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Climate Change Fiction and the Future of Memory

Speculating on Nathaniel Rich's *Odds against Tomorrow*

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The new geological epoch of the Anthropocene can be broadly defined by the primacy of human agency as a geophysical force (see Crutzen and Stoermer 2000; Crutzen 2002). Although there are varying interpretations around the Anthropocene's inception date, the consensus points to the beginning of the Industrial Revolution and its inauguration of the large-scale burning of fossil fuels and consequent atmospheric emissions of carbon dioxide, the cumulative effects of which make climate change the most pronounced Anthropocenic characteristic (see, for example, Bonneuil and Fressoz 2016, 1–19). This new geological epoch is legible in the geological record that is being left by humanity's collective geophysical agency and to a lesser extent in the less-sedimented, emergent materializations of transformation in the atmosphere, lithosphere, biosphere, and hydrosphere. Put another way, that unfolding geological record of humanity's inscriptions can be thought of as an archive by which the past and future history of the Anthropocene might be remembered.

Remembrance is a pertinent concept in this context, as it captures the dynamic of the past's return. As Christophe Bonneuil and Jan-Baptiste Fressoz argue, it is delusional to regard

the conceptualization of the Anthropocene as a period of awakening to the radical changes in Earth systems, the precarity of species (human and nonhuman) and their environments, levels of waste, toxicity and pollution, and social disintegration brought about by resource and energy depletion and redistribution (Bonneuil and Fressoz 2016, xi–xiv). For the inception of the Industrial Revolution also marked the inception of knowledge of its environmental consequences, planetary thinking about such matters, and prognoses as to what industrially driven environmental futures might look like—knowledge that would be subsumed by the ascendancy and prevalence of ideas of security, prosperity, liberty, and the instrumentalization of nature and freedom from its determinants. These freedoms were of course predicated on a fossil-fueled modernity (Chakrabarty 2009, 208; Bonneuil and Fressoz 2016, 41–44). The Anthropocene, then, describes the return and remembrance of knowledge historically dissociated, but what returns is not just cultural matter but also biological, physical, and chemical matter, as socioeconomic modification of Earth systems (and indeed bio-physico-chemical modifications of the socioeconomic) manifest themselves cumulatively and latently. With the systemic generation of feedback loops and the thresholds of systemic tipping points crossed, geohistory is anything but linear and progressive. Put otherwise, the collective actions of humanity (e.g., emissions of so-called greenhouse gases) have afterlives—among which are rising sea levels and planetary temperatures and consequent meteorological instability. The courses of these afterlives are difficult to predict with precision; but nonetheless, they belatedly disrupt modernity’s progress. This essay explores how the Anthropocene and its environmental futures might be remembered in the face of modernity’s and postmodernity’s forgetful, capitalist progress; how the work of cultural memory might apprehend the belatedness of the Anthropocene’s present and future force as the materialization of a forgotten past; and how the

Anthropocene's geological inscriptions might be curated and archived by the work of cultural memory as the material of memories to come.

Arguably, this work of cultural memory is exemplified by one quite common variant of the emergent and growing genre of climate change fiction. Climate change fiction is increasingly turning toward the future anterior—the dramatization of that which will have been—in the literary imagination of near-future scenarios of catastrophe and postcatastrophe. Whether the future emplotted is (post)apocalyptic and characterized by socioeconomic and ecological collapse and species extinction; whether it is characterized by resilience, adaptability, and sustainability; or whether it is somewhere in between, such fictions stage cultural memories of what has been designated the Anthropocene as an etiology of the conditions that are imagined in the future but that are unfolding in the present of this literature's production and consumption as well as giving narrative presence to that which is subject to cognitive dissonance if not disavowal in that present. Focusing on Nathaniel Rich's 2013 novel of near-future climatic catastrophe, *Odds against Tomorrow*, this essay scrutinizes this fiction's memory work and the ways in which writing and reading the weather is bound up with remembering its causes.

This approach to the Anthropocene in general and climate change fiction in particular raises a number of questions around which this essay will pivot. Given its typical humanist scales, how might the literary work of cultural memory, and indeed the theorization of cultural memory calibrated to those scales, be recalibrated to encompass planetary, ecological disaster? Perhaps more fundamentally, this is a question of not just what is remembered but how memory is mediated or interpolated. Rich's novel thematizes the relationship between environmental catastrophe and finance capitalism, in particular the ways in which corporations can insure against the occurrence of such disasters, the calculated risks of which have been monetized. Such

financial practices are part of the ever-growing futures market in which environmental risk has been commodified and by which nations and corporations can insure against their own risks and invest in the financialized and hedged risks faced by others. This financialization of the future may actually suggest a form of thinking that is as global as the disasters that are financialized and as ecological as the imbrication of human and nonhuman worlds made disastrously apparent by such catastrophes.

In other words, this kind of speculation implies a planetary vision and so a possible departure from the typical parochialism of cultural memory and the possibility of a capacious remembrance of how potential environmental disasters of the future came to be. *Odds against Tomorrow* demonstrates, though, the closing down of this expansive potential when the ecological is wholly subsumed by the economic and when futurist thinking serves only to secure hegemonic US interests.

Itself set in a catastrophic near future, the plot of *Odds against Tomorrow* centers on the worst-case scenarios calculated, predicted, and made profitable by “futurist” Mitchell Zukor and what happens when one such scenario—the landfall of a hurricane on the northeastern seaboard—materializes. Working for FutureWorld, Zukor pitches possible scenarios of intertwined environmental, geopolitical, and economic disaster to potential corporate clients and induces sufficient fear to persuade them to insure and indemnify themselves against legal claims to their liabilities in the face of the human costs of catastrophe. As Ben Dibley and Brett Neilson have argued, the financialization of the risk of environmental catastrophe and the management of the perception of risk creates an “actuarial imaginary,” by which organizations that perceive themselves at risk and that are financially enabled can preempt and financially survive catastrophe while participating in and maintaining the fossil-fueled economy structurally

responsible for the catastrophes that befell them in the first place. As Dibley and Nielson put it, “the actuarial imaginary . . . effects . . . not only the prevention of the trauma of the unmediated future, but of the trauma of a future that does not have its resolution in protection and profit” (2010, 152).

The resolution of the future in protection and profit is not just a matter of forecasting and speculating on that future; it is also a matter of backcasting from those forecasts—of imagining future pasts and thereby how the future was arrived at. Speculation on environmental catastrophe generates speculative narratives structured by the particularities of what may happen and why; but as we shall see, those narrated events and their contingencies need at the same time to be rendered abstract in order to be commodifiable and fungible. From the abstractions of the future, backcasting would be structured by the same homogenizing logic, dehistoricizing events through retrospection. These are the mediations of speculative memory that *Odds against Tomorrow* foregrounds, which are continuous with modernity’s notions of progress and which this novel’s memory work must navigate in order to remember the Anthropocene in other terms. Ultimately, that navigation takes place in the novel’s catastrophic conclusion, amid the ruins left in the hurricane’s wake. The application of Walter Benjamin’s theorization of the wreckage of modernity, and the ways in which such remnants can focus glimpses of time beyond capitalism’s organization, makes Rich’s postcatastrophe landscape legible in potentially countermemorative, counterhegemonic ways.

The early stages of the novel remind us of the specifically American nature of those mediations. In *Odds against Tomorrow*’s twenty-first-century America, environmental catastrophe—or what could be described as “geotrauma” (after Morton)—seems to have redefined the trauma culture engendered by the events and aftermath of 9/11 (see, for example,

Bond¹⁰⁰; Simpson 2006). Indeed, the escalation of environmental catastrophe in this novel subsumes the impact and, indeed, memory of the terrorist attacks (Rich 2013, 15, 27). However, this is not so much a paradigm shift as a continuation of the national fantasies surrounding Homeland (in)Security that have a long history, often involving the perception of environmental threats, and that are oriented toward both an idealized future and past.

Barbara Biesecker argues that the terrorist attacks informed the orchestration of a collective melancholia for an exceptionalist project deemed interrupted by the homeland incursions of 9/11, mobilizing the anticipation of more threats to the idealized lost object in a “clarion call to pre-emptive arms” (2007, 155, 157, 164). Mitchum Huehls adds that the politics and ideology of preemption were designed to gain control of time and restore the temporal continuity of national identity, following the experience of a traumatic temporal dislocation brought about by the terrorist attacks (2008, 44–46). What was at issue, then, was not just the nostalgia for an imaginary homeland of the past but also a “nostalgia for the [imagined] future” of that homeland, as Aaron Derosa puts it (2015, 102). However, as the War on Terror increasingly failed to demonstrate American exceptionalism after 9/11, the prospecting and retrospections of national fantasy sought out “threat in order to reanimate” the idea of nation (Derosa 2015, 102)¹⁰¹. As David Palumbo-Liu argues, the imagination of a potential state of weakness becomes a “pretext” for the reassertion of strength in this “shuttling between reaffirmations of both strength and weakness, of both invincibility and vulnerability” (2006, 152). Climate change has presented the next threat, the securitization of which serves the purposes of hegemonic affirmation.

¹⁰⁰ There is no listing for Bond in the References section. Please provide full citation information there.

¹⁰¹ It is unclear if this quote should be credited to Derosa or to Palumbo-Liu. Please confirm this is the correct citation.

Robert Marzec reminds us, though, that the perception of environmental threat is as old as the idea of American exceptionalism itself and is in fact a constitutional part of that exceptionalism. As inscribed in the Puritan Jeremiad, the self-described moral exceptionalism of the colonial mission, the normalization of crises often generated by the perceived and actual threat of what lay beyond the frontier and all that it symbolized, and the authoritarian coherence of society in the face of that threat were inextricable.

“We see the same element of crisis transfigured from the Puritan wilderness discourse to the twenty-first-century occasion of a post-9/11-shaped discourse of climate change,” argues Marzec (2015, 72–73). After 9/11, he continues, the “nation-state collective fantasy of Homeland Security” has been evolving into a ¹⁰²“new planetary ecological-state fantasy of ‘natural security’ or an ‘eco-security imaginary.’” Securing the environment becomes the means of securing the state at home and abroad, given the relation between climate change, resource scarcity, conflict, and terrorism. This does not mean stabilizing the environment, or in this case the climate, but rather adapting to its continued mutation. Commandeering rather than stemming environmental threat ensures hegemonic perpetuity, and this, for Marzec, explains the Pentagon’s interest in the work of the Intergovernmental Panel on Climate Change (IPCC) (Marzec 2015, 73–78, 79).

That Rich’s novel folds the events of 9/11 into an ongoing narrative of catastrophe rather than making them exceptional and unique suggests that securing capitalism against environmental threat is continuous with the national-security imaginary and its long history of defensive measures. We have seen how retrospection and prospection, and indeed the anticipation of retrospection, have been woven into the temporal schemes of the national imaginary and the fantasies it superintends. Faced with these precedents for looking back

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hegemonically from a secured future, Rich's novel works toward a cultural memory of the Anthropocene that counters such teleologies.

The embedding of future time within a novel about the (near) future—a telescoping of future time—extends the vantage point of retrospection, of a future cultural memory of an unfolding Anthropocene. The work of remembrance undertaken by *Odds against Tomorrow* entails, then, reaccentuating the culture of finance and security this novel emplots, the transvaluation of that culture and its materials to yield countermemorative material, and ultimately the apprehension of climate in counterhegemonic terms.

More than that, this work must entail a rethinking of the habitual humanist boundaries or enclosures of memory work identified, for example, by Tom Cohen. For Cohen, “mourning theory” (as he terms cultural memory and trauma studies) is preoccupied with the defense of human “cultures, affects, bodies and others” through their reconstruction in representations of the past (Cohen 2012, 15–17). For example, Cohen rounds on Judith Butler’s use of the future anterior to frame lives from their beginnings as “grievable” and so sustainable “by that regard” (Butler 2009, 15). Grievable life is recognized as potentially precarious and, in the event of that precarity, would be recognized and remembered *as* life. In other words, life is subject to the anticipation of its future remembrance. Nonetheless, this remembrance secures ¹⁰³political and epistemological homelands—political in the sense that exclusive human habitats, systems, or territories are imagined and so delimited in memory, epistemological in the sense of “our modes of cognition” that cannot think beyond these delimitations (Cohen 2012, 15). That means deferring addressing ecological precarity: “biospheric collapse, mass extinction events, or the

¹⁰³ Though these terms may be directly referenced in Cohen, it is typically unnecessary to encase individual words in quotation marks, with the citation acting as enough of a good-faith reference to the original author’s ideas. If you feel this damages your intent or compromises the reference, however, feel free to stet.

implications of resource wars and ¹⁰⁴“population’ culling” (Cohen 2012, 15–17). In essence, this critique is of mourning theory’s or memory studies’ failure to think ecologically, to apprehend the disastrous imbrication of human and nonhuman worlds. To extend this argument, the humanist enclosures of futurist memory work, its ethical intentions notwithstanding, risk unwittingly sharing the logic of capitalism’s speculations in which the environment is othered as a precursor to its instrumentalization.

To move beyond humanism is to recalibrate the scale(s) of remembering the Anthropocene. The very idea of an anthropogenic, catastrophic environmental event—its eventness—needs to be rethought, given the ways such events unfold unevenly across time and space, their slowly violent effects often dislocated temporally and spatially from their causes¹⁰⁵. In the example of climate change, the feedback loops of these unfolding events ¹⁰⁶turn effects into causes of further climatic transformation; and with atmospheric thresholds crossed and tipping points met, those transformations can be dramatic, sudden, seemingly stochastic, not necessarily predictable, and anything but gradual. More generally, in the “slow” as well as the fast violence of environmental catastrophe (Nixon 2011), human activity sets in motion a chain of action—the environment itself is lent an emergent catastrophic agency—that exceeds human control (Bennett 2010).

So while there is a geological record that demarcates the epochal shift to the Anthropocene, the remembrance of this epoch must also apprehend its emergent and mutating materialities, not just its discrete sedimentations. Thinking expansively across space and time, matter and life—and the multiscale referents of climate change—calls for a derangement of the

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¹⁰⁶ Change okay, or was this “which” referring to something else?

scales of cognition, remembrance and representation (Clark 2012). If, though, a recalibrated, or deranged, theory of cultural memory may be able to conceptualize the scales of climate change, what of the practice of memory? The question remains as to whether such scalar recalibrations remain a theoretical proposition or a narrative possibility.

In order to assess that possibility, it is first necessary to explore how the novel form may function memoratively. Mark Curry argues that the future anterior—the anticipation of retrospection—is as much a question of the novel’s form as it is of its theme and content. In his study of modern and contemporary fiction, Curry’s narratology of the novel, and phenomenology of reading, illuminates a future-oriented structure and experience that resonates with our current, general cultural tendency to consider the present moment as subject to a future memory. Here Curry draws on Derrida’s concept of the archive as the materialization of this anticipatory memory: the archiving archive will structure its contents as they are archived and so anticipate the way those contents are used in memory work in the future (Curry 2012, 17); and this active structuring of the “present in anticipation of its recollection . . . is at the heart of narrative” (Curry 2012, 15). Just as the reader reads of past events and makes them quasi-present through the act of reading (Curry 2012, 30, 39) and just as the author weights those events with a significance that renders them narratable and memorable in the future by a narrator looking back at them—an anticipation staged between the time of the narration and the narrated time (Curry 2012, 31)—the reader encodes life events as objects of a possible future memory. Or as Curry puts it, “the fictional convention which encourages a reader to view the past as present has as its counterpart the tendency to view the present as past, or as the object of a future memory. In other words, the present of a fictional narrative and the lived present outside of fiction are both experienced in a future anterior mode: both are, in a sense, experienced in the preterite tense in

relation to a future to come” (Curry 2012, 30). In other words, in this “structural prolepsis” (Curry 2012, 31) the past is made present through narration, reading, and the narrative structure of the novel. This presentification of the past, given the way it reorients the past toward the future, contributes toward the de-presentification of the reader’s moving present and a culture of futurist thinking outside the novel and its anticipation of retrospection. The novel’s prolepsis is a “performative function which produces in the world a generalised future orientation such that the understanding of the present becomes increasingly focused on the question of what it will come to mean” (Curry 2012, 22).

The catastrophic events narrated (made present and of future import) in Rich’s novel are not contextualized by the narrator or Zukor as the culmination of a history of fossil-fueled industrial capitalism and the effects of humanity’s geophysical agency. However, when critically framed by Curry’s narratology, the environmental events of the novel, narrated in the past tense, are brought into the present by the narrator’s acts of remembrance. In other words, these events are emplotted to be remembered. Just as the fictional past becomes present through an anticipated act of narratorial remembrance, so the novel corresponds with the archival tendencies of, generally speaking, the reader’s contemporary cultural moment and our inclination to anticipate the remembrance of events in our own unfolding present and to experience those events as anticipated memories. In other words, the speculative prolepsis of the novel corresponds with, and perhaps contributes to, the archival tendencies beyond the novel and the possibility of a culture of environmental memory. That correspondence is highlighted by the fact that there are some conspicuous absences in the history of Rich’s speculative future. For example, 9/11 is cited as a historical trauma but Hurricane Katrina is not; yet in interviews, Rich has cited Hurricane Katrina and its aftermath as an important influence on the novel (Rich 2016).

This omission is surely a provocation to the reader to recall Hurricane Katrina as a precursor to the kind of environmental events remembered and predicted in the novel; as a presage of things to come in the reader's near future; and therefore as an invitation to commit such things, of the past and unfolding present, to memory, now and in the future. While there is no shortage of cultural memories of Hurricane Katrina, what is at issue here is the remembrance of such events as part of an unfolding history of the Anthropocene rather than as exceptional and unique natural disasters—a history more memorable when archived.

Despite the archival possibilities yielded by a formalist approach to narrative fiction, cultural memory is of course a matter of form *and* content, and to suggest otherwise disarticulates literature's referential relationship to the world it purports to represent, dehistoricizes the literary form that relationship takes, and makes the referent a matter of no inherent significance. The futurity of narrative fiction's structure can of course be particularized by this novel's thematization of financial speculation and its assessment of risk. As Ursula Heise might argue, the focus on the theme of risk can sharpen our understanding of literary narrative, but it also lends itself to an understanding of how risk is narrated outside the novel. In turn, "a consideration of risk and the kind of narrative articulation it requires has potentially important implications for the analysis of narrative form" (Heise 2008, 161). In other words, the novel form may contribute to an archive of catastrophe and the cultural memories it materializes, but the narrativization of risk in cultures of financial capitalism will illuminate the hegemonic futurist thinking that mediates this novel and occasion a rethinking of the significance of knowing the future in advance.

In Rich's novel, the future is known in advance, as it is in any novel. The wider archival effects of structural prolepsis suggest that the environmental catastrophes fictionalized by Rich,

and those like them unfolding in the past and present worlds of readers, presage worse to come. That the future is written in fiction “‘instructs us’ as to the significance acquired by an event when it is looked back upon in a mode of teleological retrospect” (Curry 2012, 35). While the emplotment of the future may give presence to climate change, is knowing the future in advance tantamount to the teleologies of the environmental futures market? (Admittedly, “presence” here is precarious, predicated as it is on the protensions and retentions that structure narrative. What is more, as Curry argues, prolepsis can be described as a form of Derridean supplementarity and “the logic of supplementarity makes the anticipation of retrospection into a first cause, which precedes the event it purports to follow” [Curry 2012, 43]. In other words, the telos and its origin are ungrounded as the excursion forward is to somewhere that precedes the point of departure.) Nevertheless, by virtue of its emplotment of flood and hurricane, and therefore its realization of the profitable prophecies of Zukor, does this novel dehistoricize catastrophe, rendering it fungible on the futures market? This would resonate with Derrida’s caution about the logic of archivization that “aims to coordinate a single corpus, in a system in which all the elements articulate the unity of an ideal configuration . . . [without] any heterogeneity . . . introducing *a priori*, forgetfulness and the archiviolithic into the heart of the monument” that would, in this case, be Rich’s novel (Derrida 1996, 3, 11–12).

Dehistoricization is fundamental to the futures, or derivatives, market, of which indemnification against future catastrophe—the business of FutureWorld—is paradigmatic; and here an explanatory digression is needed. Derivatives trading began in the 1970s as a mechanism that enabled the basic operations of global businesses: foreign investment, international trade, and the movement of goods. Global businesses could hedge against the risk of fluctuations in the currency of an agreed trade, and therefore financial loss, by purchasing an option to buy or sell

currency at a particular price at an appointed time in the future. The derivatives market evolved, was no longer “derived” from an underlying asset, speculated on currency fluctuations as an end in itself, and from there became a means of predicting the future price of virtually anything, and indeed anything virtual, from stocks and bonds to derivatives themselves (on whether the derivatives contracts would be needed) (McNally 2011, 159–62). As Melinda Cooper puts it, “where traditional derivatives contracts traded in the future prices of commodities, financial derivatives trade in futures of futures, turning promise itself into the means and ends of accumulation” (Cooper 201, 178). In Marxist terms, this is a radical shift in the abstraction of social processes that contextualize the commodification of labor and the commodification of that which labor produces. That abstraction took new financial forms with the emergence of interest-bearing capital, which mystified “the real social process of accruing profit¹⁰⁷,” seemed not to “pass through the underworld of production,” occluded “the actual social relation without which capital cannot subsist (wage-labour),” and gave rise to the “pure fetish of money-capital” and “a fantastic bourgeois utopia where capital endlessly gives birth to itself” (McNally 2011, 152). The late twentieth- and early twenty-first-century derivatives market, though, marks a more complete ostensible dematerialization of capital and its historical reality. In essence, derivatives enable the future to be priced, as does FutureWorld’s insurance policy against future catastrophe. As McNally puts it, derivatives allow the “monetisation” of temporal shifts (2011, 162). All derivative pricing models require that all concrete risks be measured on the same scale. Therefore concrete risk is translated into abstract risk, which makes risk fungible (exchangeable for a price) but ironically also less particularized and therefore less accurately assessed (McNally 2011, 163). Of course, the abstraction of risk is part of the larger dehistoricization that subtends commodification in general; but in the future imaginary of Rich’s novel, it is the historical

¹⁰⁷ There was an end quote missing here. Please confirm the accuracy of this change.

origins and specificities of environmental catastrophes that are rendered abstract.

To be more precise about the processes of abstraction, environmental derivatives share much of the logic of scenario planning. National and international institutions of governance, policy making, and finance, as well as global businesses, have used the methodology of scenario planning, particularly since the financial crash of 2008 and the terrorist attacks of 2001, as a way of assessing and measuring risk. Scenario planning is not a form of forecasting or predicting. It is, as Cooper describes it, focused not on “risk as such” but rather on decision making amid “the radical uncertainty of unknowable contingencies—events for which it is impossible to assign a probability distribution on the basis of past frequencies.” Scenarios are therefore planned using “counterfactual propositions, opening up onto a pluriverse of alternative event-contingent worlds”; for example, “if x were to occur, what world would we be living in? If x had occurred (or had not), what world would we be living in?” (Cooper 2010, 173–74). Cooper adds that as “these discontinuous ramifications unfold” and “the spectrum of alternative futures is expanded beyond the logical possibilities of simple prediction,” it is not just possible futures that are glimpsed but “the proliferating pasts and futures of counterfactual worlds.” Scenario planning is therefore “able to move backwards as well as forwards, positing futures from which a series of alternative pasts can then be ‘back-cast,’” so not just “the way things could be” but also “could have been”—modes of being that are rendered by the grammatical constructions of the conditional or the subjunctive (Cooper 2010, 173–74). In the terms of this essay, scenario planning, then, is a form of futurist memory, a structuring of the future anterior.

As Cooper argues, scenario planning has informed the work of the IPCC, given the ways that the former’s methodology can accommodate uncertain uncertainties,¹⁰⁸ and therefore, the

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discontinuities rather than continuities between the past, present, and future correspond to the difficulties of mapping exactly how, when, and where the effects of climate change—with its feedback loops and self-modifying patterns—will materialize. That scenario planning is designed to imagine future worlds that “with their expansive ontological status and indifference to the law of non-contradiction . . . are capable of enduring extremes of turbulence” also explains the vested interests in this futurist methodology of a resilient and sustainable capitalism (Cooper 2010, 174; see also Pinkus 2011, 71–72). The nexus of scenario planning, finance capitalism, and the future anterior is particularly apparent in the fact that the turbulent events and patterns of climate change itself have become a “speculative opportunity” (Cooper 2010, 173–74, 175).

Given the discontinuities between the past, present, and future in climate change, upon which financial speculation capitalizes, a further refinement of commodity abstraction is needed to understand the orchestrations of historical cause and effect that the future anterior of climate change fiction has to negotiate. Where McNally describes the abstraction and fungibility of risk in futures trading, which would mean a dehistoricization of environmental catastrophe, Cooper argues that the “irreversible, complex nature of the weather makes it recalcitrant to actuarial models of risk management” (2010, 176). In other words, there is “no fundamental value, no equilibrium point of nature,” around which weather predictions can be “calibrated” (Cooper 2010, 176). The unique events that constitute the unfolding of climate change do not cohere into a dataset from which the relative frequency of future extreme weather events can be predicted with certainty. In terms of an actuarial assessment of environmental risk, the only thing that can be valued, priced, and traded is the “uncertainties of the weather and our own uncertainties about the future of climate change” (Cooper 2010, 176). In other words, the future is expressed and priced in “affective terms—in the language of confidence, trust and degrees of belief” (Cooper

2010, 176, 178). Indeed, Zukor trades in affect: “he hocked fear” (Rich 2013, 78). His actuarial method is characterized by the narrator as a form of prophecy; and toward the end of the novel, he finds popular and media celebrity as a prophet of disaster (Rich 2013, 70–71, 244). In pitches to clients, he erratically segues from one interrelated disaster to another: “public health scares” (e.g., contaminated meat, the “poisoning of the water supply”); industrial accidents and the release of airborne toxins; explosions and fires at nuclear plants; global epidemics reaching American shores; terrorism (cybernetic and suicidal); “earthquakes, floods, wildfires, and tsunamis”; “solar storms” and consequent nuclear winters; up-to-now unheard-of volcanoes erupting in the American heartland; and

finally, large-scale fiscal fiasco: the dollar collapses; a major foreign currency fluctuates violently; the real estate market slides eight percent; the World Bank files for bankruptcy; commodities soar, leading to food riots and political instability. And peak oil millenarianism: electric grid crash; the collapse of industrial agriculture, travel and international trade; a return to premodern agrarian life; mass starvation; the wilding of the suburbs. (Rich 2013, 71–73).

Although rhetorically charged, of note here is the interconnectedness of anthropogenic disasters and the ways in which Anthropocenic conditions amplify nonanthropogenic catastrophes.

Moreover, that interconnectedness is affective: “The complications he explored were extravagantly detailed, tendinous, delicious” (Rich 2013, ¹⁰⁹). The affectiveness of these scenarios deliver a “taste of the future” more than an actual risk assessment; these pitches were a “transference” of collective, repressed fears awaiting representation (Rich 2013, 76, 79, 74). In other words, Zukor’s scenario planning informs an exemplary financialized orchestration of affect. How then to read the novel itself in terms other than scenario planning that underpins the future of capitalism? In terms of memory, how then to anticipate retrospection—and stage the cultural remembrance of the Anthropocene—from a future not secured financially?

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When a hurricane hits the East Coast, New York is flooded and rendered mostly uninhabitable, and the physical and infrastructural damage is immense, not to speak of the human casualty rate. Zukor survives but chooses not to return to business as usual, and business for FutureWorld has never been so good—especially as this catastrophe was one of his predictions. Rather, he lives on what is left of Flatlands in the borough of Brooklyn. Although Zukor depends on various pieces of technological equipment donated by his former business partner, his lifeworld—or object world—is mostly structured by his ability to reuse and recycle what was left behind by the wind, floodwater, and rain. Zukor’s life among and through the obsolete—a life through things that have fallen out of circulation as commodities—suggests his attempt to think environmentally, through if not outside the mediations of capital. Indeed, he dwells in what was once a bank.

That Rich stages postcatastrophe living amid the ruined and reclaimed suggests a theory of object life akin to Walter Benjamin’s, and the possibility of appropriating a Benjaminian approach to ruins and the retrospection and prospection focused by those ruins. Benjamin finds that “revolutionary energies that appear in the ‘outmoded’” and the “relation of these things to revolution . . . [is] not only social but architectonic” (Benjamin 1997, 229). As Peter Osborne explains, in the incessant seriality of the commodity form, Benjamin saw the temporal structure and logic of modernity conceptualized as history as progress—a history homogenized, internally undifferentiated and universalized (1994, 83). However, commodities that are obsolete, fallen into obsolescence, ruined, and no longer fetishized or fungible can no longer contribute to the phantasmagoria of commodity culture, the dreamworld of capitalism as utopia (in other words, a myth of progress). Fallen, recontextualized, and reconstellated, such objects compel the historicization of their phantasmagorical function, the historical realities of commodification (the

alienation of labor or conversion of subjects to objects) and therefore the failed promise of a capitalist utopia. As Max Pensky puts it, the material fragments of capitalism, read in this way, interrupt the idea of history as a continuum of progress toward utopia and simultaneously look forward and backward (2004, 184). The forward progression navigates through a history of repetition, to the revolutionary possibilities of awakening from the dreamworld of capitalism; and the material fragments look backward because, fallen, the commodity has been unmade, returned to something akin to natural history—“fossils unearthed from an ongoing history of compulsion, violence and disappointment” (Pensky 2004, 187–88). As Pensky summarises, it is this dialectical opposition of “subject and object,” “history and nature,” “consciousness and material being,” and “time and repetition” that arrests the progression of historical time and shockingly awakens the historical subject from the dream state¹¹⁰ induced by capitalism¹¹¹ (2004, 188). More significantly for the purposes of this essay, “the experience of awakening, in dialectical terms,” is related to a form of “critical memory” (Pensky 2004, 188). Zukor’s wasted landscape and recycled object life provides the materials for the awakening of a critical memory that potentially looks backward to the prehistory of commodities and forward through an unfolding of capitalist history toward a more ecological vision of climate change. Of course this is somewhat different from the kind of history Benjamin sought to orchestrate, but the temporalization of ruins is nonetheless useful, affording retrospective and prospective orientations not coextensive with the temporal horizons of capitalism.

Odds against Tomorrow ends with scenes of stillness and inertia. In clearing the land he claims of storm-damaged and rotten trees, Zukor notices that

what had appeared to be no more than a dead log was everywhere crawling, munching, slurping,

¹¹⁰ Change okay for consistency with MW11, or is this part of a quoted excerpt?

¹¹¹ This last quotation was missing an opening quotation mark. Deletion okay, or should an open quote be placed somewhere before it?

rotting, liquefying, cannibalizing—a grotesque insectopolis. . . . Did he want to obliterate this festering micro-universe? Or might it be nicer to simply join it? To stretch out under the sky until night came and all the creeping things mistook him for a second log to explore and infest. . . . Days would pass, maybe weeks, before someone found him. By then his corpse would have already merged, like the rotting oak, into the marshy soil. (Rich 2013, 291–92)

On the one hand, this is a fantasy of what Stacey Alaimo might describe as the transcorporeal; it is a vision of humanity’s ecological situation. It is also a vision of the abdication of sovereignty over the self and its environment. Implicit here is Zukor’s glimpse of the limited agency he possesses in relation to the surrounding environment and its nonhuman nature and matter. If that is so, the novel leaves us with the idea that agency is a human-nonhuman assemblage and that the effects of human actions do not end with the human. This is not a utopian vision of biocultural equilibrium but rather one of inactivity in the face of the potential environmental change effected by perpetual resource-extractive human activity (Crary 2013, 9–10). Or perhaps this is “thinking” in the Benjaminian sense—the arrest of thought that would otherwise contribute to a “homogenous course of history” containing “homogenous empty time” and instead “blasting” differentiated histories from this continuity (Benjamin 1992, 254). Put otherwise, this moment of arrested thought suggests an interruption of a financialized future, the catastrophic events of which have been made fungible and from which an equally fungible history of events can be backcast and remembered. Instead, the arrest of such historical thinking yields the possibility of the particularization of catastrophe as it is remembered from the future, blasting the historical specificities of environmental disaster from the homogenous empty time of financial speculation.

In Benjaminian fashion, Rich’s entomological vision is a “configuration pregnant with tensions” (Benjamin 1992, 255); it is not a determination of the past and the future but rather, as Peter Osbourne might put it, the “fleeting experience of the legibility of history as a whole”

(1994, 68, 87¹¹²). Zukor’s entomological vision registers one end of the scale of humanity’s geophysical agency; the other end is the severe weather event (an expression of anthropogenic climate change) from which New York, the Northeast, and Zukor are reeling. These microcosmic and macrocosmic images of an Anthropocenic (near) future imply the unfolding of that agency across time as well as space and so the future recollection of Anthropocene history.

Rich’s novel does then suggest the possibility of, or at least gesture toward, a cultural memory capacious enough for the Anthropocene—a recalibration called for at the beginning of this essay. Working toward that possibility, the novel has demonstrated the imbrications of the ecological and the economic, the ways in which speculations on the future and future pasts are mediated, and therefore what a counterhegemonic speculative memory must navigate. However, for all its theoretical possibilities, Rich’s novel is still firmly parochial. In Zukor’s scenarios of global catastrophe that reach America’s shores, the global remains on an abstract level and never realized outside of the actuarial imaginary. If the global remains abstract, the effects¹¹³ of climate change beyond the developed West or Global North, as assessed in 2014 by the *Fifth Assessment Report* of the Intergovernmental Panel on Climate Change (see also, for example, Nixon 2011), remain unspecified in this literary regime of representation. Therefore, Zukor would not knowingly fit Michael Rothberg’s definition of an “implicated subject”—as an agent of climate change, a perpetrator of slow violence against the Global South but also a potential victim of that violence when climate change belatedly threatens the developed, industrialized world from which it originated (Rothberg 2013, xv). The parameters of Rich’s novel are not only geographically delimited, but its ecological reach is dubious. The narrator has a transcorporeal fantasy of abdicating sovereignty over the more-than-human world, and implied in this is a

¹¹² This has already been parenthetically referenced in this sentence.

¹¹³ Please confirm that this is referring to “the results,” not “the emotions.”

recognition of humanity's geophysical agency. But there is no specific recognition of the effects of climate change on that world in terms of nonhuman species precarity and extinction (see, for example, Kolbert 2014).

The possibilities and limits of Rich's novel may be due to its thematic preoccupations, but they also point toward the challenges faced by climate change fiction more generally and its generic constraints. For example, is too much being asked of the novel form, with its residual humanism of plot and geography? As Heise has argued, the narrativization of risk can draw on the cultural power of generic templates to render "intelligible and meaningful" environmental information in ways that can be ecologically and politically disruptive or benign, ways in which genre can contain or be disrupted by what it delivers (2008, 138). Now that climate change fiction—particularly the catastrophist, future-orientated version—has become a recognizable genre, it brings its own teleologies of anticipation, regardless of whether or not it deals with financial speculation. In the face of the novel's likely humanist purview and generic tendencies, it is perhaps more productive to read, as Clark advocates, within multiple and contradictory frameworks, in this case the economic and environmental enclosures of American literature *and* the Anthropocene's deeper and vaster, emergent temporal and spatial coordinates (Clark 2015, 52–54, 62–63). Although Rich's novel stages a potentially Benjaminian reading of postcatastrophe ruins, its form and interpellation may inevitably subsume the expansive memorative disposition provoked by those ruins. However, read within those multiple and competing frameworks, Rich's novel is lent an afterlife (in a rather Benjaminian fashion), becoming "a measure of some intractable break in consciousness and understanding," as Clark would put it (2015, 54); the immanence of the novel's Anthropocenic context remains in tense copresence with the localizing purview it threatens to unground.

About the Author

Rick Crownshaw is a senior lecturer in the Department of English and Comparative Literature, Goldsmiths, University of London. He is the author of *The Afterlife of Holocaust Memory in Contemporary Literature and Culture* (New York: Palgrave Macmillan, 2010), as well as numerous articles on American literature, memory studies, and trauma studies. He is the editor of *Transcultural Memory* (London: Routledge, 2014) and coeditor of *The Future of Memory* (New York: Berghahn 2010). He is currently working on a monograph, “Remembering the Anthropocene in Contemporary American Fiction,” which focuses on, among other things, the potential of cultural memory and trauma studies in analyzing literary narratives of climate change and its communication and cognition, extinction, pollution and toxicity, the resourcing of war, American petrocultures, and postoil imaginaries. He is the coeditor of a forthcoming special edition of *Studies in the Novel* on climate change fiction.

References

- Alaimo, Stacey. 2010. *Bodily Natures: Science, Environment, and the Material Self*. Bloomington: Indiana University Press.
- Benjamin, Walter. 1992. “On the Concept of History.” In *Illuminations*, edited by Hannah Arendt, translated by Harry Zohn, 245–55. London: Fontana.
- . 1997. “Surrealism: The Last Snapshot of the European Intelligentsia.” In *One Way Street*, translated by E. Jephcott and K. Shorter, 225–39. London: Verso.
- Bennett, Jane. 2010. *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press.
- Biesecker, Barbara. 2007. “No Time for Mourning: The Rhetorical Production of the Melancholic Citizen-Subject in the War on Terror.” *Philosophy and Rhetoric* 40(1): 147–69.
- Bond¹¹⁴
- Bonneuil, Christophe, and Jean-Baptiste Fressoz. 2016. *The Shock of the Anthropocene: The Earth, History and Us*. Translated by David Fernbach. London: Verso.
- Butler, Judith, 2009. *Frames of War: When Life Is Grievable*. London: Verso.
- Chakrabarty, Dipesh. 2009. “The Climate of History: Four Theses.” *Critical Inquiry* 35(2): 197–222.
- Clark, Timothy. 2012. “Derangements of Scale.” In *Telemorphosis*, 147–62.
- . 2015. *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept*. London: Bloomsbury Academic.
- Cohen, Tom. 2012. “Murmurations—‘Climate Change’ and the Defacement of Theory.” Introduction to *Telemorphosis: Theory in the Era of Climate Change*, vol. 1, 13–42. Edited by Tom Cohen. Ann Arbor, MI: Open Humanities Press.
- Cooper, Melinda. 2010. “Turbulent Worlds: Financial Markets and Environmental Crisis.” *Theory, Culture, and*

¹¹⁴ Please provide full citation information for this source cited in the text.

- Society* 27(2–3): 167–90.
- Crary, Jonathan. 2013. *24/7: Late Capitalism and the Ends of Sleep*. London: Verso.
- Crutzen, Paul. 2002. “The Geology of Mankind: A Critique of the Anthropocene Narrative.” *Nature* 415 (January 3): 23. doi:10.1038/415023a
- Crutzen, Paul, and Eugene Stoermer. 2000. “The Anthropocene.” *Global Change Newsletter* 41(1): 17–18.¹¹⁵
- Curry, Mark. 2012. *About Time: Narrative, Fiction and the Philosophy of Time*. Edinburgh: Edinburgh University Press.
- Derosa, Aaron. 2015. “Nostalgia for the Future: Temporality and Exceptionalism in Twenty-First Century American Fiction.” In *Narrating 9/11: Fantasies of State, Security, and Terrorism*, edited by John Duvall and Robert P. Marzec, 98–117. Baltimore: Johns Hopkins University Press.
- Derrida, Jacques. 1996. *Archive Fever: A Freudian Impression*. Translated by Eric Prenowitz. Chicago: University of Chicago Press.
- Dibley, Ben, and Brett Neilson. 2010. “Climate Crisis and the Actuarial Imaginary: ‘The War on Global Warming.’” *New Formations* 69(8): 144–59.
- Heise, Ursula K. 2008. *Sense of Place and Sense of Planet: The Environmental Imagination of the Planet*. Oxford: Oxford University Press.
- Huehls, Mitchum. 2008. “Foer, Spiegelman, and 9/11’s Timely Traumas.” In *Literature after 9/11*, edited by Ann Keniston and Jeanne Follansbee Quinn, 42–59. New York: Routledge.
- Intergovernmental Panel on Climate Change. 2014. *Fifth Assessment Report*.
http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml.
- Kolbert, Elizabeth. 2014. *The Sixth Extinction: An Unnatural History*. London: Bloomsbury.
- Marzec, Robert P. 2015. “Climate Change and the Evolution of the 9/11 Security State.” In *Narrating 9/11: Fantasies of State, Security, and Terrorism*, edited by John Duvall and Robert P. Marzec, 70–97. Baltimore: Johns Hopkins University Press.
- McNally, David. 2011. *Monsters of the Market: Zombies, Vampires and Global Capitalism*. Chicago: Haymarket Books.
- Nixon, Rob. 2011. *Slow Violence and the Environmentalism of the Poor*. Cambridge, MA: Harvard University Press.
- Osborne, Peter. 1994. “Small-Scale Victories, Large-Scale Defeats: Walter Benjamin’s Politics of Time.” In *Walter Benjamin’s Philosophy: Destruction and Experience*, edited by Andrew Benjamin and Peter Osborne, 59–109. London: Routledge.

¹¹⁵ I cannot tell what this character or symbol is indicating. Can it be deleted, or was this translated incorrectly somehow and should be fixed?

- Palumbo-Liu, David. 2006. "Preemption, Perpetual War, and the Future of the Imagination." *Boundary 2* 33(1): 159–69.
- Pensky, Max. 2004. "Method and Time: Benjamin's Dialectical Images." In *The Cambridge Companion to Walter Benjamin*, edited by David S. Ferris, 177–98. Cambridge: Cambridge University Press.
- Pinkus, Karen, 2011. "The Risks of Sustainability." In *Criticism, Crisis, and Contemporary Narrative: Textual Horizons in an Age of Global Risk*, edited by Paul Crosthwaite, 62–80. London: Routledge.
- Rich, Nathaniel. 2013. *Odds against Tomorrow*. New York: Picador.
- . 2016. "Interview with Nathaniel Rich." Interview. Audio blog post. *LA Review of Books*, n.d. Web. 21 June 2016.
- Rothberg, Michael. 2013. "Beyond Tancred and Clorinda—Trauma Studies for Implicated Subjects." In *The Future of Trauma Theory: Contemporary Literary Criticism*, edited by Gert Buelens, Sam Durrant, and Robert Eaglestone, xvi–xvii. London: Routledge.
- Simpson, David. 2006. *9/11: The Culture of Commemoration*. Chicago: University of Chicago Press.