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***Resilience: International Policies, Practices and Discourses*, special issue 'Resilience and the Anthropocene. Accepted for publication 13 September 2016.**

Introduction: Resilience and the Anthropocene: The Stakes of 'Naturalising' Politics

Kevin Grove and David Chandler

Abstract

The Anthropocene marks a new geological epoch in which human activity (and specifically Western production and consumption practices) has become a geological force. It also profoundly destabilizes the grounds of Western political philosophy. Visions of a dynamic earth system wholly indifferent to human survival liquefy modernity's division between nature and politics. Critical thought has only begun to scratch the surface of the Anthropocene's re-naturalization of politics. This special issue of *Resilience: International Policies, Practices and Discourses* explores the politics of resilience within the wider cultural and political moment of the Anthropocene. It is within the field of resilience thinking that the implications of the Anthropocene for forms of governance are beginning to be sketched out and experimental practices are undertaken. Foregrounding the Anthropocene imaginary's re-naturalization of politics enables us to consider the political possibilities of resilience from a different angle, one that is irreducible to neoliberal post-political rule.

Keywords: Resilience, anthropocene, sublime, governance, politics, critical theory

Introduction

Since its inception, the modern Western subject, Enlightenment 'Man', has provided a refuge from the harsh insecurities of embodied life. Man (and of course it is, in this vision, a gendered subject) was separated by the powers of rationalism and reason, constructed as an autonomous agent, while 'Nature' was seen to be passive and changeless. The binary separation of 'Man' and 'Nature' was the defining hallmark of modernity. Whether we find Descartes retreating into the certainty of the cogito, or Kant finding shelter in self-reflexive consciousness from the sublime (events of such magnitude they cannot be grasped directly by the mind) the modern subject constitutively held out the promise of security and salvation in a finite and insecure world (Dillon, 1996).

Thus insecurities were managed through a modernist ontology, which reduced flux to fixed laws and entities, both knowable and governable by a construction of a human subject as separated from nature by the powers of reason. This subject was always contingent and fragile, one that bore the markings of the power relations, hierarchies, exclusions and prejudices of its time (see especially Slyvia Wynter's (2003) excellent study). But in recent decades, the Kantian problematic of the sublime has become inescapable as globalization, interconnectivity and the unexpected feedback loops and side-effects of intentional actions have brought humanity to the edge of our conceptual powers, revealing the multiplicity and instability of a world less amenable to modernist assumptions (see, for example, Beck, 1992; Giddens, 1994; Latour, 1993).

The first cracks in modernity's façade began showing in the years immediately following the Cold War, when it seemed that unconventional threats such as global environmental change, international terrorist and narcotics trafficking networks and industrial disasters – to name but a few – demonstrated modernist security technologies' inability to control spatially interconnected and temporally emergent phenomena. But from the vantage point of the current period, the sensitivities to flux and uncertainty, which emerged in the 1990s, can be seen to be merely the premonitions or outliers of a much greater sense of the destabilization of modernist framings. Today, the Anthropocene destabilizes the very ground on which the fragile façade of modernity rests. This sense of uncertainty in the face of forces beyond the control or knowledge of the human – that tallies with the Kantian subject confronting the moment of the sublime – transpires at the end of modernity both as a destructive

force and as a potentially liberating one. This special issue on 'Resilience and the Anthropocene' seeks to explore ways in which the confrontation with the sublime and the attenuation of the Man/Nature binary are played out in the field of governance, through discourses of resilience.

The Anthropocene

First identified by physical scientists to name a distinct geological epoch in which collective human activity influences planetary dynamics (Crutzen, 2002; Steffan et al., 2007), the Anthropocene has come to signal a more general provocation for rethinking the fundamental coordinates of subjectivity – the prevailing understandings of space, time, nature-society relations and security and development that orient life within a finite world. If the post-Cold War world's unconventional threat spectrum operated against the backdrop of a more or less stable Earth, then the concept of the Anthropocene ultimately introduces us to a dynamic and potentially pathological Earth – an Earth that can turn against life itself (Evans and Reid, 2014; Dalby, 2013) and in doing so can be seen as inviting humanity to re-envision its relationships and to rethink security. And if the initial rise of unconventional threats expressed the general danger that *emergence* poses to global liberal governance (Cooper, 2008; Dillon and Reid, 2009), then the Anthropocene foregrounds how *carboniferous capitalism* (or other nomenclatures - such as the Capitalocene or the Plantationocene - highlighting the imbrications of the cultural and the natural) marks emergence as a very real threat to planetary viability (Bonneuil and Fressoz, 2016; Dalby, 2013). This is perhaps the concept's most unsettling effect: it lays to rest an anthropocentric view of Earth as given for human habitation and forces us to confront the planet's (and the cosmos') indifference to human survival (Culp, 2016).

The Anthropocene thus brings us back to the problem Kant confronted over 250 years ago: the sublime reality that the universe is ultimately indifferent to the existence of thought itself (Clark, 2011). The experience of the sublime is profoundly disorienting: it is an experience that exceeds the scope of human perception and destabilizes regimes of sensibility grounding existing order. It also provokes a scramble to re-orient thought within the groundless void of meaning. The 1755 Lisbon Earthquake is illustrative here. The (at the time) unfathomable damage and destruction it caused shattered the convenient fictions of theodicy and forced

Western thinkers to confront a world where suffering was random and indiscrete – a matter of chance rather than sign of divine retribution. Kant's solution was to barricade himself behind the fortifications of self-reflective consciousness – to withdraw from the world into the certitudes of the mind. Thus far, the Anthropocene seems to be provoking reorientations in the opposite direction: not withdrawal *from* the world, but rather total immersion *within* the world: rather than politics as separation from nature the bringing back in to politics and governance of nature itself.

There is no escaping the world when human life is envisioned as a geological force in and of itself. With retreat from the world a constitutive impossibility, an increasing number of scholars and professionals have found solace in the imperative to become resilient (Walker and Cooper, 2011; Cretney, 2014). Resilience holds out the promise of living with and even benefiting from change, uncertainty and vulnerability (Aradau, 2014; Evans and Reid, 2014; Grove 2014; Duffield, 2011). Key to its promise is how it envisions human life – both individual and collective – as *part of* interwoven complex social and ecological systems that span from the microbial to the global (Holling, 2001). In resilience thinking, what matters is not the security and stability of individual parts within a system, but rather the system's capacity to spontaneously reorganize itself in response to disturbance and adapt in ways that preserve its identity and function (Walker and Salt, 2012). This promise of systemic meta-stability in an unstable world has made resilience an attractive policy goal and conceptual framework for those struggling to come to terms with the Anthropocene. Thus the Anthropocene appears to reinforce and give new dynamism to a range of critical approaches seeking to go beyond the Enlightenment or modernist view of 'Man', as an artificial separation from and withdrawal from the world, to the posthuman subject fully immersed within the world (see, for example, Sharp, 2011; Grosz, 2011; Cornell and Seely, 2016). It can appear as if the choice is merely between the artifice of Cartesian and Kantian separations (enthroning Man) and the dethroning of the subject, reduced to a seemingly 'natural' existence of adaptation to circumstances beyond human control or understanding.

For many critics, the rise of resilience thinking, based upon the view that man is part of nature in a world beyond control, is little more than the most recent iteration of neoliberal socio-ecological governance. They tend to flag up the topological similarities between certain strands of neoliberal economic thought and ecological

theories of resilience. Resilience and neoliberal thought converge around a shared critique of centralized planning that emphasizes the limits complexity poses to human cognition and any attempt to manage complex ecological or economic phenomena, respectively (Walker and Cooper, 2011). However, at the same time, some critical scholars are beginning to recognize the links between resilience and neoliberal governance as accomplishments worked out in specific social and ecological contexts, rather than a necessary feature (Chandler, 2014). According to these thinkers, paying attention to the settings in which resilience is mobilized can draw attention to the points where resilience *might not* easily map on to neoliberal rule (Anderson, 2015; Simon and Randalls, 2016). There are moments of potential transgression where resilience might point towards *other* forms of socio-ecological relations that do not shore up the inequalities and injustices of neoliberal political ecologies (Nelson, 2014; Grove, 2013). What is at stake here is not so much a challenge to the ‘renaturalizing of politics’ (immersing ‘Man’ in the world of flux and contingency) but rather a question of what is at stake in assumptions of the end of the modernist separations of ‘Man’ and ‘Nature’ along with fixed spatial and temporal ontology of modernity. It is within the field of resilience thinking that the implications of the Anthropocene for forms of governance are beginning to be sketched out and experimental practices are undertaken. Analysis of these approaches are often undertaken within a broad Foucauldian framing, sensitive to the ways in which what it means to govern is co-constituted with the meaning of the life that is to be governed.

This special issue of *Resilience: International Policies, Practices, Discourses* explores the interface between resilience and the Anthropocene with these arguments in mind. Importantly, there is no editorial assumption that resilience has any necessary political commitments. Instead, we are interested in the questions posed in their context. Thus, while resilience approaches to the renaturalizing of politics may indeed re-orient thought and practice in ways that shore up the political ecological status quo against the Anthropocene’s destabilizations, they may *also* point towards more radical possibilities. The relation between resilience and the Anthropocene may not be as straightforward as some prevailing understandings allow. The challenge for critical thought is to open up this relation in ways that are sensitive to the possibilities that may be afforded by ethical and political indeterminacies.

In the remainder of this essay, we lay out some key theoretical considerations that might help us think differently about resilience and the Anthropocene. We begin by examining the dis-orientations the concept of the Anthropocene produces, and then explore how resilience thinking attempts to re-orient thought and practice in a complex world where humans are a geological force. We then consider how positioning resilience within and against the Anthropocene's dis-orienting effects complicates standard critical narratives that dismiss resilience as nothing more than a tool of neoliberal post-political rule. Finally, we conclude by detailing how the papers in this special issue contribute to a more complex understanding of the politics and ethics of resilience and the Anthropocene.

The Sublime Biopolitics of the Anthropocene

For physical scientists, debate rages over the Anthropocene. While there is more or less general agreement with Crutzen's (2002) claims that the planet has entered a new geological epoch in which humans have become a "great force of nature" (Steffan et al., 2007), there is far less consensus on how to bound and measure this epoch. Should the start of the Anthropocene be marked by the advent of human agriculture millennia ago? The so-called "great acceleration" in carbon dioxide production associated with the Industrial Revolution? The first atomic bomb tests, which have left a clear stratigraphic boundary for future scientists? These kinds of definitional questions are at the forefront of debates in the natural sciences (see Steffan et al., 2011). However, the Anthropocene has sparked a different kind of debate in the social sciences and humanities. Regardless of how physical scientists might define and measure the Anthropocene, the simple fact that we can now talk about human activity as a world-(de)forming force carries significant ontological, epistemological, ethical, and political ramifications. Simply put, the Anthropocene imaginary calls into question established categories through which we tend to make sense of the world – and engage in critical reflection and analysis. This destabilization works across five interconnected categories that orient human action in a finite world: space, time, nature/society relations, security, and earth. Several of these categories have been considered in detail elsewhere (see, e.g., Cook et al., 2015; Johnson and Morehouse, 2014; Malm and Hornberg, 2014; Dalby, 2009, 2013), but we are interested here specifically in how they disorient modern subjectivity through bringing nature back into politics.

First, the Anthropocene breaks down modernist understandings of space as fixed, bounded and quantifiably determined. This occurs across a number of cuts. To start with, the Anthropocene mobilizes a global imaginary. Much like environmentalist and sustainable development discourses, the Anthropocene draws attention to all-encompassing planetary processes that transgress territorial divisions (Cook et al., 2015). However, this is by no means a coherent vision. Even though the Anthropocene does indeed direct attention to humans as a planet-shaping geological force (Rickards, 2015), its foundations in earth systems science also mean that this is not necessarily a universal or total image (Clark, 2011). Here, the globe is not one territorial scale distinctly separated from others such as the national and the local. Instead, the global and local are intricately intertwined; their relation is one of topological connection rather than topographic division (Massey, 2005; Amin, 2002). The global emerges out of and through localized processes and interactions as much as it is their backdrop or container. It is an emergent, unstable effect of feedbacks across and within social and ecological systems that amplify effects of actions taken in specific contexts. Taken together, these two distinct cuts undermine modernist spatial strategies of separation and division that provide the essential building blocks of modern subjectivity: from one angle, a holistic vision of universalizing globality; from the other, a vision of space as an emergent topological surface formed through contextually-specific conjunctures of different social and ecological processes (cf. Massey, 1999). In turn, the collapse of modernity's spatial compartmentalizations leaves the subject exposed to the world it sought refuge from.

Second, the Anthropocene similarly de-stabilizes modernist understandings of time. At a basic level, the idea of the Anthropocene posits an emergent temporality that runs counter to a modernist sense of time as quantifiable, ordered, and predictable. The complex interconnections and feedback loops that comprise the Anthropocene's emergent spatiality generate non-linear changes that cannot be predicted from either past experiences or a given arrangement of things in the present. Just as its sense of space leaves the subject exposed to the world, this sense of emergent temporality leaves the subject exposed to a radically dynamic and unpredictable future. Without the view of linear time the possibility of understanding the human through the telos of progress is no longer possible. Temporality is no longer a matter of scales, thus the concept of the Anthropocene also folds together human time and deep geological time. This condensed

temporality encourages us to consider human activities within the broader temporal register of geological change, both past and future. While this can provoke new forms of thought on human intervention in the planet (Cook et al., 2015), it can also spark reflection on material existence both before and after humanity. For some scholars, such as Kathryn Yusoff (2013), this involves thinking human life in terms of its potential fossilization – a question of what kinds of remains we might leave to future worlds. This is a far more radical sense of temporality that forces us to confront not only an unknowable future, but to also recognize, as Kant once did, that there is always a beyond to the known in the present.

Third, the Anthropocene also destabilizes the modernist division between nature and society. On one level, positing humans as a geological force can be seen to intensify modernity's separation of nature and society. It gives human agency a previously unimaginable reach, now capable of making and re/making the entire planet. However, on other levels, it troubles this ontological dualism. First, the Anthropocene blurs the boundary between humans and nature. If humans are indeed a geological force, then human and non-human worlds are inextricably intertwined. The Anthropocene signals both the end of nature and the end of humanism (Cook et al., 2015): nature is a product of human activity, just as human activity cannot be separated from nature. Second, the Anthropocene's sense of deep time horizons that hold a future without humanity signals biophysical and geophysical worlds that both pre-exist human intervention and exhibit agential capacities in their own right. This is a sense of nature as dynamic and world-(de)forming – properties modernity attempted to exclusively claim for humanity. It also indicates a radical asymmetry between nature and society (Clark, 2011), where human life relies on a narrow range of geophysical conditions that are inherently unstable and dynamic. This vision of nature's ability to survive and thrive without the presence of humans undermines the Kantian sense of an ontologically distinct nature given to human cognition.

Fourth, this vision of radical asymmetry points towards one of the more unique effects of the Anthropocene imaginary: its destabilization of the category "earth." As Nigel Clark (2011) argues, Western metaphysics has long taken the earth to be a stable backdrop for philosophy – the "ground" upon which Truth might reveal itself. And yet, the Anthropocene ushers in a sense of the earth as radically unstable and dynamic. For Clark, this works against recent developments in critical thought to

foreclose any sense of nature's alterity. If indeed "nature" is nothing but a discursive construction or a product of political economic processes, then the sphere of "the natural" is entirely enveloped within human artifice. But Clark's sense of radical asymmetry brings back a vision of autonomous geophysical materiality that is not premised on a modernist nature/society dualism. Instead, Clark emphasizes how human life is indebted to earth in a manner that can never be reciprocated. This sense of earth cannot be reduced to one side of a nature/society binary; instead, it is the *différance* that stabilizes this binary. And yet, this earth is radically unstable and prone to unpredictable, non-linear phase shifts that are lived out as catastrophic disaster. Not only is this a disaster in a modern sense of physical damage, tragic loss of life, and so forth, it is also a disaster in a philosophical sense of an event that cannot be put into language (Blanchot 1980). But as Clark (2014) astutely notes, the Anthropocene is the disaster to end all disasters – it is the event that threatens the very possibility of thought, meaning and identity. Lovelock's conception of the 'Revenge of Gaia' (2007) and Brad Evans and Julian Reid follow this argument to its logical conclusion when they identify the Anthropocene with the figure of a pathological earth – that is, an earth that turns against the life it supports.

Fifth, the preceding destabilizations undermine a modernist sense of security. In the most direct sense, they do away with the possibility of a safe, confined, predictable interior space that can be shielded from a threatening, unknown and unpredictable outside. The modern promise of security from danger rings hollow when the subject cannot remove itself from the world (Chandler, 2014). At the same time, visions of a dynamic and unstable earth also liquefy the ground of truth (Clark, 2011). The complexity thinking that conditions the Anthropocene imaginary is founded on a disjointed subject immersed in a world of dynamic interconnections she can neither recognize nor comprehend (Chandler, 2013). In such conditions, truth becomes partial, limited, bounded and contextually-specific. The Anthropocene imaginary thus forces humans to confront the limits of knowledge, even as it positions human life within complex worlds that require greater and greater amounts of information to be successfully navigated. Thus the promise of the Anthropocene is of new ways of being and knowing without separations and cuts dependent on linear spatial and temporal conceptions of the world.

Taken together, these five categories help us recognize how the Anthropocene introduces a radical sense of indeterminacy. This is not simply the

indeterminacy of a finite and uncertain life that has grounded Western understandings of life since the dawn of European modernity (Foucault, 1989). Instead, this is the indeterminacy of the Kantian sublime: the disorienting sense of earth's *indifference* to human survival. The Anthropocene ushers in the death of a certain kind of anthropocentrism that views the earth as inherently hospitable for humanity (Culp, 2016).

The realization that humans are inextricably entwined within, produced by and productive of 'natural' processes means that it is no longer possible to act as if humanity was separate to, above or controlling, separate forces. However, critical theorists, such as Cornell and Seely (2016) argue that caution is necessary: the human subject needs to be reconstructed rather than removed. In effect, that immersion into nature would be as bad as the withdrawal into the human. The critique of immersion is forwarded in Brad Evans and Julian Reid's (2014) highlighting of resilience's nihilistic qualities. For Evans and Reid, resilience thinking's transvaluation of life into a natural force removes the possibility of freedom: resilient life is life that lacks the potential for poetic or political action. Resilience thus prevents the possibility of death – not in a biophysical sense of a loss of life, but rather in a philosophical sense of becoming-otherwise. The challenge is no longer to invent a more just or secure existence, but rather to sustain the vital (environmental) services that make (social) life possible in the first place. Resilience becomes a matter of adapting to and living with a pathological earth.

Resilience thinking thus is seen to provide a conceptual framework that re-orientates thought and practice in response to the Anthropocene's destabilizing effects. It names conditions of responsiveness, adaptability, inventiveness and flexibility required to survive and prosper within a catastrophic horizon. From this perspective, the relation between resilience and the Anthropocene is a profoundly depoliticizing one. Politics is in fact reduced to responding to and managing what are understood to be the consequences of previous human actions. Governing never starts a process with goals or aims at transformation and instead is reactive and responsive rather than a matter of initiation, of beginnings, of creativity. While agential powers of creativity are projected to the world, the human is reduced to, at best, following the instructions given by the world.

However, for other authors, this very process of 'renaturalising' politics is seen to offer creative possibilities and potentials. They offer a liberating and emancipatory

perspective of entanglement, which, following critical decolonial, feminist, queer and posthuman approaches, enables the dethronement of Enlightenment Man. Whereas the critics of resilience as neoliberalism assume 'Man' and 'Nature' to be separable in a zero-sum relationship, these authors would reject and go beyond this modernist binary. Human agency is radically redefined as part of nature itself. Thus Hasana Sharp, drawing on the politics of Spinoza and Deleuze, suggests that awareness of our embodied and embedded relationships within the world enables governance through the cultivation of practical wisdom, seeking out 'new sources of agency, connection, and energy' rather than focusing on 'a politics of rights and representation' (2011, p. 13). A 'posthumanist politics of composition and synergy' would see the radical potential of appreciating contingency through an affective politics of enablement (2011, p. 183). Similarly, Elizabeth Grosz suggests that appreciating the power of emergence - as a vital force of Life itself - enables and facilitates new forms of social organization which would challenge the constraints of neoliberalism. The naturalising of politics is only oppressive if nature is seen as fixed and linear rather than as lively excess and creativity. In her reading of Darwin, Bergson and others she suggests that governing for the Anthropocene is not necessarily a matter of 'a rational strategy for survival, not a form of adaptation, but the infinite elaboration of excess' and experimentation (2011, p. 119). In a world of becoming, beyond the binaries of 'Man' and 'Nature', resilience can thus be a creative and enabling perspective of relational embeddedness that sees contingency as opportunity rather than as a constraint on human freedom.

Other critiques have also noted that the reading of resilience as neoliberalism paints an overly totalizing vision of resilience as a coherent governmental rationality (Anderson, 2015; Dunn-Cavelty et al., 2015; Simon and Randalls, 2016). These arguments suggest that, in practice, the ties between resilience thinking and neoliberal governance are far more partial, contingent and tenuous than critics allow. Moreover, while Anthropocene visions may indeed open the door to further post-political governance (Swyngedouw, 2010), at the same time, they *also* enable us to recognize that we make the world in which we live (Dalby, 2013). In this light, the question is less about obedience to nature and the end of human agency than what resilience enables us to do. How bringing nature back into politics facilitates an understanding of the subject that overcomes the limits and exclusions of Enlightenment Man. This is a call for contextualizing the study of resilience: How

does resilience thinking intersect with other institutions, trajectories and concepts that have become key components of socio-environmental governance in the Anthropocene? What effects result from these diverse conjunctures? Asking these kinds of questions opens up the possibility for recognizing that the relation between resilience and the Anthropocene cannot be reduced to one of post-politicization. There are other potential relations that might undermine rather than solidify a sublime biopolitics. Resilience may indeed extend and consolidate liberal rule in a dynamic and uncertain world. But it does this in ways that may *also* create new points of transgression that an overly myopic critique might pass over. The next section details how the articles in this special issue all, in their own way, point the way towards a critical reappraisal of the relation between resilience and the Anthropocene.

Resilience beyond Post-Political Governance?

The dominant critical slant on resilience relies, for the most part, on a series of convenient tropes about the rise of resilience and its connections with neoliberal governance. Foremost among these, as the previous section detailed, are the resonances between ecological theories of resilience and neoliberal economic thought, and particularly their shared critique of centralized planning and management for their inability to cope with complex social and environmental reality. While not downplaying these affinities, it begs asking if there are *other* stories of resilience that could be told – stories that draw out distinct genealogical lineages that might complicate the easy elision between resilience and neoliberalism. Some work has already been done along these lines. For example, David Chandler (2013; Chandler and Reid, 2016) positions the genealogy of resilience-based governance in the UK within the broader arc of new institutionalist economics. Work by scholars such as John Commons and Herbert Simon, to name but a few, certainly feeds into neoliberal understandings of a choice environment amenable to government intervention, but it also exceeds these understandings. Similarly, Jessica Schmidt (2015) suggests that understandings of complexity in ecological theory owe more to the thought of American pragmatist philosopher John Dewey than the neoliberal economics of Frederich Hayek. In Dewey, Schmidt finds a way of thinking about complexity, and our interactions with complex milieus that exceeds human knowledge and control, that provokes positive and progressive self-transformation,

rather than *ressentement*. In both cases, these expanded genealogies point to other political and ethical possibilities for resilience thinking.

Several authors in this special issue further this line of work. Dan McQuillan locates the genealogy of resilience and the Anthropocene within the development of computational capacities during the 1940s, '50s, and '60s. For McQuillan, these developments enabled scholars to engage in modelling and visualization techniques that were previously impossible. Not only do these techniques enable phenomena such as “complexity” and “global climate” to be visualized, they also enable new practices of anticipatory and algorithmic governance. In his reading, this enables novel forms of (neo-)colonial rule that capture data in ways that enable the reorganization of daily life. Resilience is the outgrowth of this colonial politics of computation: ‘resilience thinking is the subjectivity of those captured by a complexity that can only be expressed computationally.’

Along similar lines, Connor Cavanagh draws attention to the influence of Joseph Schumpeter’s theory of creative destruction on C. S. Holling’s early formulations of resilience. While the connections between ecologists and neoliberal economic theory are for the most part implied, indirect and formal, the relation between Holling and colleagues’ work on the adaptive cycle and Schumpeter’s thought is much more direct and explicit.¹ Cavanagh uses these relations as a foothold onto more recent theories of antifragility, or the capacity to benefit from disorder (see also Taleb, 2012). In his reading, resilience converges with contemporary capitalist political ecologies around this thematic of antifragility: “resilience thinking” garners support... precisely because it promises to preserve societal and economic functioning throughout a – most likely, volatile – transition to a new stable economic and ecological state.’

In their own ways, McQuillan and Cavanagh read resilience in ways that broaden its genealogical foundations. This has the analytical effect of expanding the surfaces where resilience thinking resonates with wider social, environmental, and technological developments – and thus the points of potential transgression. It also helps them identify different theoretical weapons that might be mobilized within this struggle. Cavanagh’s reading of resilience creates a space where political ecological work on social and environmental justice can be brought to bear on questions of socio-ecological translation, without necessarily relying on a return to overly

structuralist historical geographic materialism. McQuillan, in turn, clears a space for feminist standpoint theory to challenge knowledge claims of algorithmic governance.

However, broadening the genealogy of resilience also multiplies the surfaces upon which resilience thinking latches onto socio-ecological phenomena. This is particularly clear in Andrew Baldwin's analysis of the recent turn to resilience in the climate migration literature. Baldwin carefully details how the newfound interest in and celebration of adaptive migration exposes the inextricably racialized nature of resilience-based governance. Here, Baldwin is referring to the way resilience approaches divide populations on the basis of their capacities that are indexed to capital. Resilient populations are those with access to various forms of capital; those who lack these "capacities" are identified as abnormal, maladaptive migrants whose real and potential mobilities threaten the wider population. Here, resilience is less a novel theoretical development and policy goal than the latest iteration of liberalism's longstanding racialized biopolitics – a reconfiguration that responds to the challenges potential mobility poses to the institutions and practices of liberal rule.

If Baldwin draws attention to under-recognized racial dimensions of resilience, Sebastien Norbert and colleagues do the same with resilience and time. They draw on case studies from local French government to argue that both applied and critical approaches to resilience downplay the temporal dimension to politics in the Anthropocene. At stake here is the ability to recognize how ecological theories of panarchy, and their adoption within social and ecological governance strategies, obfuscate multiple and potentially arrhythmic temporalities. If the Anthropocene produces a sense of (spatio-)temporal disorientation, resilience steadies the ship through a politics of distraction that naturalizes an objectified and future-oriented understanding of time.

Thus, the first four papers in this special issue broaden the genealogy of resilience in ways that expand our understanding of how resilience approaches act on and through the Anthropocene's dislocations to both solidify and potentially challenge neoliberal rule. The following three papers focus on how the wider context in which resilience initiatives are mobilized shape and delimit the ways resilience both shores up and undermines neoliberal political ecological relations.

Jon Coaffee and Jonathan Clarke focus on the limits existing institutional forms impose on resilience. They examine the adoption of resilience thinking in critical infrastructure security planning in the US, EU and Australia. In this policy

arena, resilience thinking holds out the promise of significantly altering infrastructure security practices. However, Coaffee and Clarke demonstrate how existing institutional norms and organizational arrangements actively work against some of resilience's more radical implications. Here, resilience more often than not offers little more than a new name for the same way of doing things.

Franziska Mueller extends these considerations through an examination of the IPCC's REDD+ measures' "Anthropocene geopolitics." Here, Mueller examines how forms and practices of local and global carbon governance actively reshape the world we inhabit. REDD+ assembles a disparate set of human and non-human actors, environments, discourses, strategies, and plans into specific natures that express underlying normative visions in the indeterminate world of the Anthropocene. Specifically, the suite of techniques that make up REDD+ programming work to transform opposition to REDD+ into constructive participation in social and ecological governance – a move that at once multiplies the sites of contestation while limiting the possibilities for contestation to have significant political effects.

Rennie Meyers analyses the aesthetic dimensions of Anthropocene geopolitics to offer a more optimistic reading of resilience. She examines an ecological reconstruction initiative on the island of Koh Tao that ties together ecological sustainability of the island's coral reefs with the viability of a local economy dependent on scuba diving tourism. In her reading, this ongoing project creates a space where participants are able to refashion their relationship with both local nature and global climate. Working with local coral species gives participants a novel sense of agency in the radically interconnected and uncertain world of the Anthropocene.

Taken together, the articles in this special issue draw out both the political potential and depoliticizing forces at play in the Anthropocene. Resilience's depoliticizing effects are not as straightforward as many critics maintain, and they are often exceeded by the potential to recreate the worlds in which we live in different ways. Thus, even as resilience approaches reduce the determinate *possibilities* for politics in the Anthropocene, they also, by their very nature, amplify the immeasurable *potential* for politics. The time and space of politics shifts when governance extends into the geo. The possibilities for a radical Anthropocene geopolitics thus hinge on how concrete practices mobilize this ethico-aesthetic

potential. This is a question that calls for sustained engagements with the contexts in which resilience initiatives are articulated, for the possibilities for transgression – and thus for politics – lie in the specific sites and situations – and constitutive affective relations – where people and things struggle to come to terms with the indeterminate world of the Anthropocene.

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Notes

¹ We might say the same thing about Jessica Schmidt's (2015) arguments that scholars should trace resilience thinking's understandings of complexity back to Dewey rather than Hayek. Unlike Hayek, the work of Dewey and other early complexity theorists he inspired (such as Herbert Simon; see Crowther-Heyck, 2005) is explicitly cited in early foundational resilience texts (eg, Lee, 1993; Holling and Sanderson, 1996). In any case, it is clear that the current critical preoccupation with the links between Holling and Hayek is a preliminary first cut into a dense genealogy that requires considerable elaboration and development.