The asymmetrical anthropocene: resilience and the limits of posthumanism

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Abstract

In this article we critique resilience's oft-celebrated overcoming of modern liberal frameworks. We bring work on resilience in geography and cognate fields into conversation with explorations of the 'asymmetrical Anthropocene', an emerging body of thought which emphasizes human-nonhuman relational asymmetry. Despite their resonances, there has been little engagement between these two responses to the human/world binary. This is important for changing the terms of the policy debate: engaging resilience through the asymmetrical Anthropocene framing shines a different light upon policy discourses of adaptive management, locating resilience as a continuation of modernity's anthropocentric will-to-govern. From this vantage point, resilience is problematic, neglecting the powers of nonhuman worlds that are not accessible or appropriable for governmental use. However, this is not necessarily grounds for pessimism. To conclude, we argue that human political agency is even more vital in an indeterminate world.

Keywords

agency, Anthropocene, more-than-human geography, relationality, resilience

Introduction

As the concept of the Anthropocene has risen to prominence in popular and scientific discourse over the past two decades, it has also opened new possibilities for thinking and managing human-environment relations. Many social scientists and humanities scholars initially greeted the

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concept's assertion that humans are now impacting earth system functioning on a planetary scale in a celebratory, even liberatory register. For these scholars, the Anthropocene signals a new experience and understanding of human-non-human relations, in which the Earth is no longer a stable backdrop for human activity but rather a dynamic actant that actively and recursively conditions human possibilities. The effect is to inculcate a new appreciation for, and interest in, the poetic, world-making potential these novel experiences of the 'geo' provoke. Freed from the hubris of modernity, which positioned humans in an external and instrumental relation to the Earth, the concept of the Anthropocene allows thought to recognize how, as Haraway, drawing on Latour, puts it, we are 'Earth-bound' and share a 'common flesh' rooted in the Earth.[1] This Anthropocenic affirmation of a post-humanist immersion in the Earth – a mode of thought that David Farrier calls 'Anthropocenic thinking' – challenges conventional distinctions between life and non-life, and in the process is opening up new avenues for cultural geographic research to explore diverse forms of life that are irreducible to the totalizing, universalizing figure of the modern European subject.[2] For many Anthropocenic thinkers, qualities once devalued by modernism and humanism, such as contingency, relationality, humility, and emergence, now instead ground new ethical and political practices of care for social and ecological difference.

This understanding of a novel ethico-political potential beyond modernist linear and universalist framings is increasingly forging a shared perspective. Scholars working across political geography, international relations, cultural geography, and urban geography have identified a number of governance innovations organized around the problem of resilience that create new designerly techniques and strategies for governing populations through those same qualities of contingency, relationality, humility, and emergence.[3] The adoption of resilience thinking by critical and applied scholars as a means to understand social, economic, and ecological change, and by practitioners and policymakers as an overarching principle for knowing and governing complexity and emergence, has led to resilience becoming perhaps the key trope of governance in the Anthropocene. While resilience is an essentially contested concept with no singular definition or practice, the term generally refers to a systemic capacity for topological transformation (the capacity to change form and function while maintaining identity) in response to external shocks and stresses. However, despite multiple and even contradictory definitions, resilience approaches of all stripes tend to share a common affirmation of post-liberal dispossession.[4] That is, set in the context of the Anthropocene's complex and emergent environments, resilience thinking tends to affirm that the resilient subject can no longer claim individual possession and sovereign control over human and non-human entities. Rather than acting out its will, the resilient subject instead must cultivate modes of self and collective rule based on recognizing their vulnerability, or their immersion in the world, and develop and exercise adaptive capacities to sense and respond to this world as it unfolds.

Thus, there appears to be a growing convergence between scholars of the Anthropocene and proponents of resilience, apparent in the desire to promote qualities of agility and flexibility and the importance of relational and contextual awareness rather than relying on static, abstract, or universalist assumptions.[5] For proponents of new practices of resilience in the Anthropocene, the key epistemological and practical imperative is to move beyond modernity's confining spatial-temporal boundaries and welcome emergent powers of nonhuman life and complex human-nonhuman entanglements.[6] It is important to note that this shared affirmation of new relational possibilities and potentials beyond the limits of modernist approaches crosses the political spectrum; where Anthropocenic thinkers tend to valorize these qualities as the source of radical ethico-political potential, resilience initiatives mobilize these same qualities to shore up the political-ecological status quo and slow the negative consequences of transformative socio-ecological change.[7] In the face of this ideational convergence, in this paper we seek to flag up a developing minoritarian trend

within Anthropocene thinking which seeks to challenge the consensus: a body of thought we frame here in terms of the 'asymmetrical Anthropocene'.[8]

This paper highlights the importance of explorations of the asymmetrical Anthropocene and goes on to suggest potential problems and issues which remain to be engaged. Bringing research in critical resilience studies, cultural geography, political geography, and the environmental humanities together, we seek to draw attention to the poetic, or world-making, qualities of discourses of resilience in the Anthropocene. While environmental governance might initially seem removed from cultural geography debates on geopoetics in the Anthropocene, there is a long history of engaging with the poetic qualities of scientific writing.[9] Analyzing resilience thinking in this manner offers a distinct critique of resilience (one which, unlike first-cut critiques, that focused on the parallels between resilience and neoliberalism, we believe may be extremely difficult for resilience to overcome or recuperate). Specifically, this move casts a new light on, and calls into question, the instrumental reduction of emergent life to an object of cybernetic regulation and control that animates resilience initiatives. Rather than overcoming the limits of modernity, 'asymmetrical Anthropocene' thinking suggests that resilience merely extends modernist fantasies of control as it flattens social and ecological difference into processes of mutual adaptation and information exchange.

The paper is set up in three main sections. The following section considers how policy discourses of resilience have both cohered and magnified Anthropocene sensitivities that center the immanent power of interactive life rather than human intentionality. This framing thereby provides a more-than-human poetics of dynamic creative interactive processes that can be tapped into, enabling designerly governmental imaginaries. The middle section highlights the development of an important critique of resilience assumptions, focusing upon a number of authors who have articulated what we are heuristically framing as an 'asymmetrical Anthropocene' approach which suggests that the potential power of life is ultimately, ontologically, inaccessible, meaning that the Earth is not there 'for us' and given to instrumental human use. In the third section we critically engage both these framings, which seek to move beyond the modernist human/nature divide. We suggest that resilience discourses and asymmetrical Anthropocene framings both tend toward the removal of political agency, dissolving the human into the world either via a cybernetic imaginary of feedback and modulation or a counter imaginary of abyssal inaccessibility. We conclude with a consideration of how human agency can be upheld while still pursuing the new critical vantage points being opened by explorations of the asymmetrical Anthropocene.

Resilience and the Anthropocene

While the concept of resilience had circulated on the margins of fields such as engineering, psychology and ecology for decades (each, of course, with distinct and contradictory understandings of the concept), it began to gain prominence within policymaking circles during the late 1990s and early 2000s, as scholars and practitioners grappled with a series of qualitatively novel social, geopolitical, technical, and political economic events. The end of the Cold War and the identification of non-traditional security threats, the UNFCCC's naming of dangerous climate change as a threat to development and well-being, the 1998 Asian financial crisis, the events of 11 September 2001 and their impact on national security planning, the conduct of warfare, and international financial and reinsurance markets, and increasingly catastrophic hurricanes, cyclones and typhoons throughout the tropics exceeded modernist technologies of security premised on boundaries, prediction, stability, linear temporality, and control.[10] At the same time, Paul Crutzen, Will Steffen and other scientists began naming the Anthropocene as a distinct geological era. Since then, the Anthropocene has come to stand in for all manner of conditions that, we are told, reveal humanity's embeddedness within complex social, environmental, and technical systems that threaten Earth's habitability.[11]

Resilience became an increasingly influential governance principle alongside and through this growing recognition that the stable, predictable environment many attributed to the Holocene, like the stable, predictable world of European modernity, could no longer be assumed. Its influence lies in the way the concept transvalues modernist security.[12] Resilience offers a theory of growth, development and improvement through *embracing* change, diversity, surprise, and disruption, rather than banishing these conditions beyond the limits of the sovereign subject.[13] Central to resilience as a response to the Anthropocene is an onto-epistemological shift toward valuing the emergent powers of life itself. Just as new materialist thought positions a lively, vibrant materiality as the source of differentiation,[14] so too does resilience affirm that life itself is the possessor of creative powers. In a world where it appears that the application of human science and technology to control or direct nature has undermined natural processes of regulation – including the catastrophic consequences of climate change and global warming – resilience as a dominant policy framework seeks to slow down this run-away process by restoring more power to nature or life itself and seeking alternative ways forward that redistribute understandings of agency.

This distinction is crucial to grasp. In high modernist approaches to 'development', 'security', and 'progress' there is a strict subject/object or human/nature divide.[15] Humanity is the creative agent or actor and the world/nature/nonhumans are merely passive objects of timeless universal causal laws. Human agency is the driving force for creativity and change and the non-human world awaits to have its secrets unlocked through the application of modern science and technology. Resilience approaches seek to disrupt this divide, reallocating more creativity and agency to the side of nature/the nonhuman world. The Anthropocene, through resilience, thus undergirds a subtle but important shift in modern biopolitics: rather than governance techniques and practices that reflect a form of (Human) life ontologically detached from the world, governance now strives to 'become Indigenous', calibrated in relation to a form of (posthuman) life embedded within the world.[16] Indigenous forms of life become the model for both ethical living *and* a designerly rational governmental practice: an onto-epistemological shift that seeks to make governance cybernetically responsive to a complex and emergent environment that exceeds modern control. To become Indigenous is thus to cultivate an appreciation for the productive powers of life itself, and to devise and implement governance reforms that recalibrate and redeploy conventional calculatory techniques in ways that sense, reveal, adapt to, and strategically deploy life's vital powers to fulfill the biopolitical imperative to develop and secure the politically qualified life of the *bios*.[17]

Resilience as a set of policy practices is therefore oriented toward enabling life's excessive potential to come to the surface, to circulate or emerge. In this way, feedback effects necessary for complex self-adaptive systems to operate efficiently are seen to enable adaptive transformative effects, 'bouncing-forward' rather than merely 'bouncing-back' to a previous equilibrium.[18] It is because resilience thinking searches for a solution in the hidden or potential processes, inter-relations, and interactive emergence of life itself, that its 'designerly' approach is less concerned with 'top-down' interventions – seeking to impose directions and ends – and more with 'facilitating', 'enabling', or 'engendering' existing powers and capacities or seeking to redirect them to new possibilities.[19] For example, in New York City, designers are constructing two miles of oyster reefs along the coasts of Staten Island. The region was once home to a thriving oyster industry based on the commodification of oysters.[20] Today, however, the hope is that oysters' long-overlooked biological capacities to build wave-breaking reefs and remediate polluted water will contribute in key ways to building the city's resilience capacity to future storms and flooding. Further south, in Miami, a large-scale plan to restore the historic water flows of the famous Everglades ecosystem is celebrated not merely for the sake of conserving a beloved ecosystem but also for the capacities of the Everglades' hydraulic flows to push back against salt water intrusion into the region's freshwater aquifers. In this way the Everglades flows are now valued as a key resilience infrastructure, able

to protect vital drinking water supply to the metropolitan region. These and so many other nature-based designs represent what is now seen as the resilience paradigm for the Anthropocene, able to govern its crises and incorporate its lessons.

Placing resilience alongside the Anthropocene in this manner offers a distinct angle on resilience that differs from many critical approaches in geography. Over the past decade, much critical research has tended to zero in on the formal similarities between resilience approaches and neoliberal governance reforms. While both share a common critique of centralized, command-and-control-style governance and seek to introduce reforms that decentralize decision-making and 'empower' individuals and communities to assume responsibility to manage social, economic, and environmental insecurities, this reductive formal critique relies on a deductive analysis that, as Clive Barnett calls it, 'only ever finds what it was looking for (or its absence)'.[21] Specifically, this focus on identifying formal similarities with neoliberal reforms passes over both the contextually-specific techniques, strategies, and mechanisms through which resilience approaches attempt to reform social and environmental governance – which often complicate the smooth equation between resilience and neoliberalism – and the distinct ontopolitical assumptions that animate these resilience-based reforms.[22]

Rather than engaging resilience as a coherent ideological category, hermetically sealed discourse, or unified governing principle, for us, the Anthropocene brings into focus resilience as a world-forming project bound up in the construction of forms-of-life. The production of truths through resilience techniques are poetic as much as empirical, for they bring about a particular re/ordering of human-more-than-human relations in response to the problematic of the Anthropocene.[23] This is not confined to 'natural' processes, as illustrated above in examples of designers apprehending oysters' living and dying as building wave-attenuating breakwaters, or ecologists and biologists approaching historic Everglades' hydraulic flows as buffering salt water infiltration to urban aquifers. Common resilience techniques such as simulations, community-based scenario exercises, or resilience indices make affectively present a world of complex, multi-scalar interconnections and fast-paced, emergent shocks and stressors, and transform how individuals and communities are able to sense, know and relate to their surroundings.[24] Resilience addresses and works on the wider affective environments that infuse everyday life with potential to become other than it is.[25] With roots in new institutional economics, resilience approaches attempt to work on and shape both formal and informal institutions (such as norms, beliefs, and practices) that guide how people are able to sense and interact with one another and their surroundings. Resilience-based interventions work on this relational potential, apprehended as complex socio-ecological systemic interactions, to recalibrate the quality of those interactions in ways that create new capacities for thought and action.[26]

More than fashioning responsibilized, neoliberal individuals, resilience initiatives attempt to constitute adaptive, post-human subjects immunologically conditioned to respond to the Anthropocene's disruptions and insecurities by actualizing latent affective capacities that saturate everyday life. Thus, while resilience approaches can (and should) be read as a form of biopolitics – a form of politics directed to life itself – the form of life which is being 'scaled-up' or 'engendered' is virtual or potential rather than actual or existential. Resilience techniques attune subjects to a world of dynamic interconnection, speed, complexity, and emergent shocks and long-term stressors that the subject must learn to adapt to in order to survive. But rather than providing an objective view of a single, one-world-world of complexity that exceeds the individual's total knowledge and control, resilience techniques actively call this world into being: that is, they poetically attune the subject to certain sensations and experiences, and encode these experiences in the language of complex systems theory, new institutional economics, and a designerly ethos that continually strives to synthesize diverse and partial forms of knowledge into pragmatic, holistic resilience solutions.[27] The result is an air of inevitability: for subjects physically and psychically

overwhelmed by the incalculable, sublime forces of the Anthropocene, resilience becomes the only solution that can stave off catastrophic systemic collapse. Moreover, the ethical imperative to learn from and adapt to emergent conditions allows the concept of resilience to constantly expand, laying claim to alternative forms of knowledge and practice that otherwise fall outside it remit.[28] However, as we turn to in the following section, this totalizing imaginary has been powerfully challenged by certain minoritarian strands of thought on the Anthropocene that both draw on and move beyond the visions of life and relationality that condition resilience thinking.

Asymmetrical Anthropocene thinking and resilience

Like resilience thinkers, critical scholars working across diverse fields from geography to the humanities see the Anthropocene as signaling the end to the modern 'world', with its separations between humans and nonhumans, designations of some forms of life as less-than-human resources to be used or passive landscapes to dominate.[29] In what literary theorist David Farrier calls 'Anthropocenic thinking', scholars seek an epistemological shift, away from modernity's human/nature binaries, inside/outside divisions and spatial/temporal boundaries, and toward thinking humanity's complex imbrications with vital and dynamic, unpredictable, and emergent nonhuman forces.[30] For many scholars, thinking through the Anthropocene de-centers the ontological and epistemological privilege modernity ascribed to the figure of the Human, and instead recognizes how the Human is always embedded within the Earth. This new experience of the 'geo' offers an alternative to European geopolitical imaginaries of territorial control. Rather than an inert resource passively awaiting human exploitation – the backdrop of human activity – the Earth is instead a dynamic force that conditions possibilities for sociality and becomes an active participant in human politics.[31]

Just as resilience approaches attempt to transform governance around the ethical imperative to become indigenous and embed governance within Earth processes, as above, so too does Anthropocenic thinking generally assert that ethical and political practice must become embedded in and responsive to material forces that are the source of differentiation. As Ben Anderson explains, psychic and affective investments in Earthly materiality, as a guide for Anthropocene politics, animates a reparative disposition that encounters the material and ideational fragments of modernity with hope.[32] This reparative disposition celebrates the dispossessed subject of the Anthropocene, and affirms a renaturalized vision of politics. Reflexive recognition of, and care for, humanity's shared 'common flesh' rooted in the Earth becomes the foundation for new forms of ethico-political practice that affirm novel forms of individual and collective experimentations in self-care as radical acts of caring for the quality of human-more-than-human interconnections that sustains life as such.[33]

Taken in these terms, resilience approaches and Anthropocenic thinking share a common onto-epistemological framework and a common ethical comportment to the excess of life in relation to being.[34] Both celebrate the de-centering and dispossession of the modern subject, and both find hope for redemption in the imperative to 'become Indigenous', as such, and develop personal and collective attunements to ontologically prior human-non-human relations and the material forces these relations express. However, we want to suggest here that just as Anthropocenic scholars draw on new experiences of the 'geo' to 'hold a mirror' up to European geopolitical imaginaries, revealing their partiality, and contextual specificity, so too can alternative comportments toward life reveal the partiality of both resilience thinking's universalizing visions of complex interconnection and emergence *and* Anthropocenic thinking's affirmations of a universalizing, ontologically prior common Earthly materiality. To begin to de-center the ontologizing claims of both resilience thinking and Anthropocenic thinking, we want to focus on a minor thread within Anthropocenic thought that is developing an asymmetrical understanding of the relation between Earth and life – a nebulous body of thought exploring what we conceptualize here as the 'asymmetrical Anthropocene'.

Within the broader amalgam of Anthropocenic thinking, a subset of thinkers including Claire Colebrook, Timothy Morton, Nigel Clark and Frédéric Neyrat argue that the chief epistemological insight granted by the Anthropocene is not only that humans and nonhumans are interlinked in a world of emergence and interconnection, but that this relationship is not one of equivalence or transparency, or simple reciprocity. Earth's forces and beings are not simply intertwined with human life in a relationship of equality, a 'parliament of things' or flattened 'actor network'.[35] Instead their force dwarfs that of humans, both materially as well as epistemologically. Volcanoes or hurricanes, tsunamis or bacteria: these dynamic, unruly nonhuman forces are emphasized as having their own trajectories and aims, autonomous from and inaccessible to human intention and knowing.[36] At stake in this version of Anthropocene thinking is thus not only the relatedness of humans and nonhumans, but also, importantly, the fundamental *asymmetry* of the relationship between human and nonhuman earth forces.

As this cursory definition suggests, the 'asymmetrical Anthropocene', as explored across the otherwise distinct thought of the above-mentioned scholars, differs markedly from resilience thinking. The exploration of asymmetry starts from a position that appears to align with the resilience approach's emphasis on life's power of excess. On one level, this assumption is straightforward: humanity is self-evidently not the only creative or agential being or we could not exist in the first place. Life is clearly in excess of being as evolutionary change demonstrates.[37] Even non-life is in excess of being as the production of life from non-life illustrates.[38] There is little doubt that life harbors multiple potentialities, only some of which are actualized. Likewise, the assumption of resilience as well as asymmetrical Anthropocene thinking that we are now 'after Nature'[39] or 'after ecology'[40] – in that nature should no longer seen as a distinct and separate realm, as a mere 'background' for human struggles – is now widely accepted among geographers and other nature-society theorists. Yet it is not so obvious that human and natural forces should be seen as mutually entangled and mutually co-constitutive. To be sure, affirmations of symmetry reflect critical scholars' desires to combat environmental and technological determinism – to ensure, in other words, that neither nature nor the social are seen as some sort of stable ground for modernist hierarchies and exclusions.[41] But for theorists engaging the asymmetrical Anthropocene, the fact that life withholds excessive powers of actualization does not immediately equate to these powers as being generative and productive 'for us', nor to the possibility that humans can have the capacity to understand, instrumentalize or to actualize these powers.

This is a key distinction. Explorations of the asymmetrical Anthropocene understand the power of life in ways that differ from resilience approaches and in so doing, we argue, importantly challenge the latter on its own epistemological terms. Approaches highlighting asymmetry problematize the relational power of life as there 'for us'. As Kara Keeling points out, drawing upon the insights of Deleuze and Glissant, relations are not always commensurable: 'They can still be opaque, yet in relation'.[42] The problem for thinkers in this perspective is that, in the constructivist desire to 'de-naturalize' policy understandings, there is little separation of the human from the world. What Frederic Neyrat calls the geo-constructivism of geo-engineering and eco-constructivism of resilience ecology operates through constant adaptive management, in which humans reflexively devise ways to cybernetically sense, respond to, and direct emergent life to achieve more resilient and sustainable outcomes.[43] In resilience discourses it can easily appear that human ingenuity is freed from the limitations of nature and that nature is now available for us through the process of its accidental 'humanization' in the course of industrialized modernity. This new 'culture-nature' collective appears then to be the product of our construction and thus open to alternative constructions through the systems-thinking approaches of resilience. Thus, while modernity can be seen to have failed in its hubristic designs upon the earth, resilience is held to enable a new set of 'posthuman' governing techniques and frameworks open to the emergent powers of systemic

relations. A cybernetic biopolitics oriented around understanding of life in excess of being that is nonetheless still amenable to human control and regulation.[44]

As Nigel Clark, among others, has long argued, these framings of 'hybrid nature-cultures' all too easily pass over the excessive and unpredictable powers of nonhuman or inhuman nature. Rather than overcoming the nature/culture divide, some approaches within Anthropocene thinking therefore cast resilience perspectives as very much part of the modernist desire to see everything through a human-centered or anthropocentric lens:

> What we need to keep an eye on here is the repeated insistence that there is no outside to the new hybridised environments: thus no functionally intact nature enduring beyond, beneath, amidst or after this assimilation. . . It is a fusion, I want to argue, which discourages any political or ontological investment in a geo-physical materiality with an autonomy and integrity of its own.[45]

While Clark shares a similar perspective of interactive becoming or emergence, as that of resilience approaches, the difference here is that the understanding of asymmetry means that the potential for taming these powers and putting them to productive use is questioned. The reason for this is that agential life – even if it is understood as a complex adaptive system of emergence – is not a mutual collaborative product to be put to use for human convenience. The vitality of matter is well beyond human knowledge and control, reaching down to the molten core of the planet and up to the impacts of solar winds and radiation. The relationship between humanity and the planet is fundamentally asymmetrical, well beyond resilience thinking's imaginaries of 'mutuality or co-dependence'.[46] While Clark takes up the matter of asymmetry most explicitly, others have followed this line of thinking in their own ways. Authors like Eugene Thacker have also emphasized this 'darker' or 'negative' side to immanent thought, which is lost in resilience approaches, which concern specifically life *for us* as human beings.[47] These Anthropocene theorists' considerations of life – as 'inhuman',[48] 'nonhuman' or 'unhuman'[49] – therefore point beyond subordination to the productive biopolitics of resilience. Key to this shift is a subtle but essential distinction between immanent understandings of life as contingent and interactive (shared with resilience-thinking) and the metaphysical assumption, necessarily underlying resilience thinking, that life has a positive, thermodynamic or Neoplatonic, telos or flow toward creative differentiation (an understanding of emanance, radiating out from either a theological or cosmic source).[50]

Claire Colebrook argues that the inaccessibility of life's excessive potential leads to thought beyond the ontological constraints of positive and productivist understandings of a 'redemptive' or 'knee-jerk' vitalism' so often underlying resilience approaches to the Anthropocene condition.[51] It is too simplistic to imagine life as a force that flows through relational interaction, as 'an end that unfolds through time'[52] that seeks to draw out essences or enable entities to 'become themselves' or to orient themselves more productively to the world. The power of excess in the pragmatic framings of resilience is always conveniently cast productively and functionally, where the power of life enables entities and systems to develop their own internal principles for mutually adaptive forms of self-maintenance or autopoiesis[53] – bouncing back to equilibrium or forward to new forms of mutual sustainability. Life is thereby reduced to the on-going work of survival and adaptation.[54] Thus, although the power of life may have no human-centered liberal telos of progress, in constructions of resilience life is always amenable to functional collaborations of mutual survival and sustainability. This is also reflected in much of contemporary social and political thought, for example, in Bruno Latour's imaginaries of collective assembly and negotiation to construct with non-human others who share our 'Earthbound' existence and the 'composting' and 'companion species' of Donna Haraway.[55]

In tracing a line of thought of a less productivist and activist framework of the power of life, life is not imagined as continually working to become its 'better self' through the imaginary of the

'hidden hand' of resilience.[56] For Colebrook, these imaginaries set 'the urgent, yet redemptive, tone today of ecological ethics', and constitute resilience thinking as part of the problem rather than the solution as: 'it is the insistence on the universe as an organism or web of life that allows us to retain anthropomorphism, for the world is still the milieu of our life *and* life itself is presented as active, creative and self-furthering'.[57] Along similar lines to Clark and Thacker, she argues that we need to reject this view of life as made up of systems of harmonious self-making interactive subjects – the vision of nested systems resilience scholars define through the concept of panarchy[58] – and instead to appreciate that to live is also to become subject to powers beyond knowledge and control.[59] It is precisely these breaks in continuity that prevent life being one homogenizing process of 'becoming' or 'actualization' and enable creativity beyond the biopolitical imaginaries of resilience. While resilience thinking challenges modernist assumptions of human-centered direction over life, anthropocentrism is smuggled back in with an ontology of a world that is coherent and harmonious and capable of directing governance toward new forms of sustainability. The celebrated 'naturalization of politics' that plumbs the Anthropocene's immersion of the human in the natural to discover new principles of governance, ethics, and politics immanent to emergent and relational life[60] thus sits more closely to resilience thinking than many proponents might acknowledge.

Tracing these lines of contrast between resilience and asymmetrical approaches to the Anthropocene – two differing views of life's amenability to governance and problem-solving after the end of modernist assumptions – enables us to develop our distinct critique of resilience. The latter's problems are not simply that it can be understood as neoliberal.[61] Instead, what is at stake in both resilience and asymmetric Anthropocene thinking *is a contestation over how 'the end of the world' – of the human/world binary – works politically and poetically.*

Resilience approaches to the Anthropocene try to resolve the problematic modern human/world binary by drawing nonhuman life's emergent powers into the realm of neoliberal governmental aims. In doing so, resilience approaches posit a flattened, self-contained world of cybernetic control. In this 'one world world' of relational complexity,[62] entities are products of interactive assemblages as life is understood as a self-organizing system of adaptive ordering. Creative differences are always interactive non-linear paths of functional adaptation, forever refining, and differentiating as life perfects its sympoietic adaptation. Entities, immersed in relations, are reduced to signs or signals or code for the life forces operating through them. In resilience approaches, politics is reduced to immanent forms of eco-cybernetic control and connection.[63] Such interlinkages are the weft and weave of Anthropocene governance and economy. Resilience approaches aim to administer these connections; to modulate them and adapt in 'real time' as individuals, communities and societies self-regulate without thinking of causation or problem-solving in modernist terms. Within such governing imaginaries, human and nonhuman entities are rendered equivalent, as they are both interlinked into broader, adjustable feedback systems, where they become understood as interchangeable and related in terms of feedback and communication.[64]

For explorations of the asymmetric Anthropocene cited above, differences matter in ways that are not so easily assimilated into new governing imaginaries: relations are stranger and temporalities of 'weird' loops[65] are incongruent with the 'one world world' of relational complexity where impacts and responsibilities can be traced and manipulated in such instrumental ways. For Morton, the productive, progressive trajectories that resilience approaches attach to feedback loops must be relinquished. They represent, he argues, a 'violence that tries to straighten the loop'.[66] Instead, one must 'delve further into the loop form'[67] to disperse human agency into a world which it cannot grasp, producing a kind of immanence itself albeit one no longer tending toward productive ends, governmental, progressive, or otherwise. 'As in a blizzard. . .where one's sense of distance evaporates. . .where the environment at its purest seems to absorb me from all sides. . .' envisions Morton.[68] In this line of thinking, human agency is pushed even beyond being a node within tightly

coupled feedback loops, instead it is at risk of being dissolved altogether into a nihilist world of loops which it can neither understand nor control.

The stakes, it would thus seem, are clear. In the Anthropocene we must make a choice between two varieties of posthuman, either the human as suborned to the world – a world still 'for us' but one in which we are humbled into obeyance; the world of the adaptive imaginaries of recursivity offered by the advocates of resilience – or we must imagine a world that is not 'for us' and the dissolution of the subject itself; into the flows and abyssal flux of matter and meaninglessness. In heuristically forcing to the surface this binary, in which the world is either available 'for us' but only in a totalizing way or not available 'for us', in an equally totalizing way, we seek to suggest that there may be more possibilities for the Human after the death of the modernist imaginary of world and subject. The penultimate section explores alternative possibilities beyond this binary.

After the end of the world

For us the issue of overcoming modernity is less significant than that of the political possibilities opened and foreclosed by these bodies of thought. As we see it, explorations of the asymmetrical Anthropocene make important points about the relationship between human and nonhuman forces that put resilience's status as the most appropriate political approach to the Anthropocene into question. But all too often, asymmetric Anthropocene approaches are led to interpret the political implications of this asymmetry in ways that, we believe, can be unnecessarily disempowering. From a political perspective, we suggest, both approaches, those of resilience and of the asymmetrical Anthropocene can be problematic.

While there is little new in arguing that discourses of resilience can suborn us to the world as it is, reducing governance to questions of vulnerability and adaptation, it is important to highlight that explorations of asymmetry can similarly curtail human potential and political possibility in their emphasis on the unknowable and uncontrollable powers of the world beyond the human.[69] As we see it, there is no inherent or necessary path from an awareness that the world contains living and nonliving processes and forces beyond totalizing human knowledge or control – a reality few would dispute – to meditations on human powerlessness and condemnations of human agency. Certainly, there are living and nonliving processes beyond human knowledge and control but there are also real histories, not just of the human species' impact on the environment but also of conscious political subordination, contestation, and struggle, which also have all too real effects which continue to reverberate no less than those of pre-human planetary forces.

The ability to contest existing conditions is not an outdated relic of the Holocene to be discarded, but a unique human capacity in need of rejuvenated exploration today more than ever. The political, economic, and existential stakes of the Anthropocene are high, and while the dissolving of human agency into a blizzard might be an aesthetically pleasing image for some, it would probably be less so in, say, Texas, where recently dozens of elderly and young people died from hypothermia when the recent near-collapse of the state's power grid after extreme winter storms and electrical utility-imposed blackouts left millions of people without power, clean water and fresh food for several days during record cold temperatures (while commercial areas were prioritized and politicians went on vacation). Instead of pathologizing human power and naturalizing dispossession within a catastrophic world of supposedly inevitable, endless disaster, it seems to us that continuing to explore human capacity to resist such conditions and create other ones is a far more adequate response to the Anthropocene.

Doing so is not inherently incompatible with explorations of the asymmetrical Anthropocene. It just requires taking it in a very different direction. In fact, Nigel Clark's work, one of the most well-known and elaborated accounts of asymmetry, itself offers a productive jumping off point

for such a reclaiming of human agency.[70] While readers tend to approach his work with the volume up on the nonhuman, Clark's work is remarkable, it seems to us, for the endless stories of the awesome – creative, destructive, evasive – things *humans* do on a planet of powerful forces and matter. Rather than becoming one with ice and snow, Clark gives us account after account of human-created flame and fire, shelter and warmth, defense and offense.[71] Drawing on a favorite form of matter – fire – he describes how humans across place and time have deployed, captured, and intensified flame for manifold uses and ends both instrumental and irrational: to illuminate dark places; blaze trails through tangled landscapes; create hunting grounds, ward off predators, or drive prey; bake figurines and breads; burn fossil fuels, power factories; create warmth and comfort; choreograph elaborate fireworks displays; produce weapons, armor, and money; or torch structures of brutal domination, as in the setting aflame of a Minneapolis police precinct in response to the police killing of George Floyd in the summer of 2020.

Fire is of course but one of the many strategies through which very different humans, across place and time, in political upheaval and everyday life, take hold of and 'tap the power and potentiality of our planet. . .[the] elemental ingredients of our inherited worlds. . . the material-energetic expressiveness of our planet itself'[72] and put them to different ends. Some of these are simply adaptations. Others, a means to dominate other people or lands. But human existence past and present is also replete with creative, destructive, and evasive strategies through which humans take hold of and shape, intensify or destroy environments and matter as a means of liberation from domination. These strategies work on and through a variety of elements, not only earth and fire, but also water, ice, sand, swamps, and so on.[73] Taking these seriously challenges earth-based understandings of subjectivity and territory that present us with a binary choice between a world 'for us' and a world inaccessible to us after the end of the modernist imaginary.

Instead, in any of these, the power of elemental processes can be understood as an incitement, a provocation, a gift, or, just as equally, a challenge or threat. Engaging in such activity, humans make aspects of the world quite knowable: how to start a fire, how to contain and carry it, etc. But such strategies just as equally are waged within contexts of real, often existential uncertainty. Fire also moves of its own accord; an accidental spark blowing on the wind can set whole forests and towns ablaze; a misdirected Molotov can reduce the wrong target to ash and upend an entire social movement (as occurred some years ago in Greece). But far from eliminating possibilities of human agency or political action, this uncertainty is the dynamic context within which political action is waged. From this vantage point, that many of Earth's forces and elements are unknown or uncontrollable constitutes not grounds for self-hatred but part of the beauty and tragedy of life, a context within and against which deeply varied, not to mention hubristic, human strategies are forged.

This image of human life in but also able to separate itself from and act on the world seems to us to diverge radically from both resilience and asymmetric approaches to the Anthropocene. In contrast to homogeneous visions of an endlessly controlled and governed human and nonhuman world – a total order whose completion would be achieved in the form of subjects willingly abdicating their own agency – this is a view of a wild and burning planet populated by wild and burning, but also creative and strategic, people as well, who, rather than being subject *to* the world, shape and push back against it in various ways.[74] As Neyrat argues, there could be no conditions of possibility for politics if it were ontologically impossible to stand apart or separate from the flux or flow of the immediacy of life processes.[75] In this sense, disentanglement, Eva Haifa Girard argues, becomes a key emancipatory strategy.[76] Exploring the potentialities of these and so many other points of 'innervating contact with the elements and powers of the earth',[77] rather than trying to govern and contain them, illustrates how irreducible to either of the above-discussed governing imaginaries human life on earth is. Such strategies are not just objects of remembrance – missed opportunities or replicas behind museum glass – but human forms elaborated in ever-new ways.

We have little doubt that continuing to actively explore the irreducibility of human capacity in uncertain contexts will provide a much richer epistemological perspective than reducing appearances to unknowable and arbitrary processes and politics to reactive adaptation.

This is obviously not the place to propose a political program for the Anthropocene. However, we do believe it is important to refuse the binaries that have been set up to govern and define it, to insist that in fact one can have the human and the world, even and especially in the Anthropocene, and that human agency in this context is not limited to governing crisis but can ground powerful, emancipatory trajectories. Clark's thinking on this matter is but one among many jumping off points for reclaiming human political agency in the Anthropocene, a pathway that is being taken up by growing number of scholars in response to affirmative entanglement thinking.[78]

Conclusions

In this paper, we have sought to reevaluate resilience in and through the Anthropocene. First, we located resilience as a poetic practice linked to the problem of knowing and governing a volatile, interlinked more-than-human world. More than a continuation of neoliberalism, resilience names a world-forming project bound up in the construction of eco-cybernetic forms-of-life attuned and responsive to socioecological emergence and interconnection. Situating resilience as a response to the Anthropocene allows us to understand ongoing governance reforms as an attempt to render governable those fraught affective intimacies that endanger the modern subject's status as the metaphysical grounds of truth, security, and politics. Second, we read resilience understood as such critically, not through now-traditional Foucauldian or political economic lenses, but through the lens of the asymmetrical Anthropocene, with an emphasis on differences as inaccessible and the problematization of relation. Resilience recalibrates governance around the cybernetic systems logic which reduces entities to relations and then opens up the possibility of the adaptive governance of effects, with relation, becoming and immanence posited as an instrumental alternative to the modernist episteme. However, in the asymmetric understanding, this approach remains still too modern, too humanist, in so far as it imagines symmetry and commensurability between human and nonhuman life forces, and thus the possibility of 'enabling' or mobilizing the latter to achieve human governmental aims, passing over the excessive and unpredictable powers of the nonhuman world that operate independently of human intention and control.

Our reading of resilience and asymmetrical approaches to the Anthropocene alongside one another also allowed us to make an additional, original insight, which concerns the way in which the 'end of the world' is playing out politically as a contestation over commensurability and relation. At stake in this decidedly spatial debate, we have argued, is the question of how to move beyond the modern human/world binary. This contestation is conceptual and ethical, with important ramifications for how nonhuman life is understood. But it also has implications for human politics. While our reading of resilience via asymmetrical Anthropocenic thinking yielded new issues with the former that, we suggest, resilience practitioners might seriously consider, we also highlighted the political limitations of some versions of asymmetrical Anthropocenic thinking itself, especially as regards some scholars' dissolution of political subjectivity into the world. In so far as resilience and asymmetrical Anthropocene thinking can be seen as presenting politics as requiring a choice between totalizing alternatives, either the human suborned to the world or the human dissolved within it, we argued that they constrain political possibilities to either reactive cybernetic governance or the ceding of agency to the nonhuman world.

In contrast, we suggested that the fact the world is in many ways unknowable to humans – a fact which few would dispute – does not require that we disavow human agency nor does it mean that humans cannot engage in political action. Instead of following the turn toward the intensification

of relationality or push toward dissolution into the world – both of which we argue foreclose political transformation – what we suspect is that rethinking political subjectivity even in a world defined by asymmetry may prove more fruitful. Our hope is that our reflections on resilience, asymmetrical Anthropocenic theory, and political subjectivity, respectively, have highlighted key areas for critical self-reflection and further conceptual development as critical scholars continue to grapple with the challenges the Anthropocene poses to critical thought.

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Notes

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