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Indeterminate Bodies: Introduction

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Abstract

Indeterminate Bodies organizes a number of theoretical and empirical studies around the concept and actuality of indeterminacy, as it relates to body and society. Located within the struggle to apprehend different categories of 'body' in the volatile flows of late-capital, indeterminacy is considered through such multiple incarnations as economy, contingency, inheritance, question, force, uncertainty, materiality and affective resistance to determination. While indeterminacy is often positioned as the 'trouble' or friction in subject/object knowledge-formation (framed as ontological or empirical challenge), it also engenders affects such that some subjects are both in and out of recognition. Questions of indeterminacy overlap with work on imperceptibility, giving rise to interlocked questions about the modes of representation, categorization, inclusion, exclusion and sensibility in the production of bodies. We address the hesitancies, difficulties and necessities of working with and through indeterminacy in order open up new descriptions, visions and modes of political work.

Keywords

affect, bodies, imperceptibility, indeterminacy, ontology, science studies

Indeterminate Bodies: Introduction

This special issue organizes a number of theoretical and empirical studies around the idea of indeterminacy, as it relates to body and society. The indeterminacy of a body, or subject/object, is something complex to think and write about. Immediate difficulties are that

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indeterminacy, perhaps like 'affect', is a term that simply covers too much ground; it gives licence for under-specification of its own modalities; it has an air of 'magic' about it that encourages theorists to neglect the work of thinking and rethinking ideas through (Grossberg, 2010: 314). But equally, there are many difficulties that come with doing the work of specifying this term more precisely. If we are thinking of indeterminate bodies: how to think that which is not (and perhaps will never quite be) a thing, a body? How to study unformed phenomena (Murphy, 2013)? How to avoid the violence of determining – through thought and language – that which lacks oneness and which is neither part nor whole (Strathern, 1991)? How to discern and specify the relations of indeterminate bodies? Methodologically and ontologically the question is equally problematic and probes into some of the more fundamental assertions about the ontic and epistemic realm.

These concerns are familiar. They bring to mind two strong connections with ongoing debates recently hosted in this journal and in the field of body studies more generally. As already hinted, they mirror the kinds of apprehension afflicting (but also exciting) scholars involved in the recent surge of interest in affect. We refer here to a previous special issue on 'Affect' that took up this theme (Blackman and Venn, 2010a). And, second, they cause us to wonder how – and whose – testimony can be given to such bodies (Tsing, 2014). A more recent issue focusing on the 'New Biologies' (Blackman, 2016a) opened out this latter question, urging exploration across genetics, the biological sciences, mathematics, quantum physics and the neurosciences *as well as* through affect theory, new materialisms, history and social theory (see also Meloni et al., 2016).

As both of those special issues and ongoing research show, and as this collection hopes to explore further, initial hesitations as to 'how to think about indeterminacy' can find support in research that specifies *the different ways* in which the body is in a state of open-ended and affective mutability in relation with its world (Blackman and Venn, 2010a; Venn, 2010; see also Blackman, 2012; Grosz, 2013). Informing much of the research in this broad domain are: inheritances of thought in philosophy, feminist theory, Science and Technology Studies, social and cultural theory (among other subdisciplines) about the 'body becoming'; notions of the 'processual', 'queer' or 'emergent' body; and the possibility of capturing, in a

conceptual apparatus, the emergent relations of beings and things (Barad, 2007; Coole and Frost, 2010; Despret, 2004; Haraway, 2003; Latour, 2004; Roosth and Schrader, 2012). Many of these approaches strive hard to apprehend the volatile, entangled flows of late-capitalist global modernity: there has been a rich engagement, for example, from cultural and environmental anthropology in rethinking ethnography as a politics-making praxis from which to theorize the ontological indeterminacy of toxicity and toxic bodies (Choy, 2005; Murphy, 2006; Povinelli, 2011).

As Michelle Murphy (2006) has shown in her book on toxic exposure, indeterminacy in both cause and effects makes the question of an affect's existence a matter of controversy and a problem of uncertainty. Such uncertainties are generative in both denial of affects as well as the production of multiple narratives that try to establish the object of concern/knowledge in a compelling way. Murphy demonstrates how the question of multiplicity in cause and effect is both an opportunity for coalitions that form around 'racial privilege' (Murphy, 2006: 112) and a site of elision in responsibility through the affirmation of ambiguity by vested interests. Similarly, Mel Y. Chen (2011) argues the sexual and racialized instantiation of toxicity through her discussion of the racial 'matterings' of lead and its differing materialization and political presentation within very different social and racial contexts. Both authors draw attention to the way that that matter coheres onto the organization of existing mattering, whether white nuclear family or black housing project, to produce very different narratives of toxic agency.

Chen also approaches indeterminacy as the means to stretch biopolitical questions in ways that eschew causal logic and creatively rework the intimacies of toxic exposure through the openness of porous bodies. Affirming the 'queer bonds' of affectivity and relationality, she challenges the ways in which hierarchies of ableism, race and sexuality produce the agency of a body in relation to exposures. Along with Lauren Berlant's discussion of how particular bodies get trapped into an obesogenic 'slow death' (2007), Chen thus upends the directionality of agentic materials and subjective composures around the 'event' of toxicity. Both authors problematize the notion of choice and agency in the construction of the 'quasi-event' (Povinelli, 2011) of toxicity. More recently Kai Bosworth (2016) has taken up the idea of permeable bodies within the context of uranium

toxicities, opening up questions about permeability within the field of geologic materialities and mobilities through the Earth to examine how indeterminacies release new kinds of politics.

Affirming queer bonds and genealogies in subjective modes suggests a practice that offers indeterminacy as a site of political possibility. This acts as a rebuttal to the employment of indeterminacy as political impediment around ecological and social justice issues. Queerness challenges normative knowledge and subjective modes, and thus it finds a certain solidarity with questions of indeterminacy and the affective resistance to determination and incorporation into heteronormative, racial or colonial contexts (Chen, 2012; Morgensen, 2016).

While indeterminacy is often positioned as the 'trouble' or friction in subject/object knowledge-formation (framed as ontological or empirical challenge), its affects can also be exercised as a racialized or sexualized negation of another kind. For some subjects, indeterminacy, lived as a corporeal condition, places them in a troubling and often vulnerable hinterland, in and out of recognition *as* a subject. The very *in*-determining condition of queer, gender-nonconforming or trans within gender and sexual norms comes into conflict with a grid of determination that is often violently upheld against this 'gender trouble'. As such, the challenge of queer presentation viewed as an indetermining force within structures of heteronormativity is a lived challenge that expands the horizons of social and sexual determination, but often at considerable cost to those subjects. In this context of often violent practices of exclusion, discrimination and oppression, questions of indeterminacy overlap with work on imperceptibility (Grosz, 2002; Sharp, 2009; Weinstein, 2012) in feminist, trans and sexuality studies. Together, the zones of imperceptibility and indeterminacy give rise to interlocked questions about the modes of representation, categorization and sensibility in the production of hierarchies of social structures.

Using queer thought and its attachments to undecidability, fluidity and unknowability to attack the caesura between human and animal, queer animal studies has sought to break down the essentialisms of western science in the production of epistemic and philosophical determinations (Chen and Luciano, 2015; Weinstein and Heywood, 2015). Seeking a more plastic genetic and genealogical account, queer thought has pushed indeterminacy further to disrupt subject/

object and body/sex boundaries altogether through the indeterminate subjects of queer and environmental theory (Hird and Giffney, 2008: 154). While queer or trans (Alaimo, 2008) approaches provide a nuanced and well-developed language for the discussion of human–nonhuman (Hird and Giffney, 2008; Hird and Roberts, 2011; Weinstein and Heywood, 2015) and inhuman forces (Nyong'o, 2015; Yusoff, 2014), and their modes of corporeal indetermination, those languages are often crafted within the context of explicitly insecure subject positions. In this sense, indeterminacy is a double-edged sword of creative and violent cuts. The robustness and energetic optimism of queer theory in refuting the assigned position outside of the determinations of science and the state has profoundly reconfigured the field of science studies and its attunement to such issues.

As some of the articles in this collection show, staying open to indeterminacy means resisting the lure of trying to know indeterminacy better in the attempt to reduce uncertainty, while attempting to do political work that works with, rather than against, this contingency (see Waterton and Yusoff articles, this issue). Pushing this point further, theorists have included a rethinking of the 'event' of relationality, with regards to the temporal as well as material and linguistic forms of apprehension in terms of what's going on and to whom (Berlant, 2007; Chen, 2012; Povinelli, 2011). Such work resists the inadvertent reinstatement of a realist world that can be known (Hinchliffe, 2001: 182–204) and the corresponding conflation of indeterminacy with unknowing. Rather, indeterminacy is kept on the move as a queer affect, frustrating normative ideas of social and sexual reproduction to produce new ideas of queer kinship and genealogy.

The question of how matter moves, extant and internal to bodies, has promoted engagement with the animacies and ambience of material worlds, and the inscriptive qualities of our sensibility to them. Contemporary environmental issues of toxicity, pollution, contamination and increasingly 'engineered worlds' (Masco et al., 2015) suggest that forms of toxic re-materialization are increasingly a widespread normative condition rather than the prerogative of specific test landscapes or zones (Masco, 2010). Yet such materializations are also strongly coupled to various dematerializing or dematerialized processes. As such, the role of sensibility, not just

as a configuration of visibility and invisibility or subject to a politics of representation, has conditioned novel forms of engagement that ask broader questions about how knowledge is constituted and its fundamental relation with nonknowledge (or forms of knowing that fall outside and in excess of the demands of empiricism and its metrics).

There are continuities here with the previous special issue of *Body & Society* on affect (Blackman and Venn, 2010a). Contributors to this addressed questions of methodology, advocating engagement with non-verbal, non-conscious dimensions of experience through sensation, memory, perception, attention and listening (Blackman and Venn, 2010b: 8). They sensitized us to the lack of distinction between what is body and what is world (James, 1996 [1907]), stirring interest in the plasticity and hybridity of living bodies, or what Grosz (2013) has called the 'inter-implications of forms of life with inorganic forms'. They also brought into focus questions of intercorporeality and trans-subjectivity querying the singular, bounded and distinctly human body, and suggested the emergence of a 'common ontology' linking the social and the natural, the mind and body, the cognitive and affective.

The second *Body & Society* special issue on the 'New Biologies' (Blackman, 2016a) built explicitly upon these developments, charting a growth of interest from the 'sociology of the body' to more intimate encounters between sociology and the life, biological and the neurosciences. Again, the idea of a common ontology features, this time emerging across the sciences and humanities, emphasizing the 'complex, processual, indeterminate, contingent, non-linear and relational nature of phenomena constantly open to effects from contiguous processes' (Blackman, 2016b: 256). Indeterminacy is mentioned here but is not explicitly explored. In the current collection, the authors single out this concept and put it to work in a number of different ways. They specify, they turn to particular, distinct kinds of source material, they theorize, and they think and re-think, with and through indeterminate bodies.

We should say here that, in thinking through indeterminacy in relation to body studies, the seven authors whose work appears here have drawn from and cut across a wide range of different approaches – ranging from literary studies, to STS research that demands close working relationships with natural scientists, to more philosophical

approaches. This diversity allows for a number of different ways of engaging with previous debates. The first way is perhaps the most easily imagined given a common-sense understanding of the term 'indeterminate'. Several of the articles seek a theoretical framework that goes beyond the concept of the organism or 'body' to engage with material forces and affects that do not necessarily begin or end in a classifiable ontological entity (a body, as such). The concept of 'the body' in such cases is of entities that are 'indeterminate', 'in-between' (Roosth and Schrader, 2012), 'unformed' (Dahlberg et al., 2013), 'preindividual' (Venn, 2010), 'insensible', or somehow in excess of conventional modes of accounting (Barad, 2012; Braun and Whatmore, 2010; Clark, 2011; Harrison, 2009; Kirby, 2011; Schrader, 2010; Yusoff, 2013a). These kinds of bodies are indeterminate both spatially and temporally; some of them have difficulty hanging together as stable or singular entities; they exceed classification; and their agency is unpredictable. They include ocean-dwelling plastic-species configurations, microscopic marine algae and bee bomb-detectors. The focus in these articles, however, is very often on the play of indeterminate forces that constitute the possibilities of a body within a wider field of sociality in social and ecological worlds. The unformed kinds specified by the authors are in play with other forces and planes: such as those of time, or 'polluting' matters, or material-semiotic arrangements around the apparatus of war. That is, indeterminacy is always located in projects of material or linguistic modes of re-description.

Second, authors of the collection look deeply into the life-pathways of bodies. Several of the articles look carefully at how bodies are, constantly, (un)formed. How is being, in other words, an incomplete relational process with others? What kinds of indeterminacy are involved as bodies flourish and as bodies die? How do temporal and spatial indeterminacies cause us to re-think processes such as life, living and death? How do they, also, cause us to re-think the relation between individual and collective bodies (Schrader, this issue)? What forms of care and modes of attention are required for the chance for lives to flourish (Mackenzie and Roberts, this issue)?

Third, a collection on indeterminacy would be incomplete without a consideration of the conditions and sensibilities required for the apprehension of, and response to, quasi-bodies, phantom beings, semi-living and/or mutable entities, or more general incoherences,

spaces and multiplicities in relations (Barad, 2012; Kirby, 2011; Roosth and Schrader, 2012; Stengers, 2008). Several articles ask what may be needed – in terms of imagination, theory, methodology and commitment – to perceive and account for those entities and processes that exceed existing categories of experience and forms of accounting? Here one way forward is to explore indeterminate bodies themselves as sites of encounter and experiment. Dwelling on the indeterminate as a site of negotiation and creative questioning can bring about awareness of the generative potential – in ethical-political terms – of indeterminate bodies. De Wolff's article, for example, explores plastic-species and scientists' practices of classification within a moral economy of production and waste. Waterton's article explores the way in which a deliberate posing of questions to indeterminate bodies and their relations might enable a new kind of environmental politics. Yusoff's article, demanding a critical interface with the current global political and economic context as it thrives upon (un)formed, (un)stabilized phenomena, understands indeterminacy as a 'fractured ontology' that opens out new responsibilities and relationships (see also Cooper, 2010; Murphy, 2013).

In these kinds of encounter, there are many relations at stake – with organisms, within biologies and ecologies, with other kinds of knowledge-makers including scientists and those involved in policy and politics. The relation of the social sciences and humanities to positivistic science is on the table again here, echoing Meloni's observation that sociological inquiry is becoming more open to biological suggestions just at a time when biology is becoming more social, as well as Landecker's assertion that this is a material exchange as well as a disciplinary one (Meloni, 2014: 594, in Blackman, 2016a: 5; see also Landecker, 2016). We suggest here that this 'opening up' and material-semiotic exchange is not only happening in the (New) Biologies. In this issue, research on pollution and toxicity, intersecting with insights about ecological sensitivities and thresholds, features strongly in authors' considerations. A planetary-to-micro-scale fragility and precariousness, freighted with past relationships of capital and natural exploitation, seems to thread through many of the bodies featuring in this issue (Altvater et al., 2016; Barad, 2010; Haraway, 2008; Murphy, 2013, 2016a, 2016b).

Fourth, the mode of encounters in this special issue includes reflexive lay perspectives relating to occurrences in socio-natural bodies and lives. 'Being affected' by phenomena and the knowledges that accompany them is explored in some of the articles. This positioning is hardly new in most strands of continental philosophy, feminist science studies and anthropology. But we can read in some of the articles a strong affective pull upon the researchers/authors which positions them implicitly inside the phenomena being described and its modes of description. As Schrader puts it (this issue), '[i]ndeterminacy is a condition for affective production and life', and this sentiment seems to pertain both to life forms and to ourselves as social scientists. Several authors are in an affective relation with biological, ecological, chemical and neurological research, and they have engaged with such research in order to explore, sometimes with urgency, how to position themselves within these relations, as well as what questions can be put to lively bodies and how they can involve themselves in such trials and inquiries in intimate and iterative ways (Mackenzie and Roberts, this issue; Waterton, this issue).

Fifth, and last, some of the contributions extend beyond reading, interpreting, deciphering and contextualizing social and scientific theories to more literary, philosophical approaches. Working with literary sources, Clark's paper, for example, deepens the question of indeterminate relating. Situating his work beyond the 'new materialist' sensibility which hails things-in-themselves as agential initiators of relations, political and otherwise (Marres and Lezaun, 2011), he takes us to an imagination of life 'before' and 'after' humans (Clark, 2011: 29; Clark, this issue). Through literary analysis, Clark portrays a very nearly *in*human Apocalyptic expanse, forcing consideration of the value of relations within life without 'communal or linguistic consanguinity', that is, without clear thresholds of the living and the dead, without a clear difference 'between compatriot and alien or between one species and another'. Asking, 'what happens here? In this space?' he sees that 'we are in the realms of forces that overflow signification' (Clark, this issue). His point is to show how, even in this open, frightening, indeterminate space, there remain gestures of care and allegiance, there are still openings to a future, there is still love, desire and fidelity within the radically inhuman. The drama and vastness of indeterminacy is shown here, but Clark

urges us to imagine that there are, in these inhuman spaces, other kinds of senses, other intimate knowings; relatings that are older and more profound than humankind or even life, but speak to a desirous intimacy with the Earth.

As we introduce more concretely below, the articles making up this collection work at the interface between confident and cautionary approaches to locating, defining and working with indeterminate bodies. The collection presents these approaches as different ways of imagining, encountering and constituting (in)organic bodies, entities and life processes, thereby also presenting alternative forms of responsiveness and responsibility.

The first article in the collection by Kim De Wolff brings us a glimpse of her ethnographic research working with marine scientists on plastics in oceans. De Wolff describes the strenuous efforts of classification and sorting required to clean up the entanglements of synthetic and non-synthetic bodies that now proliferate in our seas. She unpicks the assumptions of ontologically distinct natural and synthetic matter upon which those classifications are based. Under these, plastic in the ocean is pollution; organisms that travel on plastic are invasive; and future plastic-creatures are transgressions that do not belong. Working with marine scientists and their extended networks, she sees that practices of scientific knowledge production, public education and 'clean-up' all work with these assumptions – scientists reassemble indeterminate plastic–body relationships into ontologically distinct matter-categories. Responsibilities, as she puts it, are inherent to these knowledge practices whereby different kinds of materials (plastic or not-plastic?) are distinguished (and put into different jars) and where these separated entities become the basis for awarding the status of belonging or not belonging in the sea. Yet, as she notes, there are bigger questions of indeterminacy in the ocean nowadays. Efforts made by volunteers and environmental agencies to 'clean up' are always exceeded by the indeterminacies of plastic-species relationships, and with them the vibrancy and resilience of plastic matter. In an inevitable circularity, clean-up 'solutions' can only ensure that there will always be more plastic to separate. De Wolff portrays the futility of the constant separations: what, she asks, will ever prevent recycled ocean plastic bottles from returning to the sea? And besides, some sea creatures are learning to live differently – with plastic. Plastic is not only now vital to human living but to

certain forms of marine life. With ocean plastic entanglements bound to proliferate, she argues that scientists and humanists alike could, rather, approach the plastisphere in all its indeterminacies, without trying to disentangle it into material types that deny plastic its agency and place in the ocean. In a daring move, she argues that we need – through discourses and practices less inclined to purification – to award plastic more power in asking questions about where and how plastic belongs.

Astrid Schrader builds on feminist science studies scholarship that challenges the notion of bodies as discrete entities, the idea of a clear demarcation between self and other and between the insides and outsides of living systems (Barad, 2007; Blackman and Venn, 2010a; Haraway, 1991; Hird, 2009, 2013; Jamieson, 2010), as well as developments in biology and the philosophy of biology that question biological individuality and autonomy (Dupré and O'Malley, 2007; Gilbert et al., 2012; Helmreich, 2009). In consort with a number of scholars who now describe intra-active processes (Barad, 2007) and transductive individualizations (Simondon, 1992) as engendering body boundaries, Schrader investigates such boundaries in a way that makes us re-think, also, the notion of time. Contemplating the puzzle of microbial mass suicide, her work resonates strongly with that of Venn (2010) and Simondon (1992), upon whom Venn draws. Microbial cells, in her account 'do not decide to destruct themselves nor are they fully under social control; they do not form a unity as a particular identity but are constituted through an ongoing "transidividual communication"'. They are, as Schrader puts it, 'auto-affective' – constantly 'out of sync' with themselves as they relate to others. This way of being constitutes their aliveness, their liveness, their affectivity and their indeterminacy. By this account, it does not make sense to think of a framework of time when a being, or beings cease to live. Time 'does not have a prior external existence but is constituted in the process of individuation'. Death, similarly, is 'not a temporal limit which is approached progressively' (Schrader, this issue). Rather, death is always already internal to out-of-sync, relating, auto-affective lives. Schrader suggests that microbes and scientists might very well share these conditions of life. Microbial phytoplankton and scientists alike are guided through their own spatiotemporal productions of affectivity, knowledge, life and death.

Yusoff's article, 'Indeterminate subjects, irreducible worlds: Two economies of indeterminacy', examines the ways in which indeterminacy, power and politics relate in the different ways of accounting for pollution events and pathways. Her question is how to establish accountability for power-saturated and harmful actions within language and understand the indeterminacy of toxicity, bodies, and their ongoing, emerging relatings. This question accompanies other studies of toxicity and justice that seek to make toxic injustices not only visible and accountable 'in the event', but also to narrate historical and ongoing chemical–body relatings as ongoing worldings whose contingent path dependencies include threads of injustice and violence against specific kinds of bodies and not others (Murphy, 2013, 2016a, 2016b). Acknowledgement of indeterminacy within these pathways is risky because it colludes with the ongoing, historical invisibilities (externalities) of capitalism, including 'extinction, sterility, pollution and toxicity'. Yusoff notes that capitalist frameworks in the last 20 years have achieved a way of accounting for these indeterminate externalities that ostensibly brings them under the rubric of transparent exchange – she is referring to exchanges of carbon in the form of carbon credits, or exchanges of ecosystems in the form of services. Dissatisfied with these moves, she rejects the way in which indeterminacy in capitalist frameworks acts as 'hidden labour' ensuring their functioning. She aims to 'craft an alternative "other" economy of indeterminacy'. Her project is to create a theory of indeterminacy within social theory that interrupts or suspends the generalized equivalence of market values or utility. This involves the crafting of 'radical inequivalences', the shattering of efforts to make everything exchangeable, so that something may be released that is 'more liveable'. The actions of a dissenting marine toxicologist, who dived into a sea of chemical dispersant in the Deepwater Horizon Gulf of Mexico oil spill, serves as one inspiration. Her action aimed not to produce empirical scientific data but to speak, in much more aesthetic mode, of the deadly, toxic, indeterminate 'cloud of death' through which she swam. Yusoff shows how that action illuminated indeterminacy in the chemically charged waters of the oil spill. The critique is of corporate attempts to dissipate and ameliorate particular, visible or known effects of the spill through a literal making indeterminate of those same effects. The chemical Corexit® distributes and disperses in ways that can never be accounted for, that drag

the pollution beneath the surface and that kill unknown life in unknown ways. The marine toxicologist appropriated the indeterminacy of the industry and re-crafted it to display a visible, aesthetic, narrative that disrupted the feeling of smooth dispersal. Yusoff also introduces the problem of apprehending a bee-body bomb sensor. She asks whether it is possible to see the bee without nostalgia for its whole body, so that an apprehension of its bee bomb-detector ontology might sensitize us to the languages, materials and relations that produce its deadly form. Her interest is in keeping a focus on indeterminacy (no matter how grotesque) so as to provoke new senses of responsibility and political possibility.

The article by Waterton describes a forum – the Loweswater Care Project – which aimed to open out the ways in which scientists, local residents and environmental authorities could explore the deteriorating ecological relations of a local lake. Within this forum, participants were encouraged to view indeterminate bodies as sites of encounter and experiment where the posing of questions might enable new things to take place. By insisting on questioning the nature and boundaries of bodies such as cyanobacteria within the lake, participants in the project learned how to identify the limits of particular ways of knowing and to hone new questions and avenues of inquiry around this organism and its relations. Waterton describes the project as a kind of 'open' in Haraway's (2008) sense, where questions and demands were put to vital bodies and where a proliferation of indeterminate relations began to be imagined and researched. She reports that, within this 'open', over time, a solutions-based discourse transformed into a discourse of steady, energized inquiry. Entities such as the element phosphorus, previously understood to be traceable and controllable, were interrogated and re-imagined as spatially and temporally unbounded, acting in multiple ways and dimensions, and in ways that might not ever be fully understood. The article raises questions about the potential that might be associated with the exploration and acknowledgement of indeterminacy within frameworks of management and policy.

Turning to professional and lay knowledges in another domain, Mackenzie and Roberts explore the scientifically informed practices associated with parenting adopted children in the UK and the US. Theirs is a case study about 'adopting neuroscience' and a nascent 'science of adoption' – both of which are involved in the formal

transfer of parenting responsibilities from birth to adoptive parents. They suggest that the experience of being informed by these knowledges might be instructive for debates around the contemporary turn to science as a resource for the social sciences and humanities. The authors show the scientific concepts with which they are presented as adoptive parents always exceed the determinate context in which they emerged. Observing the difference between recent work on new materialism, which is often 'optimistic, excited and largely affirmative in relation to what it gets from sciences such as microbiology, genomics, neurology, physiology, geology and ecology', and existing social science and humanities research on the merging of neurology into parenting discourses, they forge a middle way – 'learning to be affected by science'. While the neurology-parenting domain of research tends to be firmly within a critical tradition, Mackenzie and Roberts find themselves in a rather more ambivalent, yet hopeful situation. They are looking for ways in which they can, via brain-based parenting, adopt neuroscience in ways that ameliorate seemingly entrenched difficulties of bodies and actions in relation. Fully aware of the affective transmissions that come with the adoption of scientific concepts and their own affective transmissions towards their objects of study, they suggest taking the risk of messy, indeterminate engagement with contemporary science.

Clark analyses two novels – *The Road* by Cormac McCarthy (2006) and Anne Michaels' *Fugitive Pieces* (1997). Both novels evoke the acts and trials of a single man caring for a child but Clark describes the way that individual bodies in both pieces seem to be immersed in 'an unaccountable field of forces'. He describes this as 'the inkling of a scripture or sensorium stretching far beyond our own cognitive horizons'. Clark is interested to move beyond the bounds of living organisms in his consideration of the indeterminacy of life. In a world where the agency of human subjects is layering indeterminate geological accretions to the Earth (through the phenomenon and epoch named 'Anthropocene') he asks how we might begin to understand ourselves as geologic subjects (see also Mackenzie, 2014; Yusoff, 2013b). The novels lend stories of desire, expressiveness and intelligibility beyond organismic bodies and within a strange posthuman universe. They give insight into 'the inestimable value of one human life', not for its own unique qualities but for the things that such a life might share with the rest of existence.

All of the articles in this special issue engage with the question of how indeterminacy asserts itself within and beyond the body, where it takes shape and how to work alongside that indeterminacy against those who would use it to disavow responsibility and negate its affects. In this sense, indeterminacy is understood as both a diagnostic condition and future-oriented practice with which to craft an experimental politics. Staying with the trouble of indeterminacy, we propose the theorization of indeterminate bodies as an essential part of making new and currently undisclosed futures within the ruins of environmental catastrophe and late liberal subjectivity.

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