In concrete situations, these four components can occur jointly. Absolute rent is the kind of rent levied despite the absence of any clear specific property of the land and thus also on absolutely unproductive lands (Marx's example is desert land). Absolute rent thus represents the purest example of arbitrariness of property and exposes the ideological power of rent – its role of sanctioning tool for the institution of private property. In contrast to absolute rent, monopoly rent is levied

on opposite grounds on lands displaying specific, non-replicable and non-substitutable properties (here Marx's example is Bordeaux wine). When land is mobilised as a means of production, the mechanisms are complicated by the existence of differential rents. Differential rent looks at value formation and competition between capitals within one economic sector – agriculture – and it can be of two types. The first type (DRI) arises from differential productivity of the land, related to physiological fertility and differences in location. Capitals of equal size tend to move onto lands of different quality; assuming that the conditions of production stay equal, value formation will be different on land with differential productivity.

The second type of differential rent (DRII) arises when capitals of different size are applied to land with the same qualities, as it happens for example in processes of agrarian intensification. While in industry the larger than normal capital would get higher returns, in agriculture this is not necessarily so, because rent can appropriate a share. When capital is invested intensively in agriculture it usually faces the obstacles posed by DRII.

Marx concludes that when landed property becomes an obstacle to the access of capital into the agricultural sector, industrialisation of agriculture is slowed down.

The situation changes when the land in question is 'new', in the sense that it has up to then seen no substantial capital investment; yet it has a landlord, levying rent on it. This absolute rent arises when there is competition between different economic sectors using land as a significant means of production and capital flow out of and into agriculture. In fact, absolute rent concerns competition among capitals in different productive sectors, for example, agriculture and industry, or agriculture and the building sector. Absolute rent influences the formation of value and the determination of prices of production. The way prices are formed is thus distorted by rent, which has effects not only on distribution and prices, but also on accumulation. There is debate on the limits and the possible magnitude of this kind of rent, with Marx maintaining that absolute rent can never rise above the difference between the price of production of agricultural commodities and their value. This is because the organic composition of capital – which is the ratio between constant and variable capital – is lower in agriculture than in other sectors of the economy.

To conclude, rent has to be analysed in relation to measures of average capital and average land in value terms and this analysis must take into account the historical and social relations between capital and land in a specific historical setting, since land prices and rent cannot be analysed by derivation, by looking simply at technical relations between capital, land and labour.

The difference between the value of production on different lands – especially of the best quality lands in relation to the worst ones – is important. If the relative difference between the best and the worst land increases, then rent increases, as a consequence of the increase of surplus value produced by agricultural labour. Agricultural labour is

socialised labour, so the socially necessary labour time in agriculture is commensurated to other sectors of production through the price mechanism. Fine has observed that, in order to understand the effects of landed property on the process of accumulation and the quantitative aspects of rent, we need to look at the determination of value, inside each sector of the economy and among different sectors. Value determination is linked to the process of accumulation and land property can "intervene to obstruct or promote these processes and structures of accumulation." (Fine 2013: 10). Rent may rise at the expense of wages or not, as it is caused by an increase in the relative difference between the best and the worst lands.

The basic thrust of Marx's explanation of rent is a fundamental distinction between the naked soil and fixed capital invested on it – such as improvements, machinery and infrastructure. Rent theory is based on the assumption that land is not capital – it is indeed something distinct from capital. Ground rent and the social form associated with it – that is a landed class, a social group living from land rent – can be separate and distinct from capital and the capitalist class, this latter being a social group who thrives on extracting surplus labour, by imposing the discipline of dead labour (embodied in machinery) on living labour. In each specific historical moment, rent can compete with capital or ally with it, be an obstacle to accumulation or, on the contrary, further its operations. It is the task of political economy to understand the underlying material reality behind the form of ground rent – which is apparent also in non-capitalist modes of production, but there performing other functions – to determine its relation to capital.

There is debate on whether rent theory applies to geographical locations where modern private property as a distinct historical and social form is not the dominant form. The institution of modern private property comprehends a recognisable landlord class, which is unproductive and lives solely by rent; the existence of a land market and defined institutions for property rights; the existence of a capitalist class which pays rent to a landlord class; and the dissolution of feudal landlordism, marked by forms of social and political powers of landlords over tenants (Murray 1977). With modern landed property – that is, a property system of individualised land titles, registered in a national cadastre, protected by the national land law – rent represents claims on future agricultural production in the case of agricultural land and implicitly to future land price increases (Harvey 1982). It is this future anticipation which is typical of land markets – and of property markets in general – which makes them particularly amenable to speculation, as the focus on future profits anticipates the use of land as a speculative asset in terms of expected future derivative incomes (Harvey 1982; Haila 1988; Christophers 2010).

The appropriation of rent is appropriation of a part of the surplus value produced by a section of society; this force relation is hidden behind the property title, which gives exclusive powers over a portion of the globe to a distinct group of people; and behind land prices, which are the appearances covering up the fact that land is not a product of human labour. Land markets and private property in land are appearances which cover

this force relation, in itself constituent of class. The buyer on land markets does not perceive the act of buying land as an arbitrary entitlement based on privilege and devoid both of the effort attached to labour and the risk associated with capital investment. Buyers and sellers in land markets fail to perceive the reality of rent as a class relation, concealed as it is behind the appearance of land markets; this is so because capital makes its own laws seem natural, as if proceeding from the eternal and natural laws of nature (see entry for 'Commodity fetishism').

Once this fetishism is acknowledged, the reality of rent remains and it has real effects on producers. Harvey poses it this way:

> The appropriation of rent, in short, entails the exploitation of who, by whom? […] it is 'natural' for producers 'to feel completely at home in the estranged and irrational forms of capital-interest, land-rent, labour-wages, since these are precisely the forms of illusion in which they move about and find their daily occupation'. Individual producers can afford to care only about the profit they make over and above what they pay out on wages, interest, rent and constant capital (Capital vol. 3 pp. 830-835). The rent they pay is real enough, and their response to what indeed may be a fetishistic category has real enough effects which have to be taken into account. Armed with the theory of value, it is easy to strip away the necessary fetishisms that invest daily experience, but matters do not end there. And the theoretical challenge is to define a coherent theory of ground rent within the framework of value theory itself. This is the immediate task at hand. (Harvey 1982: 333).

To face this task in late financialised capitalism, it is important to recognise the increasing role of land as financial asset and the combination of locational rents and temporary monopoly rents such those "cashing on design, climate, amenities, 'cultural capital' and the like" (Swyngedouw 2010: 315).

See entries for 'Appearances, the economy of', 'Commodity fetishism', 'Financialisation', 'Labour Theory of Value', 'Value'

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(Entry: E Greco)

Legitimation

Legitimation is the process by which the relative value or worth of something (a quality, form, process, person, etc.) gains justification, often from a source considered to be authoritative. Michelle Lamont (2012) posits legitimation as a subprocess of valuation alongside categorisation and identifies six dynamics of legitimation in relation to the process of valuation: the contestation and negotiation of value; diffusion; stabilisation; ritualisation; consecration; and institutionalisation.

The question of political legitimacy is famously considered by Max Weber (1978 [1922]), who identified three sources of political legitimacy as traditional, charismatic and rational-bureaucratic, the latter being the form of legitimacy underlying the rule of modern nation states. The legitimacy that rational-calculative action assumes (as in rational-bureaucratic governance) is related to the acceptance of forms of value derived from calculative technologies (see entries for 'Socio-technical *agencement* (STA)') and 'Qualculation'). The question of how or why these forms of action gain legitimacy, however, is better addressed by the work of Pierre Bourdieu's (e.g., 1984 [1979]; 1993) on how judgments of value – for example the relative value of a work of art – gain and reproduce their own legitimacy.

In Bourdieu's analysis of the legitimation of value in different fields he considers how different actors compete to impose their definition of relative value. Critics, experts and other evaluators are central actors in the (re)production of symbolic capital for specific entities in their relevant fields of expertise, however other forms of capital – notably economic capital – will depend on other terms of legitimation. As Lamont elaborates,

> Symbolic fields typically contain, on the one hand, actors whose structure of capital predisposes them to maximize the autonomy of the field and the criteria of evaluation favourable to it, and on the other hand, actors whose structure of capital typically ties them to other fields (political, journalistic, etc.) and to a general audience. (2012: 7)

In the field of literature, for example, high status critics often adopt a disinterested stance on legitimate value, advocating 'art for art's sake' and assuming this as standing in inverse relation to economic value (Bourdieu 1993). Publishers and booksellers, on the other hand, are more likely to assert legitimate value as something conferred by markets.

Boltanski and Thévenot's (e.g.,, 2006[1991]) work on justification offers a competing approach to understanding legitimation wherein the focus is less on competing logics and reproduction and more on the ongoing work of negotiating, (re)constructing and (re)enacting of different 'orders' of value undertaken by individuals in their everyday lives (see entry for 'Justification', 'Orders of worth').

See entries for 'Calculation and qualculation', 'Device', 'Justification', 'Orders of worth', 'Pragmatism', 'Socio-technical agencement', *'Valuation', 'Value'*

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(Entry: A Fredriksen)

Marketization

Marketization is a particular instance of economization associated with the making of markets. While markets are diverse, the general significations, practices and contents associated with them are "a matter of widespread agreement" (Çalişkan and Callon 2010: 3) and thus present those interested in economization with a coherent site for analysis. Çalişkan and Callon define the study of marketization as "the entirety of efforts aimed at describing, analysing and making intelligible the shape, constitution and dynamics of a market socio-technical arrangement" (2010: 3).

In examining marketization, Çali kan and Callon (2010) identify five 'basic issues' or types of framing which they consider crucial to attend to:

1. Pacifying goods:

   > Markets are not possible without generating and reproducing a stark distinction between the 'things' to be valued and the 'agencies' capable of valuing them. Two basic types of entities result: entities with pacified agency that can be transferred as property, and entities that are able to engage in operations of calculation and judgement. The creation of this asymmetrical ontological divide, in which only the latter are considered to have agency in the valuation process, is an essential property of the regular functioning of markets. (Çalişkan and Callon 2010: 5)

2. Marketizing agencies: "In comparison with other possible forms of economization, marketization's key characteristic is that a multiplicity and diversity of actors compete to participate in defining goods and valuing them."(Çalişkan and Callon 2010: 8). The list of actors competing to participate may include firms, trade unions, state services, banks, hedge funds, pension funds, individual consumers and consumer unions and NGOs as well as public- and private-sector research centres that prepare new products and processes, the international monetary or financial institutions, the regulatory or standardisation agencies,

experts, lawyers, economists, think-tanks and so on – there is no standard list, as each case of marketization will be specific. As the authors note, the concept of *agencement* on which marketization depends, "demands that a panoply of entities be flexibly taken into account and described, in detail, whether they are human beings or material and textual elements" (Çalişkan and Callon 2010: 8).

3. Market encounters: "markets involve a series of multiple encounters and overlapping processes of calculations. Contingencies certainly play a part, as do the initiatives taken by agencies and the unpredictable movements of goods which overflow and follow unexpected trajectories. Yet encounters are not produced haphazardly. Like goods and agencies, they are also framed and formatted by a series of devices" (Çalişkan and Callon 2010: 14).

4. Price-setting: The interrelated framing of goods, agencies and encounters all shape the process of marketization, however the analysis "remains incomplete without a theory to approach prices ethnographically. The existence of a market implies that the valuations, and the calculations that produce them, come out in the form of prices... Fixing a price is always the outcome of a struggle between agencies trying to impose their modes for measuring a good's value and qualities" (Çalişkan and Callon 2010: 16; see also Stark 2009; Weber 1978[1922]).

5. Market design and maintenance: This last issue refers to the dynamics of market socio-technical *agencements* (STAs), including perfomativity, fragility, and stabilisation.

See also entries for 'Actor-Network Theory (ANT)', 'After-ANT and non-dualism', 'Agencement/assemblage', 'Calculation and qualculation', 'Economization', 'Financialisation', 'Performativity/ performation/ enactment', 'Overflows/counterperformativity', 'Pragmatism', 'Socio-technical agencement*', 'Valuation'*

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(Entry: A Fredriksen)

Non-dualism

See entry for 'After-ANT'

Orders of Worth

Rather than having a set definition or sole referent (i.e. worth assessed strictly in terms of monetary value), Luc Bolanski and Laurent Thévenot, in association with the larger *Groupe sociologie politique et morale* (see especially Boltanski and Thévenot 2006[1991]), consider how various grammars of worth are deployed and redeployed by individuals and groups as they assess value in everyday life. Alongside the familiar liberal grammar of worth centred on value defined through markets, the authors also identify what they call a *civic* grammar of worth valuing community, as well as grammars of worth centred alternately on *industrial* (technical) rationality, principles of *loyalty*, *inspiration* and *renown* (fame). While representing distinct logics, each of these orders of worth can be at work within various domains – i.e. markets, the public sphere, artistic circles, etc. – at the same time. Accordingly, Boltanski and Thévenot (*ibid.*) show how the definition of worth within each order and, indeed, the interplay of different orders of worth, are sites of uncertainties, tensions and compromises that need to be continually negotiated in order to coordinate action in everyday life (see also Lamont 2012).

See also entries for 'Calculation and qualculation', 'Legitimation', 'Pragmatism', 'Valuation'

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(Entry: A Fredriksen)

Overflows/counterperformativity

Overflows are those things that are framed out of marketization processes, for example, by way of exclusion from calculations of value(s) (see Callon 1998; MacKenzie et al. 2007). Unlike the economic imagination of 'externalities', however, the conception of overflows recognises that the exclusion of certain processes, groups of people, materialities and so on from markets requires ongoing effort. As Hinchliffe et al. write, overflows may be "things that are cut out of the account in the peculiar time and space of the calculation", but at the same time they "may proliferate in other times and spaces

partly as a result of being overlooked or left out of the reckoning" (2007: 276). The proliferation of overflows (for example, the growing force of social movements or the unsustainable growth of environmental harm) can have 'counterperformative' effects, eventually forcing their way back into and potentially unsettling existing markets and calculations of value(s).

The concept of overflows or counter-performativity might usefully be linked with Igoe's (2012, forthcoming) concept of 'firewalls' as the metaphorical filters at the frontiers between materiality and abstraction. As commensurable values are abstracted from diverse materialities for entry into markets (and particularly financial markets), certain material things, qualities and relationships are excluded from the abstract circulating values as if by the work of a firewall. The firewall concept highlights both the ongoing work of filtering and excluding at the edges of markets, as well as the possibility of failure – as when a bit of malware or virus occasionally outsmarts our computer's firewall to infect our files. These moments where things breach the firewall resonate as moments of counter-performativity and thus indicate the possibility of resistance and interference in marketization processes.

See also entries for 'After-ANT and non-dualism', 'Agencement/assemblage', 'Blackbox', 'Calculation and qualculation', 'Economization', 'Financialisation', 'Firewall', 'Marketization', 'Perfomativity/ performation/ enactment', 'Scalability/non-scalability', 'Socio-technical agencement', 'Vital materialism'

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(Entry: A Fredriksen and S Sullivan)

Performativity/ performation/ enactment

The origins of the notion of performativity are in philosophy, but the concept has since taken hold more widely in the social sciences and humanities. It has prominently featured

in cultural and gender studies as in Judith Butler's use of the concept in relation to the performance of gender (e.g.,, 1990, 1997). Others, particularly in the field of science and technology studies, have used the terms to indicate a process of feedback loops at play in scientific representations of the world (e.g.,, Barnes 1983; Hacking 1983; Pickering 1995). This latter usage is less to do with the analogy of 'performing' as in acting a part (as if on stage) and more to do with the analogy of 'performing' in the sense of accomplishing a set task. To distinguish the latter from the former, some theorists (see, especially Mol 2002) have proposed using the term 'enactment' rather than 'performative' as a way of distancing the notion from the idea of a stage performance and emphasising the importance of material relations and arrangements (*agencements*). As Mol points out, the metaphor of performance is here meant to "suggest a reality that is *done* and *enacted* rather than observed. Rather than being seen by a diversity of watching eyes while remaining untouched in the centre, reality is manipulated by means of various tools in the course of a diversity of practices" (1999: 77, emphasis original).

It is this latter usage that informs the use of 'performativity' in relation to social studies of economics and the economy. In this usage, performativity refers specifically to the ability of economic theories, models and technologies to (re)make economic realities in their own image (Fourcade 2011; Callon 1998). As such, economics is not seen as a form of knowledge about The Economy as something already existing 'out there', but is rather a set of devices, practices, and discourses through which things get constituted as economic (Callon 1998; MacKenzie 2003; MacKenzie et al. 2007). That is to say, the discipline of economics does not describe an existing reality, but participates in its making – its *performation*.

Importantly, not just any economic theory, model or technology has the capacity to make economic realities. As Fourcade explains, "the mere availability of certain economic technologies does not guarantee their performative effects for the simple reasons that these technologies may not muster enough institutional and political support or that they may not resonate enough with the cultural claims they are supposed to represent" (2011: 1724-5).

See also entries for 'Agencement/assemblage', 'Actor Network Theory (ANT)', 'After-ANT and non-dualism', 'Appearances, the economy of', 'Calculation and qualculation', 'Financialisation' 'Economization', 'Financialisation', 'Marketization', 'Overflows/ counterperformativity', 'Pragmatism', 'Prescription', 'Qualculation', 'Self-fullfilling prophecy', 'Socio-technical agencement', *'Valuation', 'Value', 'World-making'*

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<div align="right">(Entry: A Fredriksen)</div>

Pragmatism

Pragmatism is an approach to social theory that focuses on the activity, process or practice of a thing, rather than on the thing itself. First coming to prominence in the early 20th century, American pragmatism was positioned by John Dewey (one of its most prominent founding thinkers) as a third way between the then prominent division posed between the real/objective and the ideal/subjective focused on tracing the 'empirical origination' of things (see Dewey 1923, 1939). Indeed, as Muniesa explains, Dewey's intervention resists choosing sides or looking for continuity in such a division, and instead "consists precisely in putting that continuity aside and approaching what happens in a more agnostic, empirical manner – a radical, pragmatist departure from the classical division in fact allows a tracing of the empirical origination of its two terms" (Muniesa 2012: 32). Thus, in regards to the study of value, Dewey rejected an approach rooted in discerning whether value is a quality based either in objective reality or subjective ideas or some combination thereof, and instead argued for attending to the study of *valuation*, the action of assigning value that can be traced empirically (Dewey 1939; see entry for 'Valuation').

In recent years there has been a resurgence of pragmatism, particularly in the renewed calls for attending to the empirical coming from ANT, after-ANT and some assemblage theory approaches to social thought, as well as more broadly in the various approaches to performativity premised on the empirically traceable recursive constitution of things (Overdest 2011).

See also entries for 'Actor Network Theory (ANT)', 'After-ANT and non-dualism', 'Economization', 'Financialization', 'Legitimation', 'Marketization', 'Orders of worth', 'Overflows/ counterperformativity', 'Performativity/ performance/ enactment', 'Valuation', 'Value'

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(Entry: A Fredriksen)

Prescription

Similar to Merton's concept of 'self-fulfilling prophecies' (Merton 1949; see entry for 'Self-fulfilling prophecies'), the concept of prescription is concerned with explaining how economic theory and economic reality are made to conform to one another. Whereas the concept of self-fulfilling prophecies proposes that beliefs are central to this process, prescription focuses on the role played by institutions (for example central and multilateral banks) and the rules and norms imposed by them in shaping economic reality to fit economic theory (Ferraro et al. 2005).

Prescription, according to Callon, may be considered as one way in which performation of the economy is achieved. In prescription performance is repetitive, following established rules, roles and behaviours in familiar situations. This may be contrasted with instances where performance is adaptive to novel situations and/or encounters (Callon 2007).

See also entries for 'Economization', 'Marketization', 'Performativity/ performation/ enactment', 'Self-fulfilling prophecy'

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(Entry: A Fredriksen)

Property

See entry for 'Land, Property and Rent'

Rent

See entry for 'Land, Property and Rent'

Scalability/non-scalability

Scalability refers to the ability of something – an image, a business, a project and so on – to expand without transformation of its elements. Scalable images can be zoomed in or out without changing the nature of the shape, but only the size, of the elements of the picture. In business scalability is about expansion without changing the nature of what the business does. Similarly, in development projects are scalable when they can be expanded without changing the project elements.

Scalability is deeply entangled with the modernist project of progress, including the international development 'modernisation' projects of the 20th century. As a form of expansion without transformation it involves covering up and trying to block all forms of heterogeneity, indeterminacy and transformation, all of which are 'nonscalable' (Tsing 2012). By contrast, the nonscalable can only 'expand' through transformation, that is by changing the elements and adjusting the frame. The transformative relationships of the nonscalable are always indeterminate, "diversity-in-the-making is always part of the mix" (Tsing 2012: 510).

Notably, the nonscalable is not necessarily normatively better than the scalable – Tsing reminds the reader that undesirable relationships like coerced labour and the destruction of unique habitats are nonscalable just as are relationships of love and care for particular ecosystems. However, looking at nonscalable processes and practices, Tsing argues, focuses attention on "historical contingency, unexpected conjuncture, and the ways that contact across difference can produce new agendas" (*ibid.* 510).

See also entries for 'After ANT and non-dualism', 'Agencement/assemblage', 'Apparatus/dispositif', 'Appearances, the economy of', 'Calculation and qualculation', 'Marketization', 'Economization', 'Financialisation', 'Overflows/counterperformativity', 'Performativity/performation/ enactment', 'Vital materialism', 'World-making'

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Self-fulfilling prophecies

The idea of self-fulfilling prophecies, as put forward by Robert K. Merton in the mid-twentieth century (e.g.,, 1949), suggests that economic theory does not have to be true to predict economic behaviour, it simply has to be *believed* to be true in order for actions in the world to conform to it (Callon 2007: 322). If, for example, everyone believes that the stock market is on the verge of crashing, they will rush to sell stock, and as a result the stock market will in fact crash. For Callon and others in the economization/performative economics school, Merton's self-fulfilling prophecy is limited in that it explains success of failure only in terms of beliefs. Events can and do happen independently of, and sometimes in contradiction to, shared beliefs, undermining Merton's idea of self-fulfilling prophecy as a complete explanation for economic activity (see entry for 'Overflows/ counterperformativity').

See also entries for 'Economization', 'Marketization', 'Performativity/ performation/ enactment', 'Prescription', 'World-making'

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Social value and social impact

The concept of social value in governance practices currently lacks a clear, coherent definition although its frequency of use within the UK public sector is rapidly increasing.

For social impact analysts 'social value' can be used to refer to the 'wider non-financial impacts of programmes, organisations and interventions, including the well-being of individuals and communities, social capital and the environment' (Wood and Leighton 2010). It could be argued, however, that this definition refers more to 'social impact' than 'social value'.

Although the two terms are often used interchangeably, an accurate differentiation between 'social impact' and 'social value' is necessary to understand the normative assumptions attached to both. Social impact refers to the social changes or outcomes occurring as a result of an activity or intervention. Within a definition of social value, the

use of the term 'value' suggests a move from a didactic explanation of the changes that have occurred within society through an intervention – the 'impact' – to an ontological assumption about the nature and importance of that change – it's 'value'.

Social value can also be used to refer to the full economic, social and environmental impacts of a given activity or intervention (SROI Network 2009). In this way social value is used as a catch all term for the principles outlined in Elkington's (1997) concept of the triple bottom line of economics. In this understanding social value refers not just to the 'wider non-financial impacts', but to the full or 'blended' impact of a given intervention (*ibid*.).

As outlined in the Social Value Act, 2012, within the UK public sector context 'social value' refers to the use of public expenditure that corresponds to the best possible impact of resources. In this sense 'social value' is used as synonymous with the 'value for money' of resource allocations, where 'value' is measured as the full costs and benefits of the impact of an intervention using a calculative device or technology (see Bracking et al., 2014). In this arena the use of valuation technologies such as Social Return on Investment (SROI) are being employed to attribute financial value to abstract concepts that have until now remained outside of the marketplace. In this area 'social valuation' sits within the 'frontier processes' of financialisation (Bracking, forthcoming).

A more accurate description of social value then, refers to the value, financialised or not, attributed to the full or blended impact of an activity for an individual or group of individuals within a given society. Normative decisions about how the 'value' of an intervention is discovered and how these 'values' are then used to make resource allocation decisions are part of the research being undertaken.

See also entries for 'Biopolotics', 'Calculation and qualculation', 'Economization',
'Financialisation', 'Governmentality', 'Orders of worth', 'Valuation', 'Value'

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(Entry: R Morgan)

Socio-technical *agencement* (STA)

A socio-technical *agencement* (STA) refers to the coming together of heterogeneous elements – including human and non-human, social and technical devices – through which action is made possible. As with *agencement*/assemblages more generally,

> A socio-technical *agencement* includes the statement(s) pointing to it, and it is because the former includes the latter that the *agencement* acts in line with the statement, just as the operating of instructions are part of the device and participate in making it work. Contexts cannot be reduced, as in semiotics, to a pure world of words and interlocutors; they are better conceived as textual and material assemblages. (Callon 2007: 320).

Calculative devices play a central role in the agency springing from STAs and, indeed, unequal access to the former can help to explain relations of domination within and between STAs. As Çali kan and Callon explain in relation to market STAs, "Inequalities derive from the unequal power of calculating agencies that loop back to reinforce themselves. Due to these asymmetries, the most powerful agencies are able to impose their valuations on others and consequently to impact strongly on the distribution of value" (2010: 13).

*See also entries for 'Actor-Network Theory (ANT)', 'After-ANT and non-dualism', 'Agencement/assemblage', 'Apparatus/*dispositif*', 'Calculation and qualculation', 'Device', 'Economisation', 'Financialisation', 'Marketization', 'Overflows/counterperformativity', 'Performativity/ perfomation/ enactment', 'Pragmatism', 'Valuation', 'Value'*

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(Entry: A Fredriksen)

Spectacle

The word 'spectacle' is used by many theorists simply according to the dictionary definition, that is as "A specially prepared or arranged display of a more or less public nature (esp. one on a large scale), forming an impressive or interesting show or entertainment for those viewing it" (Oxford English Dictionary).

This is the meaning, for instance, of spectacle as it appears in Foucault's discussion of the 'spectacle of the scaffold' (1977). Here the event of spectacle (in this case the spectacle of public executions) is a site for building analysis but not an analytic concept

in itself. For Foucault the spectacle of public executions served to display and extend the power of the monarch in the 18th century, but was displaced in the 19th century by discipline and surveillance as tools of governance and power. Foucault wrote and published *Discipline and Punish* (1977) in the wake of the social upheavals at the turn of the 1970s, during which Situationist Philosophy and Guy Debord's (1967) *Society of the Spectacle* had exploded into the public imagination in Paris and beyond. It is notable, therefore, that he uses the term 'spectacle' 41 times in the course of the book without ever citing or mentioning Debord by name. "Our society is not one of spectacle", opined Foucault (1977: 217), "but surveillance; under the surface of the image one invests bodies in depth".

This distinction is one of many that have contributed to a widespread perception that Foucauldian and Marxian understandings of the world are foundationally incompatible. To be sure, Debord's formulation of spectacle, as a very specific analytical concept, is philosophically rooted in Marxian concepts of commodity and commodity fetishism. Following Lukács' (1971) treatment of commodity fetishism in which denizens of modernity have become passive observers of celebrated exchange value, Debord (1967: thesis 34) described spectacle as a uniquely powerful form of "capital accumulated to the point where it becomes image". It is the ultimate fetishized commodity, which mediates relationships between human beings while mystifying the conditions of its own production (*ibid.*: thesis 4). Its power to transform fragments of reality into a visually pervasive totality, Debord elaborated appears as "a separate pseudo world" (*ibid.*: thesis 2), offered in exchange for the totality of actual activities and relationships (*ibid.*: thesis 49). In these ways spectacle appears to, and actually does, hold power over society and reorder relations between people.

It is precisely on this point that a convergence of Marxian understandings of commodity fetishism and Foucauldian understandings of governmentality begin to converge. This is because spectacle is "a set of techniques for the management of bodies, the management of attention" (Crary 1989: 105), techniques that work in an integrated fashion alongside of surveillance, and which together produce governmentality, contributed to significantly by the manipulation of fetishized images. Debord (1988: 2) himself described spectacle as part of a "totality of new techniques of government" that accompanied the ascendance of a commodity-dominated consumer society. Today this statement appears prescient in light of Foucault's subsequent elaborations of governmentality (see entry for 'Governmentality') and the ascendance of new media technologies and virtual realities in which privacy is apparently a thing of the past.

The power of spectacle as a 'technique of government' becomes clearest in relation to Foucault's basic definition of government as the "conduct of conduct", achieved by "structuring the possible field of action of others" (1983: 220). Following this definition, the ability to create the appearance of certain realities, particularly if those realities cannot be achieved in practice, is itself a powerful political technique (Igoe in press, 2014, 2013).

Techniques of governmentality have likewise become lighter and more pervasive over the thirty years since Foucault's death (Nealon 2008), like and through spectacle. Spectacle and other commodity forms have been rigorously refined as techniques for managing subjectivities, while subjectivities themselves have become indispensable commodities. Spectacle infused spaces of contemporary capitalism can thus be read as new kinds of 'fixed capital' for the production of hotly contested and highly prized commoditised subjectivities (Read 2003).

This formulation of spectacle as a technique of government has important implications for the production of value in the interconnected transnational spaces which correspond in many ways to Foucault's concept of apparatus/*dispositif* (see entry for 'Apparatus/*dispositif'*). These spaces operate on visual media technology from handheld devices and laptops to much larger screens in conference rooms, auditoriums and conference halls. On these are projected formulas, graphs, photographs, videos, and even live images of a person speaking or performing to an audience. These visual media stand apart as a separate psuedo world, while presenting appearances of connectivity, consensus, and concrete positive outcomes. In these spaces 'immaterial labor' travels through "epistemic, aesthetic, and affective models that structure social communication" (Read 2003: 129-130). These, according to Virno (1996: 23) include images, information systems, and epistemological paradigms communicated through videos, seminars, workshops, and meetings. Thanks in large part to the power of spectacle, they thus come to reside in the minds of workers (the producers of value in our case) as "little productive machines" (*ibid.*) – a probably unprecedented form of virtual fixed capital.

See also entries for 'Antipolitics', 'Appearances, economy of', 'Commodity fetishism', 'Governmentality', 'World making'

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(Entry: J Igoe)

Valuation

Michèle Lamont (2012) defines valuation as the practice (or action) of 'giving worth or value' involving dynamics of categorisation – i.e., classification, commensuration, establishing equivalence, signalling, and standardisation - and of legitimation – i.e., contestation and negotiation, diffusion, stabilisation, ritualization, consecration, institutionalisation (see entry for 'Legitimation'). Lamont's and a great deal of other sociological research has followed from Bourdieu (e.g., 1993) in approaching the study of valuation (and evaluation) as the study of the cultural practices associated with assigning relative worth within different 'fields', for example in economy, politics, law, art or education (see also Boltanski and Thévenot 2006[1991]). Attending to the social and cultural negotiations and contestations arising over the questions of what constitutes appropriate criteria for valuation and who can be a legitimate judge of value in various fields are central to this approach (Bourdieu 1993; Lamont 2012; Boltanski and Thévenot 2006[1991]).

Similarly, in the American pragmatist tradition, 'valuation' names an *action* of assigning value/s, though it is less concerned with theories of 'culture' and more with attending to the empirical. A central early thinker in the American pragmatist tradition, John Dewey argued for a focus on valuation as action, process or practice, rather than on value as some*thing* with either a real or ideal basis (Dewey 1915a, 1915b, 1923, 1939; see entry for 'Pragmatism'). Such a move, Dewey suggests, can effectively intervene in the dualism of an 'idealistic-realistic' divide not by choosing one side or the other, but by way of a 'flank movement' (Muneisa 2012). More specifically, Dewey argues that

> The situation in which judgement of value is required is not mental, much less fanciful. It is existential, but it exists as something whose good or value resides (first) in something to be attained in action and (secondly) whose value both as an idea and as existence depends upon judgement on what to do. Value is 'objective,' but it is such in an active or practical situation, not apart from it. (Dewey 1915a: 516; quoted in Muneisa 2012: 26)

Thus the pragmatist approach locates both the reality and the ideation of value in empirically traceable action and suggests the two are not entirely separable in practice.

See also entries for 'Calculation and qualculation', 'Economization', 'Financialisation', 'Legitimation', 'Marketization', 'Orders of Worth', 'Overflows/counterperformativity', 'Performativity/ performation/ enactment', 'Pragmatism', 'Socio-technical agencement', 'Value'

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(Entry: A Fredriksen)

Value

The Oxford English Dictionary defines 'value' as "Worth or quality as measured by a standard of equivalence".[*] Beyond this basic definition, there are myriad approaches to understanding value put forward in different theoretical traditions. In this entry, as in others in the glossary, we provide a brief overview of the theoretical approaches to understanding value that inform our collective project, rather than an exhaustive list of the meanings and uses of 'value'.

Central to Marx's understanding of value in terms of labour is the distinction he makes between 'use value', which is the utility of a thing, and 'exchange value', which is the 'appearance form' of value through which one use-value appears as quantitatively equivalent at a given ratio to another use-value at a given historical time and place. This equivalence cannot be derived from the use-value of a commodity because by nature these will be too heterogeneous. Instead the exchange value is a function of what all commodities have in common, which is the labour required to produce them. Thus, Marx explains, "that which determines the magnitude of the value of any article is the amount of labour socially necessary, or the labour-time socially necessary for its production" (1978[1867]: 306). Value, in other words, is for Marx the objectification, or materialisation, of abstract labour at a given historical moment; more or less abstract

labour required to produce a commodity at any given historical point will imbue it with more or less value. Although value appears as a relation between things (commodities), it is, in fact, a social relation between people which takes on a particular material form – the commodity – under capitalist relations of production (see entries for 'Commodity fetishism' and 'Labour Theory of Value').

In line with his extension of the categories of capital relevant to class, Pierre Bourdieu (1984[1979], 1993) expands the realm of value beyond the economic, looking at how value is assigned to various cultural, symbolic and social goods in fields such as art, education, politics or law. As economic (monetary) value is associated with economic capital, for Bourdieu cultural, symbolic and social value are associated with cultural capital, symbolic capital and social capital, respectively (see entry for 'Legitimation').

Also expanding from Marx's analysis, Donna Haraway (e.g 2008) makes the case for considering 'encounter value' alongside 'use-value' and 'exchange-value'. Writing that Marx himself understood the latter two as relationships, she argues that encounter value too "is about relationships among a motely array of lively beings, in which commerce and consciousness, evolution and bioengineering, and ethics and utilities are all in play" (2008: 46-7). While labour remains central to the production of value, it is not, for Haraway, the entirety of it: the coming together of things, that is, encounters between beings – humans, nonhuman animals, objects, technologies and so on – can make things happen, enhance power, and thus produce a form of value that is not reducible to the terms of utility or exchange (*ibid.*).

In the pragmatist tradition, meanwhile, John Dewey argues that, strictly speaking, there is no such thing as value but only things possessing "the unique, the experienced, but undefinable, quality of value" and that, moreover, "[v]alues in the plural, or value in the singular, is merely a convenient abbreviation for an object, event, situation, *res*, possessing the quality. Calling the thing a value is like calling the ball struck in baseball a hit or a foul" (Dewey, 1923: 617, cited in Muniesa 2012: 25; see also Dewey 1939). In this perspective, the only way that 'value' can be understood is by attending to the practice (or action) of *valuation* (see entries for 'Valuation' and 'Pragmatism').

The pragmatist tradition of focusing on actual practices resonates with most actor network theory (ANT), after-ANT, and assemblage theory analyses of value. For Callon and his followers, for example, value is an ongoing performance of dynamic socio-technical agencements (see entry for 'Socio-technical agencement'). Boltanski and Thévenot (2006[1991]) similarly follow from pragmatism and its relation, ethnomethodology, in seeing value (or worth) as an ongoing and dynamic (re)enactment requiring negotiations and innovations in everyday life (see entry for 'Orders of worth').

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[*] This definition pertains to value the noun. The verb 'to value' is defined by the OED as "To estimate the value of" (see entry for 'Valuation').

See also entries for 'Calculation and qualculation', 'Commodity fetishism', 'Economization', 'Financialisation', 'Labour Theory of Value', 'Land, property and rent', 'Legitimation', 'Marketization', 'Orders of worth', 'Overflows/ counterperformativity', 'Performativity/ performation/ enactment', 'Property, land and rent', 'Socio-technical agencement', 'Valuation'

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(Entry: A Fredriksen)

Vital materialism

Jane Bennett uses the term 'vital materialism' to emphasise the "vitality *of* matter and the lively powers *of* material formations" (2010: vii). As with assemblage thinking more generally, Bennett argues that agency is not the domain of humans or of any individual being, but is distributed within heterogeneous assemblages (*agencements*) of humans, non-human organisms and all manner of material things. Alongside theorists like Ingold (e.g., 2011), Whatmore (e.g., 2002) and Mol (e.g., 2002), Bennett rejects anthropocentrism in social theory and political thought, identifying the lively ways in which all manner of things have the capacity to affect and be affected, to act as "forces with trajectories, propensities, or tendencies of their own" (Bennett 2010: viii). Yet, as Hawkins explains,

> Bennett is not arguing for an essentialized materialism. Rather, she is insisting that things have the capacity to assert themselves, that their anterior physicality, their free or aleatory movements, can capture humans as much as humans like to think they have the world of things under control. Recognizing the thingness of things is not to deny the dense web of connections that they are always caught up in. It is simply to be open to the powers of matter and the recognition that there are multiple sites of agency in the world beyond the human. (Hawkins 2009: 188)

In stating that "the starting point of ethics is... the recognition of human participation in a shared, vital materiality" (Bennett 2010: 14), Bennett also argues for the significance of an emergent ethical dimension associated with a vital materialist ontology (see also entry on 'Animism').

See also entries for 'Agencement/assemblage', 'After ANT and non dualism', 'Animism', 'Commodity enchantment', 'Overflows/counterperformativity', 'Scalability/ non-scalability'

Works cited and further reading:

Bennett, J. 2005a. *The Enchantment of Modern Life: Attachments, Crossings, and Ethics*. Princeton: Princeton University Press.

Bennet, J. 2010. *Vibrant Matter: a political ecology of things.* Durham: Duke University Press.

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<div align="right">(Entry: A Fredriksen and S Sullivan)</div>

World-making

World-making may refer to a process of creating a fictional universe, for example in film-making or fiction writing, such that multiple works (i.e. films, novels) contain overlapping settings and characters. World-making, in this sense, requires that such works are "sufficiently detailed to enable many different stories to emerge but coherent enough so that each story feels like it fits with the others" (Jenkins 2006: 294).

World-making also refers to the project of (re)making the world through the projections – claims, performances, acts and so on – of groups of people self-consciously attempting to bend global flows and interconnectivities in one direction of another in what Tsing (2005) has called 'the global economy of appearances' (see entry for 'Appearances, the economy of'). The 'conjuring' of various appearances and imaginaries relates back to the world and, at least partly, remakes it in its own image (*cf.* entry for 'Performativity/performance/enactment'). As Tsing explains, "Conceptualizing the world and making the world are wrapped up with each other—at least for those with the privilege to turn their dreams into action. The relationship goes both ways: new projects inspire new ways to think, which also inspire new projects" (2012: 506).

Igoe (e.g., 2010) identifies both types of 'world-making' – the creating of a fictional universe than spans across distinct creative works and the channelling – at work in the

outputs of those NGOs, international institutions, governmental agencies, foundations and corporations engaged in global conservation efforts.

See also entries on 'Antipolitics', 'Appearances, economy of', 'Firewall' 'Performativity/ performation/ enactment', 'Scalability/non-scalability', 'Spectacle'

Works cited and further reading:

Igoe, J. 2010. 'The spectacle of nature in the global economy of appearances: anthropological engagements with the spectacular mediations of transnational biodiversity conservation'. *Critique of Anthropology,* 30(4): 375-397.

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(Entry: J Igoe and A Fredriksen)

3. The conceptual map

Aurora Fredriksen and Sarah Bracking

As noted above, the terms appearing on the conceptual map and glossary are those we have initially identified as relevant for our various case studies of value. A first list of concepts and terms were identified at LCSV research workshops held in December 2012 and May 2013 and additional ones added in the process of compiling this Working Paper. We expect that, as our research progresses over the next few years, the list of relevant concepts for our collective and individual studies of value will evolve as new concepts are added and unused ones discarded. To account for this possibility, this map (Figure 2) is presented as a first iteration, leaving open the possibility of an updated 'Second edition' being compiled at some point in the future.

Methodology for producing the map

To produce the network image of our conceptual map in Figure 2 (below), we first compiled an adjacency matrix using each of the concepts that appear in the glossary as vertices. The relationship between terms was determined based on the 'See also entries for…' lists that accompany each glossary entry such that the relationship between concepts that reference each other in the glossary entries are marked with a one, while the relationship between those terms that do not reference each other are marked as zero on the matrix. Figure 1 provides an example of a simple 4x4 adjacency matrix using just four terms from the glossary for reference.

Figure 1. Example of adjacency matrix using four concepts from the glossary

	Commodity fetishism	Labour Theory of Value	Marketization	Socio-technical *agencement* (STA)
Commodity fetishism	0	1	0	0
Labour Theory of Value	1	0	0	0
Marketization	0	0	0	1
Socio-technical *agencement* (STA)	0	0	1	0

A network image was then generated using NodeXL, an open source template for Microsoft Excel for making and analysing network graphs. The complete adjacency matrix for all 35 concepts appearing in the glossary was entered into the NodeXL Excel template, where it serves as the network 'edge list' in which each concept is a network 'node'. Just as Excel is able to convert a spreadsheet of numbers into pie or line graphs, the NodeXL template is able to convert a network edge list (in this case our adjacency matrix) into a network graph by analysing the relationship among nodes (our concepts)

and laying them out using one of several algorithms. For laying out our network image we selected the Harel-Koren Fast Multiscale algorithm (Harel and Koren 2000), as this generated what we believe to be the best visual layout for our data. In addition, NodeXL is able, again using the selected algorithm, to identify groupings of nodes within the data, which are then colour-coded for discernibility. For our network these groupings represent clusters of related concepts where relationships are identified through the cross-referencing used in the glossary and summarised in the adjacency matrix.

To recap, the relative distance between nodes (concepts) and the colour-coded clustering of groups of nodes (concepts) appearing in Figure 2 have been generated in NodeXL using the Harel-Koren Fast multiscale algorithm to analyse the relationships summarised in the adjacency matrix and based on our original cross referencing of concepts in the glossary. The use of network graphing software has thus facilitated a higher level of relational analysis than we could easily have achieved manually and thereby has allowed us to provide a clear visualisation of the overall relationships between concepts that we identified qualitatively for each individual concept in the glossary.

To add one additional layer of information to our network image, we manually changed the relative size of the nodes (the software default is to make them all equal in size) in order to emphasise the centrality of some of our terms over others. So for example, 'Value' and 'Valuation' appear as the largest nodes, for obvious reasons of their centrality to all of our research, while other terms such as '*Agencement*/assemblage' and 'Labour Theory of Value' appear as larger than other nodes to emphasise their importance to individual research projects. As with the original cross reference lists on which the quantified network image is based, this final layer of information was based on our own qualitative judgment of the relative import of the concepts for our research.

Discussion of the map

In the resulting network image shown in Figure 2 (below), the colour-coded groupings suggest four emergent ontological themes within the project. These may roughly be described as a political economy grouping (light blue), an assemblage grouping (dark blue), an animist or vital materialist grouping (light green), and an apparatus grouping (dark green). Notably, these groupings, automatically generated from the data, do not always correspond perfectly to these themes. For example, the concept of 'Black box', originating in the ANT tradition and therefore apparently falling into the 'assemblage' theme, is grouped by the graph with the light blue, political economy, theme. Rather than simply viewing this as a failing of the algorithm, however, these seeming mix-ups allow us to identify certain concepts that form bridges across themes. In the case of 'Black box', the algorithm identifies it in the light blue grouping because of the frequency by which the concept is cross referenced with other concepts in this grouping such as 'Firewall' and 'Finacialisation'. This perceptively suggests that the process of financialisation globally, the context in which our programme of research on value is taking place, may itself be proceeding via the black boxing of economic and financial theory and the associated use of strategic firewalls and legitimating discourse. Certainly, the way in which a crisis of private banking debt in 2008 was transposed into a crisis of public sovereign debt by 2010 (see Beetham, 2011a, 2011b) suggests a great, but surprisingly little noted, effort at re-legitimation of private banking. This change of

signification certainly appears to correspond to the outcome of a black box, in terms of economic theory, and a firewall, in terms of the ideological project.

Each of these ontological groupings has variously appeared and been debated in our early discussions of our collective project. While no consensus has been reached at this point as to whether and how these themes might be brought together in our research, as we get deeper into our individual case studies we will continue the discussion. The network image presented here is one tool for helping us to advance our thinking and order these discussions. Not only does it make visible the relationship between concepts (and thereby the themes noted above), but by seemingly mis-grouping concepts like 'Black box', it may also help us start to see points of connection and overlap that did not initially occur to us.
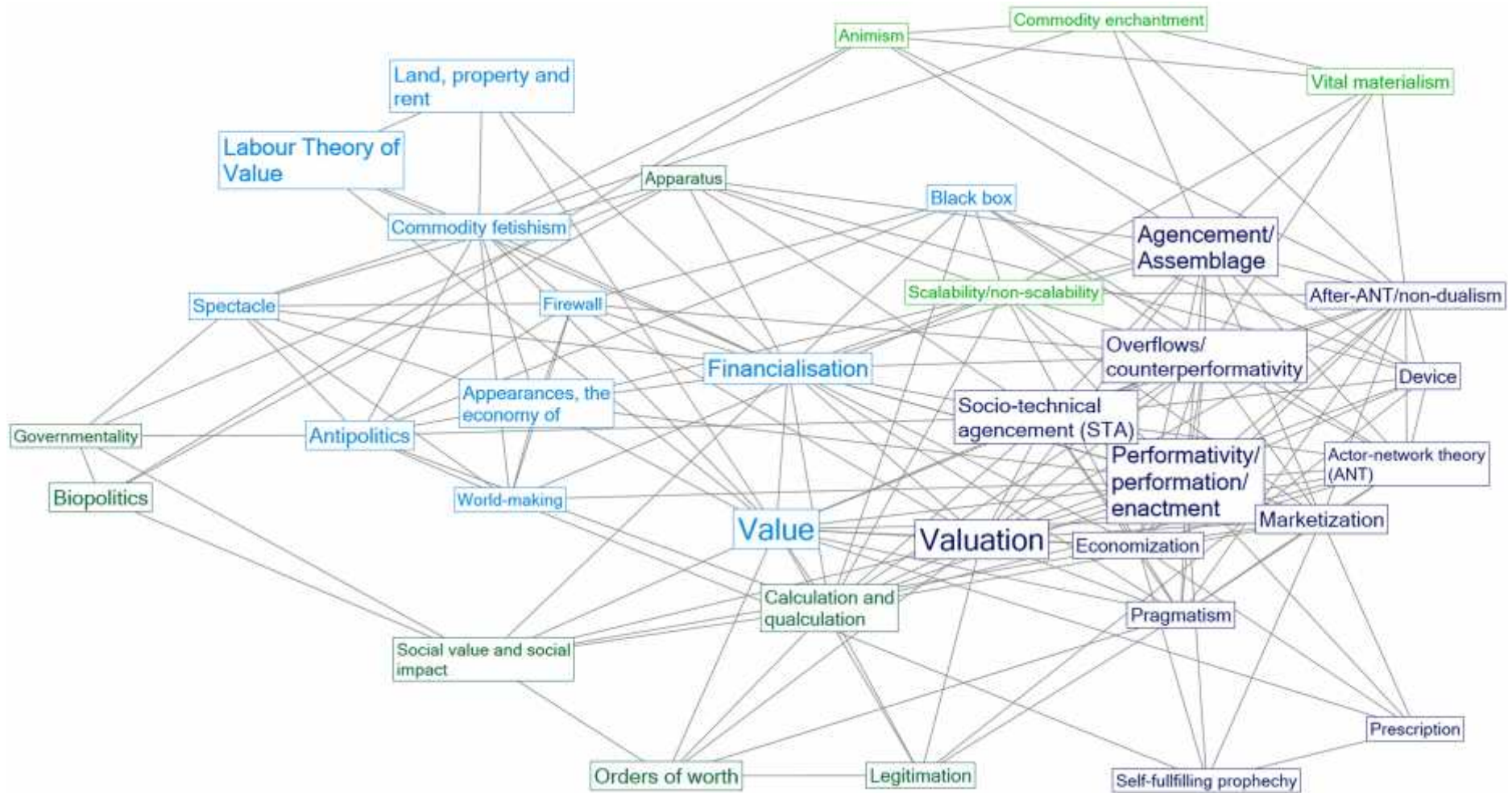
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