THE DISTANCE PLAN # 5

CHARISMATIC FACTS: CLIMATE CHANGE, POETRY & PROSE

Charismatic facts are magnetic; they move from speaker to speaker, gaining velocity and weight the more they circulate and the further they travel from their point of disciplinary origin. Charismatic facts can be used by speakers in many situations, including academic, political, and informal conversation. One might encounter a charismatic fact on a protest sign, in a speech before the UN, or over the course of a family argument. Before a data point becomes a charismatic fact, linguistic and methodological barriers preventing interdisciplinary circulation must be overcome. A charismatic fact becomes commonsensical and emotionally compelling when it is stripped of field-specific language, but retains vestiges that signal its credentials. These signals of believability might be authorial, institutional, or linguistic.

A charismatic fact grafts scientific evidence onto culturally resonant narratives that lend themselves to circulation and reproduction. A charismatic fact is generally scientifically verifiable and tied to reputable sources. Scientific facts are mediated, though the term "charismatic facts" draws our attention to the possibility that mediation need not be synonymous with misrepresentation or inflation. In a time of overwhelming scientific consensus about human-caused climate change but weak political action, the charismatic fact might usefully connect the academy and activism.

The deployment of charismatic facts is an ideal that seeks to reclaim the portable and memorable fact. Charisma has a dubious history, generating shimmering auras of distortion around persons and objects. And yet, in a time of fragmented political will, charismatic facts offer a medium for organization, mobilization, and circulation. In this context we propose that charismatic facts offer special promise for climate activism.

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What is the relation between charisma and information? How fast can a well-turned phrase move? How does it age? In this issue of *The Distance Plan* we consider how, occasionally, facts or argumentative claims float free from their point of origin to become hyper-portable and cross-disciplinary. We call these memorable, animated phrases "charismatic facts" and suggest they can be found at the intersection of flair and research, savvy and data, linguistic craft and political utility. Though charismatic facts may remain lightly tethered to, and therefore validated by, their authorial or institutional home, they are at the same time unordinary in that they are used freely by a range of speakers, from scientists and activists to TV anchors, politicians, and family members at dinner.

Adaptive to a range of narrative maneuvers, such as comparison and analogy, a charismatic fact can be used to present new or under-disseminated knowledge in a more versatile format. A charismatic fact may draw on cultural particularities to illuminate broader political trends, for example: "1965 was the year in which the French fashion industry for the first time produced more trousers than skirts." A charismatic fact might also lean on rhetorical strategies such as relativity or orders of magnitude: "In China alone, more cement was used in the three years from 2008 to 2010 than in the entire twentieth century in the United States."

Charisma has a dubious history, associated with lending a shimmer of power or unearned appeal to persons and objects. We did not ask our contributors in this issue to limit themselves to current discussions about fake news or the aporia of adjudicating truth on social media. Rather, we asked them to consider the nature of charismatic facts, what they might be, what narratives they might make or unmake. In a time of overwhelming scientific consensus and huge amounts of academic writing devoted to climate change and the Anthropocene, it has nonetheless proved remarkably difficult to marry climate science with charismatic speech. The political will to act remains siloed and fragmented. We wondered if these movable facts might be resilient to distortion. Thought in another way: how and how far can language travel without stripping itself of meaning?

But, the concept of charismatic facts also faces a curatorial problem. How does one pick portable facts out of a global tragedy? Scientists and activists, let alone those who have experienced the violent effects of climate change, could reasonably reject such a strategy as vulgar, distasteful, and small. A tragedy of such scale and complexity should not be addressed with an unethical appetite for clickbait journalism and meme-able quotability. And so, we left charismatic facts open to rejection. In his book The Great Derangement, Amitav Ghosh points out that contemporary literature has so far failed to seriously take up the challenge of global climate change. In this issue, we consider why writers have been reluctant to translate global climate change into narrative, and if Ghosh is right to say that posterity will judge our literary moment as a period of great delusion and denial.

¹ Jonathan Freedland, 'The Age of Hobsbawm,' book review, *The New York Times*, 5 September 2014

² Vaclav Smil, 'Making the Modern World: Materials and Dematerialization (Chichester: Wiley, 2014), 16.

Long associated with unwelcome prophesy, poets have unsurprisingly been more willing to take on the simultaneously ungainly and tragic topic of environmental destruction. In her poem, Rae Armantrout writes, "It's true things fall apart./Still, by thinking/we heat ourselves up." This issue of *The Distance Plan* pairs narrative and poetic voices, so that intellectual thought can be warmed by the heat of feeling, the critical by the poetic. When presented with the concept of charismatic facts, some poets focused on fact, others on the vatic quality of language. It has been said of the Trump era that civil society will bear down on language to an extraordinary degree. In poetry, language is allowed to be direct and incantatory as when the collaborative, crowd-sourced poem *Executive Orders* decrees that we should "put all the diamonds back in the ground."

Advocates for an immediate and decisive response to the environmental situation find themselves in a peculiar situation: in Washington DC anthropogenic climate change is still considered under debate – more than half the members of the US House of Representatives declare themselves skeptical about the human causes of climate change⁴ – while the US public is already experiencing what paleoecologist Jacqulyn Gill has called "empathy saturation" for victims of environmental disaster.

In their paired texts, father and son Gabriel and Boaz Levin reflect on the Palestine-Israeli conflict and the difficulty of building narratives around political and human rights tragedies that unfold over decades. How do writers remain vigilant witnesses and how do artists remain sensitised observers? The challenge "for any artist with a realist bent set to grapple with the political everyday," says Boaz Levin, is to "come to terms with the brutality of fact." Or, as Gabriel Levin observes, "our lives/brim over with the commonplace: clods loosened/where the pitchfork lies by the wall, nosy bees/ in the rosemary, and hey, wouldn't it all be just/fine if not for the new breed of mosquitos/bloodletting at low altitudes? I flap the covers ... What else awaits the avid/reader this morning? The Brutality of Fact."

This issue offers the idea of charismatic fact as provocation rather than fixed concept, as something prompting further thought and welcoming opposition. Our contributors gesture towards the potential instrumentality – as well as liability – of charismatic facts in the public discussion of climate change. In their crystalline portability and ready-to-handedness, do charismatic facts offer frustrated climate scientists a discursive strategy for making their arguments not just heard, but repeated, and circulated, even while retaining their core meaning? Can the 'stickiness', the ear-worminess, the dynamism of a charismatic fact be put to work in aid of a more informed, participatory discussion? Rather than fear-driven sound bites that bring paralysis to our confrontation with the gravity of contemporary climate science, we ask whether that charismatic facts, as information in motion, may collectively pull us forward into new and urgently needed discussion.

4 Sarah Emerson, 'A Guide to the Climate Change Deniers in Congress: How many are representing your state?', *Motherboard*, *Vice*, 29 April 2017. https://motherboard.vice.com/en_us/article/pg5zqg/a-guide-to-the-climate-change-deniers-in-congress.

CHARISMATIC FACTS

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Unlike cultural artifacts like memes, which pass from one individual to another by processes of imitation, a charismatic fact does not mutate as it spreads; and, though it may lose the format of its disciplinary origin, the core proposition of a charismatic fact remains intact. A charismatic fact is so memorable that it would survive a game of telephone. A charismatic fact can accommodate debate and continued clarification, such as when, for example the data to which it is moored are refreshed or updated. Charismatic facts suggest a formal rethinking of popular twentieth-century campaigns featuring charismatic megafauna by groups like the Nature Conservancy or the World Wide Fund for Nature that understood charisma as a subject, rather than a discursive strategy.

The poorest half of the global population is responsible for 10% of global emissions; the richest 10% is responsible for around 50%¹

A charismatic fact grafts scientific evidence onto culturally resonant narratives that lend themselves to circulation and reproduction. A charismatic fact is generally scientifically verifiable and tied to reputable sources.² Scientific facts are mediated, though the term "charismatic facts" draws our attention to the possibility that mediation need not be synonymous with misrepresentation or inflation.³ In a time of overwhelming scientific consensus about human-caused climate change but weak political action, the charismatic fact might usefully connect the academy and activism.

The deployment of charismatic facts is an ideal that seeks to reclaim the portable and memorable fact. Charisma has a dubious history, generating shimmering auras of distortion around persons and objects. And yet, in a time of fragmented political will, charismatic facts offer a medium for organization, mobilization, and circulation. In this context we propose that charismatic facts offer special promise for climate activism. A charismatic fact feeds on the internet's capacity to support and grow mass communication networks. A charismatic fact might be distributed through decentralized means, engendering connections among groups that are not traditionally aligned, but a charismatic fact might also use traditional public channels of broadcast media to gain recognition and uptake. A charismatic fact is a conceptual framework, an open possibility for asking what language can accomplish, how can climate facts be honed and taken up for immediate use.

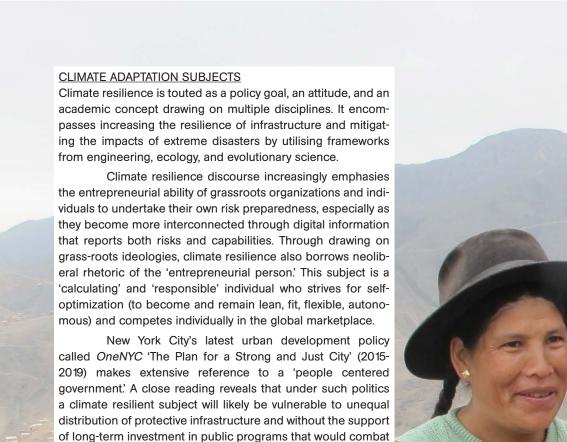
mage: K. Flint, Bonneville, UT, 2018. Digital photograph.

^{1.} Timothy Gore, 'Extreme Carbon Inequality: Why the Paris climate deal must put the poorest, lowest emitting and most vulnerable people first', Oxfam International, 2015.

^{2.} Specific facts are often drawn from large institutional studies conducted, for example, by the Intergovernmental Panel on Climate Change, NASA Goddard Institute for Space Studies or National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The citation of charismatic facts often scales directly from the specific to the institutional.

^{3. &}quot;Science creates entities—the periodic table of chemical elements, the nitrogen cycle, blood pressure, the metric system, biodiversity, the ozone hole—that reflect no-one's unmediated observation of the world and yet are recognized and accepted as real. It is this very capacity to make ideas and objects that travel, spilling over the limits of lived experience, that students of the scientific enterprise have taken as the foundation of sciences special cognitive authority." Sheila Jasanoff, 'A New Climate for Society, Theory, Culture & Society 27, 2010, (2–3): 233–53. doi:10.1177/0263276409361497.





And yet, political constituencies can also form around assessing climate resilience. Citizens in Bogotá engaged in acts of measurement of their own community risks, in a neighborhood that had developed in ravines subject to erosion and other climate exacerbated risks. Measurements included counting leaking water supply tubes, and registering illegal dumping. This act of measuring climate risks constructed a political constituency.

Reconstituting the identity of climate resilient subjects allows for the questioning of what political agency follows from instances where citizens monitor and protect themselves from risk. How does such monitoring open subjects up to being capitalized on by economic and political actors interested in sustaining the status quo? How can we begin to think of climate risk measurement practices that are utilized for critiquing authority, and in turn exposing how 'individual' failures are in fact systemic in origin?

Defined by Veronica Olivotto

Image: Photo by Rita Lambert, 2013. Community mappers from José Carlos Mariátegui, district of San Juan de Lurigancho, Lima-Peru holding the drone that captured the high resolution images of their settlements on the peripheral slopes until then unmapped. Part of the action research project ReMap Lima, DPU- UCL.

poverty and insecurity.



THE UNTHINKABLE

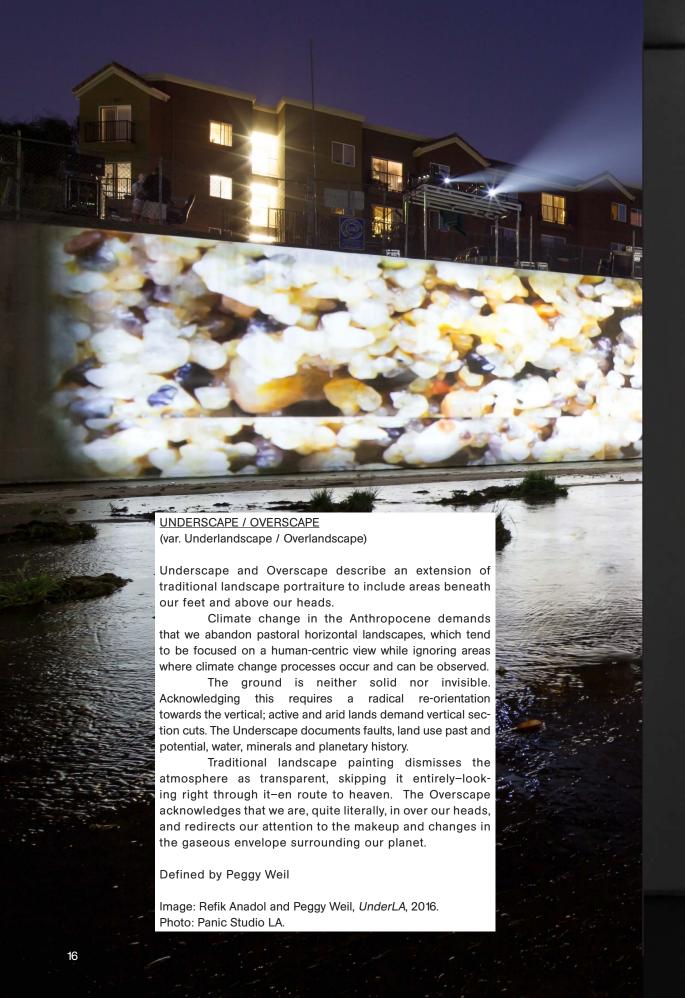
To call an event unthinkable is to at once envisage its unfolding and render it off-limits to the imagination; once summoned to mind, unthinkable events are immediately cast off as inconceivable. It is a term with apocalyptic associations that date to the Cold War, when American defense strategists were tasked with "thinking the unthinkable"—dreaming up scenarios by which thermonuclear war could occur. In the context of our current planetary condition, this unthinkable-apocalypse dyad has been forcefully reanimated, becoming a common refrain as storm after storm is declared to have wrought "unthinkable" damage on a city.

At the same time, a practice of thinking the unthinkable enacts a politics of unthinkability: the responses to apocalyptic futures that are imagined reveal fundamental assumptions about how the world works and how it will work in the future. What visions of the future are implicitly posited, for example, when responses to the threat of global-scale environmental crises come in the form of reusable grocery bags, LEED certification, and the Paris Climate Accord? What possible alternative worlds are foreclosed when resilient urbanism and geoengineering become the shared conceptual vocabulary among urban planners, or when the project of rebuilding hurricane-ravaged islands is reimagined as a demonstration of scalability for Tesla Powerpack battery systems and Alphabet's solar-powered cell service balloons?

The unthinkable calls attention to absence and to the futures foreclosed by the actions of others. It compels us to read against the normalizing grain of everyday life to ask why, at a given moment, certain responses to the climate crisis are dubbed tenable. "It matters what thoughts think thoughts," Donna Haraway reminds us. The logics that structure humans' responses to the existential threat of planetary collapse are as laden with politics as the responses themselves. To think the unthinkable, then, is to unearth the formations of power that render certain futures unimaginable by recovering how the story could have been otherwise.

Defined by Leah Aronowsky

- 1. See, for example, Herman Kahn and Irwin Mann, 'War Gaming,' Rand Corporation Report, 1167, 30 July 1957; and Herman Kahn, *Thinking About the Unthinkable* (New York: Horizon Press, 1962).
- 2. In the US context, consider Governor Chris Christie's assessment of the damage caused by Hurricane Sandy and, more recently, the National Weather Service's warning via Twitter that Hurricane Harvey would be an "unprecedented" event, with impacts "unknown and beyond anything experienced."
- 3. Donna Haraway, Staying with the Trouble: Making Kin in the Chthulucene (Durham: Duke University Press, 2016), 35.



Since 2011, artist Peggy Weil has developed a series of underscapes: landscape portraiture focused on the unseen, but critical processes involved in climate change and energy. *UnderLA* (image left) shows the Los Angeles Aquifer projected onto the banks of the Los Angeles River. Over the course of two 30 min videos, from two different wells, the viewer descends from surface level down 1400 feet through strata dating back over 2 million years. To create the work, Weil photographed lithologic samples collected from USGS well monitoring sites at 10-foot intervals; Anadol and Weil animated the digital images as one continuous vertical pan. *UnderLA* is a collaboration with Refik Anadol Studio and was Commissioned by The City of Los Angeles for *CURRENT:LA WATER* in 2016.

88 Cores (image below), a four and a half hour video, is a continuous pan through the Greenland Ice Sheet, created from digital scans of ice cores archived at the U.S. National Ice Core Lab. As the camera traces over these visual documents it tracks the descent through two miles of the Greenland Ice Sheet revealing frozen bands deposited over the course of the last 110,000 years. 88 Cores was exhibited for The Climate Museum's inaugural exhibit, In Human Time.

Image: 88 Cores (installation view), The Climate Museum, 2018. Photo by Sari Goodfriend.

LESS CEMENT

It is in the nature of cement to be hard. It is in the nature of cement to be durable. It is in the nature of cement to be destructive through its production. Cement production accounts for around 8% of global CO2 emissions. Cement is made from heating limestone to 1450°C to separate carbon dioxide from calcium carbonate. Calcium carbonate is used to form clinker, the binding component of cement. 3% of global emissions can be attributed to the energy needed to power cement kilns, with another 5% from the CO2 byproduct.

Cement is roughly 10% of concrete. Concrete is an enormous component of contemporary life. It is the bones of buildings, the flesh of roads, of runways, of bridges, and the skin of sidewalks. This has increased in recent years: in China alone, more cement was used in the three years between 2008 and 2010 than in the entire 20th century in the United States.² Hurricane Maria decimated the built environment in Puerto Rico, sweeping away lives and livelihoods. What was rebuilt was constructed out of concrete. Superstorm Sandy inundated large parts of New York, and Build It Back built it back with concrete, from the boardwalks of the Rockaways to the foundations of Staten Island homes. When planners conceive of ways to protect lower Manhattan from sea level rise, they imagine building a big concrete "U."

Is it possible to change the nature and energy appetite of cement itself? Kilns might be converted. A majority still use fossil fuels, but some consume waste oils and shredded tires. Retrofitting old kilns to improve thermal efficiency might lower the industry's energy needs by two-fifths, says the Carbon Disclosure Project, a step that would also cut the industry's overall expenditure.3 Other emissions reductions could come through transformations in the production process, such as replacing limestone clinker with other binding materials including fly ash (a byproduct of burning coal). Power plant emissions could be injected into concrete, with this sequestering of carbon potentially also improving concrete's strength and durability.4 Reusing concrete from demolished buildings could also reduce carbon emissions by diminishing the need for aggregate, a major component of concrete

Design for less concrete, use less in concrete construction. Less concrete, less cement.

- 1. Robbie Andrew, 'Global CO2 emissions from cement production'. *Earth System Science Data Data, 10* (195-217), 2018.
- 2. Vaclav Smil, 'Making the Modern World Materials and Dematerialization,' Chichester: Wiley, 2014.
- 3. 'Cement manufacturers Cracks in the surface: Why grey firms will have to go green,' *The Economist*, 25 August 2016.
- 4. Jocelyn Timperley, 'Why cement matters for climate change,' Carbon Brief, 13 September 2018.



As citizens commemorated the one-year anniversary of Hurricane Maria, the extent of the storm's slow violence was finally being acknowledged. When the storm hit on 29 September 2017, a dozen people were reported killed. The Puerto Rican Government's official count eventually grew to 64¹ but as deaths from related causes such as bacterial diseases, lack of access to health care in general, and suicides driven by Maria's destruction of livelihoods begin to be factored in, the government has now 'quietly' acknowledged that the cumulative death toll is closer to 3000.²

Gabriela Salazar's work *Matters in Shelter* (and *Place, Puerto Rico*), part of the exhibition *Indicators; Artists on climate change* (2018), at Storm King Sculpture park in New York, presented a vaulted space of reflection, a memorial of sorts both to the ongoing impact of Hurricane Maria, and also to the economic crisis which was already crippling Puerto Rico as the storm struck. Through material and olfactory effect, *Matters in Shelter* (and Place, Puerto Rico) probes the history of colonial relations between Puerto Rico and the United States, including the draconian policies that tipped the island into financial crisis and have made recovery from Maria so difficult.

The cobalt gossamer mesh which comprises the shelter's skin is a material which echoes the blue FEMA tarps used for temporary shelters in Maria's immediate aftermath. The material also references the semilleros or hothouse structures used to protect young coffee seedlings. Inside Salazar's installation concrete breeze blocks in various arrangements act simultaneously as floor, seating, and display apparatus—as rough plinths for another set of blocks made from compressed coffee grounds. These coffee bricks point both towards an element of Salazar's heritage-her mother grew up on a coffee farm in Puerto Rico-and also to the precarity of the island's present. In recent years coffee has been a resurgent crop in Puerto Rican agriculture, but the industry was decimated by Maria's impact. While the smell of coffee-ground blocks evoke the Puerto Rican agricultural industry, the concrete blocks speak to a broader global irony: in re-building efforts that follow the devastation of climate-amplified extreme weather events, concrete is used because of its ubiquity and relatively low cost, yet at the same time the production of the material contributes to the climate crisis.

Image: Gabriela Salazar, *Matters in Shelter (and Place, Puerto Rico)*, 2018. Coffee clay (used coffee grounds, flour, salt), concrete block, wood, and polypropylene mesh tarp, 12 x 16 x 20 ft. Courtesy the artist. Photo: Jerry L. Thompson.

- 1. Frances Robles, 'Puerto Rican Government Acknowledges Hurricane Death Toll of 1,427,' *The New York Times*, 9 August 2018.
- 2. Sheri Fink, 'Nearly a Year After Hurricane Maria, Puerto Rico Revises Death Toll to 2,975', *The New York Times*, 28 August 2018.



THE ARTEMIS

Rae Armantrout

Brands are what gods used to be -

categories with outsized personalities.

Artemis, goddess of virgins, childbirth, and the hunt.

This makes sense if you squint

along the shaft.

She might have stood on the hood

of a sleek car, but didn't.

It's true things fall apart.

Still, by thinking we heat ourselves up.

from THIS MUST BE THE PLACE

Andrew Gorin		

Kiosk, plinth, stall, booth, field, screen.

...

Marine, arctic, georgic, arboreal, residential, aesthetic.

...

I thought it over and over.

...

Last week I thought, "The first memory was of fish in a pail."

And, instead, thinks now, not a one.

Bittern, jacana, killdeer, stilt,
sandpiper, tern.

. . .

In the book of his music. The homes of this island have flooded.

Her legs were like rigid poles. 15 minutes to walk out of doors.

And again I thought, "Not on the trading floor did I forget her." It was in the screen wiping fluid.

His music for animals.

...

How to document the loss of dune acreage without killing plovers?

I thought it over and over. All day to repeat the one gesture. Never going home. He had not eaten. Drifting south. It grew thin.

...

But the shipments were beginning to come together. Samsung Gear, Kodak Pixpro SP, Iphone 7, Giroptic Io, GoPro Hero Session. Forced out after 22 years. Their gestures were being replaced by an algorithm. "I saw my son, but it was not my son. He was in a coma. His face was swollen, his eyes shut." And I could not speak. A new coffee shop surf shop combination. Rocinha, Kibera, Hidalgo,

Khayelitsha, Dharavi, Cité Soleil.

...

And, instead, no thought, not thinking. Not feeling either.

. . .

In her limbs a network of arterial conduits for squirrels. *How To Spend It.* Today I thought the landscapes looked good in their frames. Black wings of the pelican. High above 5th avenue, the gilded pseudo-organic lines of Third Empire. Sound of ice fissuring within. Joshua, Baobab, Hemlock, Mangrove, Sequoia, Kokerboom. An old sentence,

a new generic condition.

If temperature fluctuations continue to prevent sintering. Coppiced white birch. But the struggle with a predetermined form will figure the desire not to sit idly. Payoff was respective to each lode. Bleached reefs. So we tried the next parking lot. New York, Hong Kong, Moscow, London, Mumbai, Beijing. Pink calyx on my rubber plant.

The syntax of choosing.

But I couldn't think about one landscape without thinking about another. "Trade secrets." Even the bears know they're indicators of. Corrugated walls on the shacks served multiple dwellings. Likened to disposable cups. Lead, Sarin, Dioxin, Chlorpyrifos, Mercury, N-Hexane. The difference is when used by the Left. Laborers sing. Rebar spaghetti in exploded concrete filled the square. So I've lost my teaching gig. Sea wrack covers the ceiling fan. Pears grow illegible in a decade. Later Cassandra comes to signify too much. Surplus

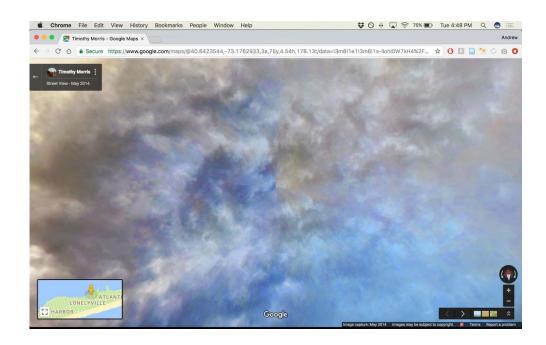
is what falls out of style.

As time pools around the Whole Foods. Chernobyl on fire. One woman becomes another. Bound to the sifting station by his feet. People usually spend about 1-2 hours here. All afternoon to sit and think about what you've done. Svalbard, Barrow, Norilsk, Nunavut, Quanaaq, Yakutsk. The actor pointed to a year beyond the concentric rings of the tree. Children walked to school. Influence flowed with the crude. And in the virtual wastes of the suburbs, subtle chimes of Final Fantasy XV. But the origin of the present was to be found

in the figure of the flood.

There was an excess of floss. Oceans were desalinating at a rapid rate, threatening to stall the motor of the Gulf stream. "A rising tide will raise all boats," was the first shot across the bow of a defunct accelerationism. Foxconn fingered the chain of supply. Blood diamonds and students on strike. But these topiary were beginning to converge. Venice, Fiji, Antigua, the Maldives, Kiribati, Cape Verde. Their noise obstructs an echo-located view. I was often confused. I had thought, "Los Angeles is real." The former name meant Place of Red Earth. I had wanted to

look up where you are.



TO EACH CAMPFIRE AS IT FILLS

Rachael Guynn Wilson

To each campfire as it fills with bituminous coal they dug their fingernails in and didn't put down what she saw in the woods snakes deer frogs blue heron loons pheasant boy scouts not a shopping cart submerged in a stream not a red solo cup in the brambles I tore into the lake as a human without enough light "in the forest" should've rested empty-headed as the meteors flashed and fell as their nature struck her heel in the whiteness of camping in a poem's exertion that moves as a stream or storm as they slipped their feet into the falls wading into the sound of a skate deck grazing pavement a slow truck sawing the air four brown trout fording the river that cuts the day in two unequal halves of what is Saranac and what is not light enough as the rock crackling under the rain cradles her head just a few drops "in the woods" consulting the shelter log in looping hand who cooked the fish in leek butter brought in from town it's beginning to rain again it's beginning to be evening as the waters swell over the tops of beaver dams cushioning their feet from the mud on t.v. the news airs reruns while seated as a rustic she regards the improbable paths men carve into constellations as if wandering a game trail the charm of litter caught up in currents of green chatter spasms and fades

TAKING THE SUNFLOWER TO THE MOUNTAINS

Brenda Hillman

i held our sunflower up as we drove
past fields of former sunflowers,
 past Margaret's house & rows
 of dead dry stalks quite prone
like summer's pale accomplishments.
 It had had a good life in the yard
 & would scatter lavish seeds
beneath the smoke from western fires.
 Our flower looked out from the Prius
 while i whispered in its ear:

Where my sunflower wishes to go (from Blake)

& You were never no locomotive (from Ginsberg)

0 0 0 0 0

. .

. Our sunflower looked off-key,
. it had a broken stem & wouldn't
make it to the mountains whole.

But it had captured oxygen in its beaks
& would stretch its golden aura
to the ground. It's necessary to travel
between realisms.

M & i had discussed how women & plants might do the work. The flower kept watch on its last day, guarding every opening & door.

For MR

CALENDAR OF EXTREME WEATHER EVENTS (EWES)

running water Manasiadis

		The Southern
Ocean	any	
future		
assessment		
numbers		
	months	
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	a community
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local tangata whenua losing	and running water
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	running water
local tangata whenua losing An inch of rain through the winter	running water
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An inch of rain through the winter	running water
An inch of rain through the winter	running water
An inch of rain through the winter	catastrophic drought
An inch of rain through the winter	running water

becoming me	ore common
	power companies
	really
	dragging the chain
big	
	vineyards
	Intelligence Secretal
	reluctant
	to make effective change
	to make enective change
	Deny the meteorolo
gists	
	the only warning
my daug	the only warning hter running out of her bedroom
my daug	
crying because	
crying because	hter running out of her bedroom
crying because we	hter running out of her bedroom
crying because we devastated Clean-up	hter running out of her bedroom were
crying because we devastated Clean-up	hter running out of her bedroom
crying because we devastated Clean-up	hter running out of her bedroom were
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crying because we devastated Clean-up	hter running out of her bedroom were replace
crying because we devastated Clean-up	hter running out of her bedroom were

in the Manawatu W	hanganui Field	ding-way Wellington
		ripping the roofs
		tornadoes you see in movies
		For
people who are like ha! Climate change		
affects water affects ka		
	is the	interconnectedness
is	te ahi ka añd	
		he ao wera
at grassroots level		
in our backyard		<u> </u>
		<u> </u>
		<u> </u>
So	metimes it's a	case of joining the dots

The original source text is an interview on Radio New Zealand with Mike Smith and Hinekaa Mako, makers of the documentary *He Ao Wera: Climate Change in Aotearoa (2009)*. The 2,846 words in this transcript represent the 2,846 days between the date of the interview and the latest costed extreme weather event (04/10/2009 – 22/07/2017). Each unredacted word/date corresponds to a flood/thunderstorm/flood/storm/storm/flood/tornado/flood/fl

Hinekaa Mako and Mike Smith. Interview by Maraea Rakuraku. *Te Ahi Kaa* mo 04 o Whiringa ā nuku. RNZ. Wellington: 4 October 2009. Radio.

'Cost of Disaster Events in New Zealand'. ICNZ, http://www.icnz.org.nz/statistics-data/cost-of-disaster-events-in-new-zealand/. Accessed 30 August 2017.

marae – open area where greetings and discussions take place; $tangata\ whenua$ – indigenous people born of the whenua i.e. of the placenta and of the land; tai – food; tai – burning fires of occupation, title to land by a group who are able to trace back to primary ancestors.

Māori Dictionary, http://maoridictionary.co.nz/. Accessed 9 November 2017.

POEM FOR THE COMMONWEALTH 2018

Karlo Mila

We gather here and feel the weight of the world on our shoulders. It does not feel like we've inherited commonwealth. But rather common problems.

If we are to heed the words of poets Ben Okri said yesterday, "We have entered the garden of nightmares and wonders the giants have woken and they are stirring we need to be roused from the beauty of our sleep."

Indeed, we've entered this strange garden in this city, epicentre of epitaph, epitome of empire.

The stones in the squares remind us that we all died for this.

The war memorials murmur numbers not names.

We bring our dead with us and they are already here.

Not just the ones marked by marble. But our ancestors, the original inhabitants of the lands 'discovered'. Who lie in the unmarked graves and unmentioned massacres, in battles unspoken of in untaught wars

We carry them like stones in our bodies.

They too contribute towards this commonwealth. They gave more than they should have.

Commonwealth.

We come with twinned sides of the same story. Either trauma or gain.

Both of it pain.
Two sides
of the same coin,
heads or tails,
the head is the same
on most of our money.

The commonwealth.

Some days
it does not feel like riches,
Although we gather
to speak
of fairer futures.

Truth be told,
It is the fear of future
that we most have in common.

I did not come to sing a siren song on the sinking ship of empire, I come to sing of sinking islands in the South Pacific, on the blue continent where I come from.

What is at stake,
Is the very land we stand on.
The earth itself rejects us.
It renegs its responsibilities.
It has retreated
back into the deep.

And if the ocean could speak in that choked overheated throat gagged with plastic bags in the way she once spoke to us and we could listen, she would say, too much salt on her tongue, rising with a surety that we have never seen before, She would say, ENOUGH!

If ever we needed to wake from our sleep and hear the call of the commonwealth, It is now.

The islands of Oceania - Kiribati, Tuvalu, Samoa, Tonga, Vanuatu,
We are the canaries
in the coal mines of climate change.
Singing and ringing the unruly bells.
Beating the big drums.

And yet, drowned out.

So here we gather, the call of the commonwealth, but it is the uncommon wealth that may save us all.

Almost completely silenced, schooled out of us, in lost languages that were beaten out of the mouths of children.

There. It is there,
There lie the answers
in cultures that hold a
wealth of knowledge,
intergenerational meditations
on what it means to be alive,
what it means to survive
in a certain set of conditions

specific parameters of earth and sea and sky.
Each of us,
holding a long-gestated
piece of the puzzle,
of how to be human and thrive.

It is a precious peopled offering.

It is here, in the ruins of our histories, in what is left of us, in what we have fought for, Ka whawhai tonu matou ake ake ake, alongside our ongoing innovation there lies the most precious offerings to the commonwealth.

It is the heart of who we are, how we see the world to be our richest offering. Let us share.

My people have always known, that we are all relatives, common ancestors, the same stardust, in all of our bones, the rocks, the trees, the leaves all of these, our relatives, all of us, part of the family of things.

One ancestral word at a time, we are salvaging what has been savaged. These backward ways of being in the world that may take us forward.

That wake us up to all that we are dependent upon. That open our eyes as the giants sleep.

Science seems to take such a long time to catch up
Richard Dawkins the evolutionary biologist can confirm, that the lettuce is our distant cousin.

But the stories we live by have not changed.

If we were truly to reorient to life as relatives, commonwealth would mean more than what we might cling to in the face of a dangerous and uncertain future.

Let us not
use the word commonwealth
to try and insulate fate
with the soft fur of fine feathered friends.
No,
let us spread our wings
to a much wider vision than that.

It may be the end of the world as we know it but let us not fear the remaking of another one.

To the young people I say, there may be no jobs but there is plenty of work to be done.

So let us harness our collective wisdoms: diverse, different and divergent.

Let us create an atmosphere of kindness and love for even the air we breathe, freshwater, trees, people, ocean.

Let us create a dream house, a great place to raise a family.

For therein lies the fate of an extraordinary family of relatives.

Where what we have in common Is all of us.

DISOBEDIENT SUN

Sarah Rara

I

solar rays reached the surface without meaning

before the sun lost interest in all that

moving across the sky constantly took a little over a year until the equator dissolved

shifting between vernal reaching the date point no one resisted

eyesight failed the southern part starlight flashed at a glancing angle

ladders and ropes defined her location on a ball approaching the star

II

when the sun flickers time abolishes pleasing positions

the heavy sun tethers to hangers-on

base values form the temporary equator

disobedient sun rotate on an unfixed plane

problems in daylight tune to changes

surface reflectance detach from exterior

atrium combinations cool the load

she positions herself with respect to horizon

she speaks to measure reads the azimuth and runs

speaking in arcs a bow illustrates the altitude

observers melt exactly when the sun rises

bending brutally in morning sun paths are different this time around

her cylindrical projection graphs the sun

remember golden red to appear to change the sun

tilt the ball's axis swivel on the wrong court

chart and know the days the sun will disobey

run the edge in increments coordinates are never enough

peeled off two axis resting on the intersection point

interpolated lately she calibrates

her unheavenly colors desaturate in darkness

the semi-circular dial slides to produce shade and location

she moves time slowly seeking isolation data

without the sun a home is unthinkable

hill with a sky vault double doors ride the east-west axis

she tries rolling the sun through the opening but the sun is tipped off and never returns

Ш

the sun casts a shadow no object can avoid

the shape must not be permanent

with regard to the shadow her building will cast no human knows how to respond to the magnitude of that

sundials were fine until the changes occurred

now landmarks of disaster dials built from two boards fuse together form a fallen "L"

gnomon was judge of time until sundials grew exhausted by constant polar movement

depending on which way she faces time can be measured up to seven times faster or slower

artificial heliodons eliminate the sun

representing solar patterns rapidly developed

so that isolation effects can be modeled physically

the building tilts illusions of day on a hillside where trees cast simulated shadows in theory there are only women the sun is missing within the hillside she is pregnant

time to obsess with another star she has no energy for leaving

despite her advances she is no predictor of how a space will perform

charting gives her freedom to try different kinds of geometry to know how time moves

it is useful to fight ignorance of the sun's impact on wasted energy and missed opportunities

IV the differences between tropics are feelings of indifference

sunrise on the heliodon is perfect at an unknown time of year

behind the hillside bunker the horizon plane extends infinitely backwards

the apparent motion of the sun is the anticlockwise motion of the earth

the sun rises under a horizon that can't be touched where arguments have no merit

THE MOST IMPORTANT THING ABOUT A DISASTER

Guillermo Rebollo Gil

Poets of the diaspora feel so guilty about not being on the island when the hurricane hit that they've been writing non-stop since the day of.

Some Puerto Rican scholars on the island—citing the historical particularities of dispossession and dispersal—refuse to use the term diaspora to refer to their counterparts on the mainland.

I suspect they're making a distinction.

Well, who isn't
feeling guilty, I mean, for not being here the day of,
or not losing as much as those who
lost everything.

Poets of the diaspora write about this sentiment all the time now—that feeling like you missed out on having really deep feelings about loss because you didn't really lose anything, still you feel like you should say something about everything that was lost by others as if it were your own.

Is it to the hurricane, or in the hurricane.

Everything is a house or just the roof and the stuff that made up the house inside.

Everything is a job or good luck in finding one.

Everything is a loved one or whatever could be considered lovely at any given time, including oneself.

Everything is having to leave the island on account of everything else

and becoming a poet of the diaspora which is something I should say something about on account of I'm feeling guilty about the opening stanza and how it could be interpreted as a commentary against those dispersed and dispossessed the day or the decades before the day of the disaster.

The most important thing about a disaster is how you broach it. My mother lost her broach. What, with all the water.

Is it to the hurricane, or is it too The Hurricane.

My sentiment is that so much scholarship on the island has focused on what we should call ourselves depending on where we at and on how where we at makes us matter more or less at the end of a such a long history of dispossessions and dispersals, and not nearly enough on how everything can be blown and washed away come hurricane season.

I suspect a distinction has been made. Well, who's feeling guilty?

I am
an island poet,
which is to say I was here
the day of, so I didn't miss out
on anything close to
feeling like—

My mother didn't lose anything at all. What.

BLUE-GREEN SUPERFUND ROUNDELAY

Rodrigo Toscano

Perma-Laboro-Centristic breaks bread with Enviro-Mass-Reductio cautiously creatively-tense

parvenu alliance Verfremdungseffekt theater familiarly-alien

effects

trip
the unconverted
crude
oil
derivatives
laity

geist

diesel ethanol methanol fall

on the third day rise spiffy?

for coal's sake, stick to it?

Internal Combustion's aesthetic campaigns

From intake stroke to exhaust stroke
UTILITARIAN
scaffolding

"we can't just use it?"

A Questionable Account of Ancient-Future Life

The Works and Days ascribed to British Petroleum

> pre-classical paradigms unstable about to blow

post-particulate standards counter-consensus process

Spirit of Karen Silkwood infusion

Spirit of comités populares tri-national borders cleanup

Phantoms of Kyoto Accords suffusion

solar, wind, hydrogen

--usefully--COUNTER-UTILITARIAN

syncretic-to-synergetic

concentrates

counter-campaign's conversions

towards?

A JUST

TRANSITION

from TO EACH HIS CHIMERA

Gabriel Levin

In Camera (1948)

Poking your head out of the window you catch sight of the porters from Saloniki

directly below, leaning over the bars of their empty carts, far from home, with nothing to show

for their labors, while the shadows of nameless passers-by cross the street – it will take

a millisecond for the shutter to slake its thirst on the anonymous

scene, but the *click* of the Leica brought from Berlin pleases you, and you fancy the hooded

lady in black crepe has stepped out of the Grimm Brothers into sunny Palestine, fraught

with its own grim tales, the uprooted arriving, and taking leave, as you duck back in.

BODY POLITIC

The face askew in deadpan dread at its own reflection, eyes sunk in their sockets, deploying antipersonnel flechettes in a conical arch where affections once held sway: at sixty-five you could say attrition

you could say, been there; memory overtaxed, punch drunk with one déjà vu after another, fists spoiling for a fight, oh my confederate, bosom companion, blood count off the charts, where do we go from here?

PASTORAL

How I love the sound of the Palestine sunbird chip-chip-chip, followed by the gargled cooing of unseen doves and the sight of white cabbage butterflies over the wand flowers -- our lives brim over with the commonplace: clods loosened where the pitchfork lies by the wall, nosy bees in the rosemary, and, hey, wouldn't it all be just fine if not for the new breed of mosquitos bloodletting at low altitudes? I flap the covers of Lamentations shut, Smack! Gotcha. Abroad the sword bereaveth. What else awaits the avid reader this morning? The Brutality of Fact, and, peeking under the pile, yesterday's ungainly exhibition catalogue: Let's Have Another War.

July, August 2014, Jerusalem

My father's poems above, and the text that follows were both unearthed from the clutter of old hard drives. We each wrote them during the summer of 2014, in response to a war Israel was waging against the Hamas government in Gaza, as well as to protests we attended and to an exhibition we saw together at the time.

Rereading them three years later is an ambivalent experience: they feel like fossils of my feelings about that horrific summer, but also reminders of how little has changed. Occupation grinds on, "operation"—an Israeli euphemism that lends every new round of carnage a semblance of hygiene and precision, while saving the government's coffers millions of shekels in compensation money that would be otherwise owed to an Israeli population affected by an "official war"—follows operation, intifadas spark, and are just as quickly and forcefully extinguished. Nothing new under the sun. For most Israelis the "situation," as it is popularly referred to, will announce itself once every several months, if they're lucky, every couple of years, only to temporarily subside into the background of everyday life. For Palestinians, occupation is a constant disrupting and lethal force, an imminent threat.

David Reeb, the Israeli painter and activist, whose work inspired us in our writing-my piece being a report of sorts on both his show and the war, my father's, a suite poems, in which Reeb's catalogue plays a cameo role-sums it up well in the title of one of his series, "Let's have another war", which is to be read not as a war cry, but rather as a fatigued, ironic lamentation. Repetition compulsion, but also a grinding everyday reality of an ethnocratic regime fifty years of age, masked as a discrete series of wars, uprisings, attacks, agreements. I'm embarrassed to admit I need a minute to disentangle the successive rounds of violence, headlines from years passed. Yes, I now remember, there's been the so called "Jerusalem intifada" (was it just a couple of years ago?), but was there anything in between? The question of how literature and art can respond to situations of relentless violence, without reverting to headlines, to 'media-worthy' events, seems not only central for Reeb's work but broadly useful as we move into an age when humankind must cope with the repercussions of a global environmental crisis.

The preceding poems and the texts that follow focus on the 'prosaic' horrors of a violent occupation regime, and the challenge of addressing such deadly monotony, of insisting that what has come to be seen as 'matter-of-fact' must be of much concern. Prosaic is, according to my handy computer thesaurus, antonymous to poetic: unimaginative, uninspired, dull, dry, humdrum, mundane, pedestrian, heavy, plodding, lifeless, dead, spiritless, lacklustre, undistinguished, stale, jejune, bland, insipid, vapid, vacuous, banal, hackneyed, trite, literal, factual, unpoetic, unemotional, unsentimental, clear, plain, unadorned, unembellished, unvarnished, monotonous, deadpan, matter-of-fact. As well as: ordinary, everyday, usual, common, conventional, straightforward, routine, humdrum,

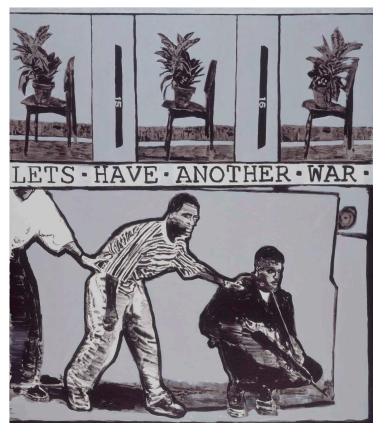
commonplace, run-of-the-mill, workaday, businesslike, pedestrian, tame, mundane, dull, dreary, tedious, boring, ho-hum, uninspiring, monotonous. Lists are prosaic. Facts too. This seems like a fundamental challenge for any art with a realist bent set to grapple with the political everyday, to come to terms with the brutality of fact.

THE LABOR OF RESISTANCE/"LET'S HAVE ANOTHER WAR"

"Let's have another war" exclaims the black and white acrylic painting in front of me, its lower part depicting a militant, crouching, an Ak-47 resting on his lap, a second figure leaning on his shoulder, and a third figure, whose face and body are all but cut from the frame, reaching in with an outstretched hand. The figures join to form a human chain, a single unit, bracing themselves together against the future to come. Above them, occupying the upper third of the canvas, are three nearly identical images of a flower pot resting on top of a kitchen chair. The images are separated by the marking of a contact sheet, proof of their photographic origin. In between these two trios—of figures and flower pots—the text: LET'S \square HAVE \square ANOTHER \square WAR, all caps, with each word punctuated by a black dot, separated for emphasis.

Outside war is raging. Well...outside, several kilometers away, in the Gaza strip and its surroundings, war is raging. Tel Aviv, in the center of which David Reeb is currently exhibiting a retrospective, is doing its best at being "Tel-Aviv," a feeble impersonation of a city with no country, no context, an oasis of myopic liberalism. This time around, its infamous bubble almost burst under the load of several dozen of Hamas's brand new M-75 rockets, and so the fragile bubble was hastily replaced by an *Iron Dome*. For weeks Israeli fighter jets and artillery pound Gaza in what seems to be the deadliest, most horrific, round to date: at the moment of my writing the death toll on the Palestinian side has already topped 2000, two thirds of which are likely non combatants—women, children, innocent bystanders, with over ten thousand wounded and roughly half a million people who lost their homes. On the Israeli side, sixty eight people were killed, among them four civilians, and several hundred wounded.

I visited the exhibition en route to another anti-war demonstration; negotiations were underway and a ceasefire agreement seemed imminent. This is Reeb's third large scale solo exhibition in Tel Aviv Museum. In 1983, during the first one, he covered parts of walls of the Helena Rubinstein pavilion in a pattern of blue, white, green, black and red—the colors of both the Israeli and Palestinian flags. At the time the PLO was still considered an illegal terrorist organization by the Israeli government (much as Hamas is termed today), public display of the Palestinian flag was an offense. The exhibition caused an outrage. The current show, though, was received with indifference by the mainstream public, an indication of the increasing marginalization of critical voices, rather than a result of a healthy open discourse.



David Reeb, Lets Have Another War #4, 1997. Acrylic on canvas, 1600x1400mm.

Nowadays, such critical gestures are most likely shrugged off-"Another left wing artist? who cares?" Reeb is persistent, and though a highly regarded artist in Israel, he has had few solo exhibitions abroad. Israel is his scene and Israelis his target audience. Everything in his work seems to revolve around this persistence. He relies on a limited repertoire of painterly gestures: often painting from photographs, using acrylic paint either in black and white or directly out of the tube, in a restricted, rather artificial, palate-he seems to rarely mix colors. At times, his paintings are poster-like, iuxtaposing text with schematic figures and outlines. Others are photorealistic: mundane scenes from Tel Aviv, mundane scenes from the occupied territories. It all looks so similar. Is this the first Intifada, or the second? An image out of operation cast lead, pillar of cloud, or is the paint as fresh as the blood spilled, a premonition of our current so-called pillars of defense (these pillars, like cadences inscribed by the IDF's PR unit, are spat out with a dizzying regularity). Reeb's aesthetic-constant repetitions, recurring motifs, déjà vu's-respond to the dreary everyday reality of an ongoing occupation and the sisyphic labor of resistance. One of the clearest, most heart-wrenching, expression of this predicament is his private archive of videos, documenting the weekly protest against the separation wall in the villages of Bil'in, Ni'lin and Nabi Salih. Reeb has attended and documented these protest nearly every Friday for over half a decade. A small selection of these videos, all available on his Youtube channel, are shown in the exhibition. For long stretches of time little seems to happen: Palestinian villagers march towards the wall chanting, the youth, the *shabab*, run ahead and occasionally hurl stones at the distant military outpost or pillbox, until a shower of teargas disperses the crowd, sending the protesters running back to the village. Occasionally the camera captures a moment of drama, or tragedy, such as the killing of Bassem Abu-Rahmeh, who was hit by a tear gas canister meters away from where Reeb and his camera were standing, but mostly it's just the arduous grind of life under ongoing occupation and the daily protest against it. Many frames from these videos serve as sources for later paintings.

Calling the exhibition 'timely' might sound cynical; Reeb's ongoing critique, his persistent protest, is bound to its subject matter with a bleak irony-is the work's relevance a sign of its political failure? I'm sure Reeb would rejoice if his paintings, his practice of over thirty years, became unfamiliar, anachronistic or irrelevant, artifacts to be hung in museums. But they aren't. Sadly, the irony of his call "let's have another war" is lost on most of his viewers, the Israeli public is more gung-ho than ever, pessimistic, suspicious. The demonstration that night brought out some seven thousand dedicated souls, a minuscule number compared to the recent social protests in Tel-Aviv, or the peace protest of the 1980s when Reeb started his career. The negotiations failed that night, and failed again and again later; another round of war and killing started. Ironic, perhaps, but as Coetzee writes, "to the barbarians ... irony is simply like salt: you crunch it between your teeth and enjoy a momentary savour; when the savour is gone, the brute facts are still there."

Berlin. August, 2014

DEFIANT EARTH:

Lina Moe in conversation with Clive Hamilton

Lina Moe spoke with writer, public policy advisor, and academic Clive Hamilton to discuss his book, *Defiant Earth: The Fate of Humans in the Anthropocene* (2017). Hamilton is the author of many books about the environmental crisis, from *Requiem for a Species: Why We Resist the Truth about Climate Change* (2010), about climate change denial, to *Earthmasters: The Dawn of the Age of Climate Engineering* (2013), which delves into the growing debate around geoengineering experiments and research. Hamilton now asks what kind of writing comes after accepting the dire forecasts of environmental change.

Recently, the Anthropocene has become a charismatic term within a range of disciplines. In The Distance Plan's discussion with Hamilton, we ask how to understand the impasse between, on the one hand, the appeal that the term Anthropocene has had for academics—as the amount of scholarship historicizing, politicizing, rejecting the term grows rapidly—and, on the other hand, the lack of coordinated global political will that has been directed toward combating climate change.

Hamilton has often worked at the intersection of social science policy and scientific investigation. *Defiant Earth* engages a burgeoning field of Anthropocene criticism that historicizes humans' geological impact on the Earth as part of the domestication of agriculture, the industrial revolution, and the development of global capitalism. Hamilton challenges the trend to historicize the Anthropocene, and those interested in the political as well as scientific implications of the acceptance of humans as a geological force will find in Hamilton's work both a forceful rebuttal of new materialism and post-humanism, and an embrace of the question of what to write in a time of growing environmental despair.

Lina Moe

This issue of *The Distance Plan* is in part about the power and futility of narratives and the urgency writers and environmental activists feel to find charismatic ways to write about climate change. You've written previous books about the environmental crisis, including *Requiem for a Species* and *Earthmasters*. In what mood did you approach writing your third book?

Clive Hamilton

What is there after *Requiem's* brutal confrontation with the truth, after helplessness and despair? I wrote *Defiant Earth* as a philosophical reflection on the state of humankind, to wrestle with the question of how it had arrived at a point where its technological power and destructive urges are so great that it can change the geological evolution of the planet as a whole.

LM

And what audience were you particularly trying to reach?

СН

I didn't set out to "reach" anyone, because to reach means to persuade them to act. I set out to try to think through what has happened and its meaning. To "think through" means in some sense to "reconcile with." Of course there is always a reader in mind but in this case the reader was anyone and no-one. I felt that there were things that just needed to be said. The act of saying has meaning in itself, a bit like writing down all of the mistakes you have ever made and then committing the piece of paper to the fires of eternity.

If this all sounds defeatist then it is, up to a point, and that point is the one we irrevocably passed beyond when we entered the new geological epoch. Yet it does not relieve us of our duties to act, so that we can just disengage and do nothing. Of course, we are each obliged to do everything we reasonably can, especially in the political realm.

LM

You emphasize that many critical books today try to build a long lineage of human action and institutions that constitute a history of the Anthropocene. Christophe Bonneuil and Jean-Baptiste Fressoz want their audience not to be surprised at the predicament of environmental disaster that we've found ourselves in, but see it rather as a culmination of a long history of pollution, ecosystem disturbance, and landscape change that began with the industrial revolution and the mass extraction and use of fossil fuels in the eighteenth century. Jason Moore also has written a book about the Anthropocene that begins by analyzing Thoreau. Instead, you argue that the history of the Anthropocene is not a long one, writing that these books elide "the recent rupture in geochronology with early industrial ecological damage, which effectively denies that anything new has happened." Can you explain what damage you think this strain of "the historic Anthropocene" criticism is doing?

Those who attempt to locate the advent of the Anthropocene—which as a matter of fact did not begin until after the Second World War—appear to be radical in their intent. "We have always known this. If only we had been listened to. The Anthropocene is the inevitable product of capitalism and therefore must have begun with it." In truth, what they are doing is deflating something monumental, normalizing something monstrous.

The post-humanists and new materialists can tell their stories of the arrival of the Anthropocene only by repudiating science. The Anthropocene is geology, or rather Earth System science. It becomes an epoch of social history only after the science has been accepted. The authority on this must be the Anthropocene Working Group of the International Commission on Stratigraphy. It has concluded, after much scientific work, that the Anthropocene began in the decade or so after 1945.

Unfortunately, the left's undermining of the authority of science in the 1970s and 1980s has led some intellectuals to believe they can make their own determination about the initiation of a geological epoch, that their social science can over-rule physical science, that sociologists and historians know more about it than stratigraphers and Earth System scientists. At this time of enormous political struggle over the future of the world, it's regrettable, to say the least, that much of the left's intellectual fire-power should marginalize itself in this way.

At a time in history when science is under such sustained attack from climate science deniers and right-wing ideologues, sensible people have an obligation to defend climate science and the authority of climate scientists. Relativising and historicizing science, or attacking it as "masculine", "western" and so on, only plays into the hands of the deniers (apart from being untrue). In these circumstances, to continue playing those post-modern games is decadent.

Without question, the greatest difficulty people have in understanding the Anthropocene is the way they confuse, or conflate, "the environment" or "ecological systems" with the Earth System. The Earth System is an entirely new concept, developed in the 1980s and 1990s. If you don't experience that little "Aha" moment, when you "get" the idea of the Earth System and how it is not the same as our early concepts of nature, then you cannot understand the Anthropocene. The Anthropocene is defined as a disruption of the Earth System.

LM

I'm particularly interested in your criticism of new materialism because its calls to acknowledge non-human agency and importance have widespread appeal in the humanities. In drawing comparisons to innovations in feminist or queer studies that urged scholars to move beyond dualities of sex or gender, scholars like Jason Moore set up a parallel between the burgeoning field of environmental humanities and past waves of criticism. What from the insights of postcolonial or queer studies do you think can be usefully imported to illuminate the current environmental crisis?

CH

There is nothing in the new materialism that can tell us anything at all about the starting date or the physical nature of the Anthropocene. The question of the factors that brought about the ecological disruption are of course in the domain of social science, where the new materialists' arguments and concepts belong.

But there too I think they make a serious epistemological error. Feminist, post-colonial and queer studies have done an invaluable and necessary service in exposing and challenging binaries between classes of human beings and the way those binaries are structured into social institutions and our thinking. But animals are not humans; trees are not humans; ecosystems are not humans. Humans are unique and the attempt to write us into the natural world as "just another species" is perverse and, yes it must be said, unscientific.

Jason Moore's analysis is especially perverse as he attempts to construct a kind of Frankenstein worldview made up of body parts collected from Marxism, post-colonialism, feminism and environmental science. This is possible only if you make no epistemological distinctions between anything. Marx would look at this monster and say "I am not a Marxist".

LM

Your title, "Defiant Earth" enlivens, even anthropomorphizes, the Earth as a whole. How does the "Defiant Earth" compare with Gaia? How much of Lovelock's characterization of Gaia do you accept?

СН

This is quite hard, although I make a few comments in the book. It's hard because first you have to decide what Lovelock's Gaia is. Despite appearances, the closer you peer at Gaia the more confusing it becomes. Lovelock himself said "Gaia" is only a metaphor, one he sometimes wished he had not used. But the thing the metaphor is getting at is opaque. So I stay away from the term.

LM

Climate change is perhaps best measured in volatility, risk, and uncertainty: a greater chance of storms, of unpredictable weather, and a less hospitable Earth. And yet, you urgently want humans to recognize (and own up to) their power as an Earth-changing species. How do you see this unstable balance between growing human power and growing Earth instability developing in the near future?

СН

Because of the volatility and uncertainty—we have entered a completely new kind of planetary condition—it's hard to say with any certainty where things will go, even in the near future. Humans are in for a rough ride, without an end.

LM

The theme of this *Distance Plan* is "Charismatic Facts." We are imagining environmental facts and stories that have charisma: they travel from scientific journal to popular

discourse; they have staying power such that they are spoken about urgently rather than passed over as something too difficult to understand or too abstruse for the layman. What aspects of the current formulations of the Anthropocene do you think—for good or ill—are the most charismatic?

СН

I like the idea of charismatic facts. Obviously, "the Anthropocene" has enormous charisma for many intellectuals, including me, judging by the explosion of articles and books over the last five or six years. It's intellectually tremendous. But it has not made its way into popular consciousness. I don't think it will because most people don't have the conceptual framework to place it in and, perhaps more so, don't know what to do with it. I think it will enter popular consciousness only when school children begin to be taught about it in science lessons.

WRITING DERANGEMENT: CLIMATE CHANGE AND THE NOVEL

Amy Howden-Chapman

Early in The Great Derangement: Climate Change and the Unthinkable, Amitav Ghosh describes an incident from his youth. A freak weather system descends on a neighborhood in Delhi that he happens to be walking through on his way home. Ghosh witnesses chaos; building facades shatter around him, scooters are relocated to the tops of trees, and fellow bystanders are severely injured. This is a primal scene for Ghosh, an episode on which he has dwelt for decades. Today, Ghosh is known as a fiction writer. He has published eight novels, many of which draw on personal experiences. But despite several attempts, he has never been able to successfully transform the dramatic events of that day into a satisfying fictional episode. Much of The Great Derangement is concerned with analyzing the conventions of the contemporary novel which, in Ghosh's view, make rendering such an improbable meteorological experience into realistic narrative difficult, if not impossible. Ghosh feels that the norms of contemporary fiction are barriers to the inclusion of climate change in the literary sphere, with the result that one of the central global issues of the 21st century remains marginal in literary texts and debates. The literary field instead represents the individual imaginary, leaving out the larger social patterns of daily life that might prompt writers to contemplate more fully the ongoing environmental destruction that will surely be a defining feature of our moment in the eyes of future generations.

In this essay, I consider Ghosh's claim that environmental disruption has been marginalized in contemporary literature through an analysis of how climate change knowledge is rendered in five novels of the past decade: Kim Stanley Robinson's New York 2140 (2017), Nathaniel Rich's Odds Against Tomorrow (2013), Ian McEwan's Solar (2010), Barbara Kingsolver's Flight Behavior (2012), and Ben Lerner's 10:04 (2014). Whereas Ghosh focuses on reasons why "serious" literary novels and climate change don't mix, I consider what appearances of the issue do tell us about climate change's evolving place in the cultural landscape.

THE GREAT DERANGEMENT

In *The Great Derangement*, Ghosh considers why climate change remains conspicuously absent from "serious" literary works—even while environmental disasters have increasingly become the focus of nonfiction and journalistic inquiries. Instead, climate change is quarantined in the new but growing subgenre of cli-fi. Ghosh argues that the genre of literary fiction that dominates today descends from the bourgeois novel which emerged in the 18th and 19th centuries. Reflecting the attitudes and interests of the European middle class, this novelistic form emphasized subjective interiority, domesticity, and social institutions and norms. Within European-style realist fiction, events that

propel a story forward become padded with observations of character and setting. This produces a "concealment of those exceptional moments that serve as the motor of narrative" (17). Extreme or unlikely events are avoided or depicted as peripheral to the lives of bourgeois individuals. The literary form thus resists the representation of unlikely occurrences such as the extreme events associated with climate change, and Ghosh describes how including such occurrences in fiction makes a writer vulnerable to critique.

Ghosh sees the generic constraints of the bourgeois novel as deriving from a context in which the natural world was newly seen through the paradigm of 19th century scientific thought. In this paradigm, humans had been liberated from the domain of erratic and vengeful gods and now existed in a world of quantifiable and incremental change. This world was conceived of in accordance with the analyses of the geologic record, in both fiction and geology, and in scientific thought "nature was moderate and orderly" (22). Stories in which nature was rendered as erratic were considered unrealistic and "nature lost the power to evoke that form of terror and awe that was associated with the 'sublime'" (56). The Romantic poets were perhaps the last to concede to a larger paradigm shift that had begun with "the practical men who ran colonies and founded cities" and had acquired an "indifference to the destructive powers of the earth" (56).

If within the dominant literary tradition unlikely or extreme events are shrouded by observations of character and setting, how are we to tell the stories of a natural world in which climatic systems have become distorted, to various degrees, by human influence, making a natural world in which "unlikely" events are increasingly regular? The "freakish weather events of today" Ghosh writes "are the mysterious work of our own hands returning to haunt us in unthinkable shapes and forms" (32). In the Anthropocene, Ghosh argues, to position the "natural" world as nothing more than a passive setting against which narratives—be they Austen-esqe romances, or the Nordic brooding of Knausgård—play out unaffected is to willfully ignore climate change. Instead, to depict the natural world realistically would require making it an actor—having it intervene in plot, challenge the efficacy of characters' actions, and influence their decisions. But doing so, as Ghosh says, would take one beyond the realm of the "serious" novel.

CLI-FI AND SPECULATIVE FUTURES

And so what alternative forms of telling the story of climate change might we turn to? Could magical realism or science fiction be the answer? Are there not many novels in which nature comes alive, where lives are upended either by a tornado or the beat of a dragon's wing? Indeed, when Ghosh tries to think of "writers whose imaginative work communicates a more specific sense of the accelerating changes in our environment" he "mostly finds himself at a loss" (124). Yet the list of writers he does call to mind (including J. G. Ballard, Margaret Atwood, Kurt Vonnegut, Doris Lessing, Cormac McCarthy, and others) is dominated by authors whose work is set in a speculative future.

Kim Stanley Robinson's *New York 2140* (2017) is a recent and exemplary work of the cli-fi genre. Set in a future New York City that has faced such massive sea level rise that it has become a "super Venice," its characters utilize the latest green technologies in order to survive. The plot is driven by central characters' loyalty to an ideology of Occupy-esqe 'down-with-the-one-percent' socialism. *New York 2140* is polemical and enjoyable, which is to say that it is urgent, but not a particularly "serious" read. In one scene, a reality TV star who boosts her ratings by appearing topless has to sedate a mob of polar bears after they break free of their cages and terrorize her. This encounter all takes place on a blimp. Antics aside, the possibilities of climate change are presented as a narrative string of "what ifs," rather than a reflection of our current climate impacted present.

For Ghosh, however, this is a problem. The conceit of a speculative future means that science fiction, almost by definition, fails to adequately address climate change because it is seldom set in a recognizable now. "The future," he explains, "is but one aspect of the Anthropocene: this era also includes the recent past, and, most significantly the present" (72)

CLIMATE CHANGE AS SPECIALIST KNOWLEDGE

In addition to the tendency Ghosh highlights, wherein novels that deal with climate change are set in a speculative future, I have identified another tendency. That is, the issue is often introduced through characters who are experts. Three recent novels published in the last decade illustrate this.

Odds Against Tomorrow, the 2013 novel by Nathaniel Rich, was heralded as a prescient book at the "vanguard of post-Sandy catastrophe." The novel is again set in a near future, in a world which diverges from our own predominantly in that insurance companies have stopped offering catastrophe coverage. Odds Against Tomorrow exemplifies a narrative category in which knowledge of the implications of climate change are not widespread but remain specialized. The novel's protagonist, Mitchell Zukor, is at the forefront of a new occupation—disaster forecasting—and he cashes in on scaring his clients with probabilities about disaster-induced losses, including those inflicted by earthquakes, drought, and severe storms.

In Ian McEwan's *Solar* (2010), climate knowledge similarly resides with a specialist. *Solar* is a comic document of an era in which climate change was still largely dealt with in the domain of wonks. The novel's anti-hero Michael Beard is a Nobel Prize winning physics professor devoted to combating global warming with green energy solutions. Beard is a vehemently cynical solar specialist and the novel centers on his follies in the workplace and at home. He has been endowed by McEwan with precisely the failings—arrogance, grandiosity, belligerence—that characterize a culture unwilling to prevent catastrophe. In one scene a character is punished for infidelity by slipping on a polarbear-skin rug. The book may be "serious" fiction, but serious or not, through mocking the moralistic tone that has repelled so many from embracing mainstream environmentalism, it itself becomes unrepentantly moralistic.

1 Teddy Wayne, 'Grave New World,' *The New York Times*, 11 April 2013. http://www.nytimes. com/2013/04/14/books/review/ odds-against-tomorrow-bynathaniel-rich.html

As with many cultural narratives around climate change from the early 2000s, in *Solar* the climate problem is distanced geographically and socially. Beard's engagement with climate change is a parody of a wasteful elitist bureaucracy who attend lectures and conferences. When a live encounter with the effects of climate change does occur, it is not in an urban setting (which is where most people live and thus where most climate impacts are felt) but in the far-off Arctic to which the bumbling professor takes an extended voyage. Within the world of the novel, climate change is still a subject for specialists and satire. It has yet to become a subject of everyday heatwaves and loss.

Barbara Kingsolver's Flight Behavior shares with Solar and Odds Against Tomorrow the narrative structure of a specialist imparting knowledge. Yet it quickly departs from the cynical tone of those novels to depict more sympathetically the pedagogical complexity of communicating how a warming climate can have devastating effects both on delicate ecologies and economically precarious communities. In Flight Behavior the primary species at threat is the monarch butterfly, yet the human inhabitants of the Appalachian community in which a large monarch butterfly population have temporarily sought refuge are themselves one bad farming season away from foreclosure. When the central character, Dellarobia, first encounters the butterflies that have descended on her family's land she doesn't have her glasses on and so interprets their presence as an aura-like phenomenon. Thus, her first experience with what she will come to understand as a symptom of climate change is an encounter she can't help but categorize as spiritual. Dellarobia does not come to understand how the monarch arrival connects to climate change until Harvard-trained biologist Dr. Ovid Byron arrives on her doorstep. The exchange between these two characters is depicted with nuance; it acknowledges how their social positions are divided by both race and class. Ovid imparts insights to Dellarobia about ecological systems under attack; in exchange she provides insights to him on how ideology impedes climate communication, a subject of which she has first-hand experience. Early on in the novel, before her re-education has begun, Dellarobia thinks to herself, "climate change, she knew to be wary of that" (147).

Flight Behavior crescendos with an extreme weather event of the type Ghosh declares so difficult to represent without disrupting the norms of so-called serious fiction. Dellarobia finds herself moving dream-like to higher ground to escape a flood of biblical proportions; "Man is born unto trouble as the sparks fly upward, she thought, words from the book of Job, made for a world unraveling into fire and flood" (432). The flood occurs with a surreal languor, her house swept away while a cake is still baking in the oven, "departing as gently as an ocean liner" from its "anchored steps and cement-block foundation" (432). The final flood scene is followed by a postscript which re-acknowledges the meticulously constructed internal reality of the novel's previous 400 pages as hypothetical. Kingsolver is careful to state that the mass migration of monarch butterflies to the Northern Appalachian region is a speculative scenario, a fictional event (although she does note that the surrounding "biological story" i.e. climate change "is unfortunately true" (435). The likelihood that devastating flooding will come to Appalachia is high; mass monarch migration much less so. Kingsolver renders

the flood as surreal and the butterflies real, and in doing so collapses the un-heard of and the everyday. It is this extreme everyday that makes *Flight Behavior's* descriptions of the monarchs' ecological perilousness so moving. Scientific and emotionally laden accounts of "One of God's creatures" meeting its end of days, are intertwined with descriptions of the difficulty of domestic life in white America's lowest income brackets—Appalachian poverty. Arguments in the aisles of a one-dollar store are juxtaposed with facts about the biological vulnerability of insects, and other details anchor us in the known world of climate activism, as when volunteers from the real-life organization 350.org show up at Dellarobia's door.

10:04

One recent novel which seems to break through the temporal and discursive limitations explored above is Ben Lerner's 10:04. The extreme weather events that bracket 10:04 are fiction based on fact. The novel begins as Hurricane Irene is about to descend on New York City and concludes with its main characters stumbling through a city that is reckoning with the aftermath of Super Storm Sandy. 10:04 is a novel centered on the depiction of extreme climate-exacerbated weather events; it is also a literary work that fits Ghosh's definition of "serious" fiction. 10:04 is set in present day New York and is a novel of ideas, with speculative content appearing only in the form of the narrator's internal dialogue. "I'll project myself into several futures simultaneously," he says, describing the structure of the novel we find ourselves reading, but then goes on: "I'll work my way from irony to sincerity in the sinking city, a would-be Whitman of the vulnerable grid"(4). It is such asides, notesto-self on the weakness of the city's infrastructure and precarity of its geography, that produce the tone of the novel, which we could call one of climate anxiety.

Everyday observations of climate appear throughout 10:04: "outside the restaurant in the false spring air" or "for the second time in a year, we were facing once-in-a-generation weather." The protagonist and his best friend have taken "six years of these walks on a warming planet," and at one point he finds himself "outside of Dr. Andrews's climate-controlled office on the Upper East side," walking into "the unseasonably warm December afternoon" (28-40). Descriptions of the weather are dominated by unsettling meteorological details: "The air around Union Square was heavy with water in its gas phase, a tropical humidity that wasn't native to New York, an ominous medium." This weather is subtly influencing the behavior of the city's inhabitants: "the unusual heat felt summery, but the light was distinctly autumnal, and the confusion of season was reflected in the clothing around them: some people were dressed in T-shirts and shorts, while others wore winter coats." In 10:04 climate change knowledge is not rendered as the spectacular center of a speculative future, but rather as the melancholy reality of our present.

Lerner's novel challenges Ghosh's claim that the natural world has become too "grotesque," "dangerous," and "accusatory" to appear as the setting of a realist novel, and that extreme weather events are too implausible to be used artfully as plot. In 10:04, events become

atmospheric anchors against which subplots play out and yet the literal atmosphere of the setting is never entirely eclipsed by narrative action. Rather, setting and plot interact. Ruminations on places shadowed with gathering extreme weather give the New York City of 10:04 its particular shade of foreboding. "I was aware that water surrounded the city, and that the water moved; I was aware of the delicacy of the bridges and tunnels spanning it." (28) When severe weather events do make an entrance, they do not sweep in ex-machina, as a cheap trick rendered by a writer with nowhere else to go, but are described almost matter-offactly, with a tone that is wary of the usual media hyperbole and with details that anchor the events as much in the quotidian as the spectacular:

An unusually large cyclonic system with a warm core was approaching New York. The mayor took unprecedented steps: he divided the city into zones and mandated evacuation from the lower-lying ones: he announced the subway system would shut down before the storm made landfall; parts of lower Manhattan might be preemptively taken off the grid. Some speculated that the mayor, having been criticized for his slow response to a record-setting snowstorm the previous winter, was strategically overacting, making an exaggerated show of his preparedness, but his tone at the increasingly frequent press conferences seemed to express less somber authority than genuine anxiety, as if he were among those he kept imploring to stay calm. (17)

In 10:04 the philosophical implications of climate change, the increasing ubiquity of extremity, and the questions that arise out of this new unstable everyday, roll around the mind of the narrator. 10:04 would almost certainly be welcomed by Ghosh because it is a work of contemporary fiction that acknowledges climate change not just as an issue of personal moral reckoning, but also an opportunity to consider a collective response and to examine climate change drivers, particularly consumption. 10:04 touches on these themes in a variety of ways, perhaps most notably through discussion of the vulnerability of supply chains, and the impacts of consumer decisions, opening up an investigation of how everyday acts of New Yorkers cause the emissions that fuel climate change. Gathering supplies in preparation for Hurricane Irene, the narrator contemplates a package of instant coffee:

Where I now stood reading the label it was as if the social relations that produced the object in my hand began to glow within it as they were threatened, stirred inside their packaging, lending it a certain aura—the majesty and murderous stupidity of that organization of time and space and fuel and labor becoming visible in the commodity itself now that planes were grounded and the highways were starting to close. (19)

This attention to the circulation of goods, and the intersection of capital and labor is touched on again in remarks about the Park Slope Food Co-Op:

although I insulted it constantly... I didn't think the co-op was morally trivial. I liked having the money I spent on food and

household goods go to an institution that made labor shared and visible and that you could usually trust to carry products that weren't the issue of openly evil conglomerates. (96)

In sharing these details, 10:04 does what Ghosh says novels must do; contribute to the climate debate.

In Lerner's hands extreme weather events emerge without seeming melodramatic, and no attempt is made to obscure "moments that serve as the motor of narrative" (17). Rather, extreme events are used to explore how collective reckoning might be painted when done so with a realist's brush. Near the novel's opening Lerner depicts the aggregate experience of ordinary New Yorkers as they await the arrival of Hurricane Irene:

From a million media, most of them handheld, awareness of the storm seeped into the city, entering the architecture and the stout-bodied passengers, inflecting traffic patterns and the "improved sycamores," so called because they're hybridized for urban living. I mean the city was becoming one organism, constituting itself in relation to a threat viewable from space, an aerial sea monster with a single centered eye around which tentacular rain bands swirled...Because every conversation you overheard in line or on the street or train began to share a theme, it was soon one common conversation you could join, removing the conventional partitions from social space; riding the N train to Whole Foods in Union Square, I found myself swapping surge level predictions with a Hasidic Jew and a West Indian nurse in purple scrubs. (17)

A central means by which 10:04 avoids perpetuating the emphasis on "individual moral adventure" (77) of the bourgeois novel is through the narrative's attention to secondary characters. First, we meet Roberto, a child from Sunset Park whom the narrator tutors, then an Occupy activist for whom the narrator cooks, a drug-addled intern in the Texan desert, and finally a student suffering a manic episode. The emotional labor that the narrator enters into with all these young men could be read as a soothing of his own anxieties, but the encounters also act to illustrate the multiple expressions of climate anxiety in our present, particularly among the young. In the role of a teacher, the narrator is asked to address apprehensions about life on a warming planet. The young Roberto reports to the narrator:

What happens in my bad dream is the buildings all freeze up after global warming makes an ice age and the prisons crack open too and then all the killers get out through the cracks and come after us and Joseph Kony comes after us and we have to escape to San Salvador. (13)

The narrator responds: "I asked him to look at me and then promised him in two languages the only thing I could: he had nothing to fear from Joseph Kony."

Lerner's protagonist doesn't need to travel to the Arctic to witness climate change. In 10:04 the dangers of climate change are not

experienced through characters enacting possible future scenarios, but rather through the preoccupations and anxieties of characters who are experiencing climate change through both lived experience, and the real-time mash of the media landscape.

It has now been five years since 10:04 was published. In that time, the importance of the climate change crisis has increased in the collective consciousness of many, in part due to large media events such as the signing of the Paris Agreement, the Pope's 2017 Encyclical, and more recently President Trump's denials regarding climate knowledge. During these same five years, the visceral and often devastating impacts of heat waves, wildfires, and hurricanes have been felt by increasingly large swaths of the globe. In 10:04 extreme weather events are handled in a manner that makes them familiar, rather than dramatic. As the novel's examples of warming and associated anxiety accumulate they collectively signal a new model for representations of climate impacts as accurately rendered as everyday events, as the new (ab)normal. We are drawn through a warming New York City in the company of a character who is no expert on the subject of climate change, but who is anxiously aware of the issue. As a result, we see climate change not as a series of distant and unlikely occurrences with dramatic repercussions, but as a reflection of the reality already present in our cities, chipping away at hard infrastructure and infiltrating the soft infrastructure of our minds.

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Lexicon: CHARISMATIC FACTS

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REAL TIME ATTRIBUTION

CLIMATE ADAPTAION SUBJECTS Veronica Olivotto

RUDERAL SYSTEMS Oliver Kellhammer

UNDERSCAPE / OVERSCAPE Peggy Weil

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Rodrigo Toscano

Prose: Boaz Levin on the brutality of fact

Lina Moe interviews Clive Hamilton

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