consciousness that the science of climate change gives rise to. I don't think my History1 and History2 ever contained that shock of being forced to recognize the alterity of the planet.

"Search for a Language" Response to Ian Baucom

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Bad Faith?

Ian Baucom's essay is, subtly, devastating. At first, take in his engagement with Chakrabarty, Lévi-Strauss, and Sartre, not to mention his citations of recent authoritative climate reports—perhaps already obsolete by the time of this response. You absorb the stakes first of "History 1," a history that "equates modernity with a narrative of unilinear global progress and with an abstract, analytic, and entirely secular epistemology" and "History 2," a critique of, but not necessarily in direct or dialectical opposition to the first. Next Baucom identifies the dawn of "History 3," a form of history (not historiography, which seems a key distinction) that cannot be experienced, that "escapes 'our' capacity as humans to experience what it means to breach the boundaries of human ontology, to traffic with/as the non-human, to have become humanly non-human and non-humanly human" (Baucom 139). Taken to an extreme—and why shouldn't we because it is precisely extremes that are at stake here?—"history 4 degrees" suggests that almost all of the writing "we" have engaged with—from theory to criticism; from historiography to anthropological description; from personal memoir to postcolonial fiction and, I might add, even that fiction that reflects unremittingly on identities fragmented or reconstituted by forms of migration—stands in a relation of denial or bad faith with regard to the disjointed spatiotemporality of the Anthropocene. By "we" I mean all of us who have written in the past fifteen odd years, since because "climate change" has been in wide circulation. Or perhaps earlier.

Eppur si scrive...

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"We" write, but the time of writing (long periods of reflection punctuated by bursts of energy; or sustained and disciplined productivity—it makes little difference) does not remotely measure up to the geological changes moving us rapidly away from a certain ingrained normativity, a certain set of expectations about relations among the past, present, and future. To be clear: by denial, I mean a function of ideology that allows us to continue (to write). Although "climate change deniers" are granted their time in the mediasphere, these are, in fact, few in number and an all-too-easy target that amounts to little more than a distraction.

To return then, with Baucom, to the previous century, we might invoke Althusserian "ideology" as a mechanism for thinking about denial. Climate change is like ideology in that it forms an invisible umbrella over us. Or better, a dome or biosphere, structures familiar from science and science fiction of the recent past. In order to function as critics, historians, teachers, writers, and so on, we must to some degree go about our business, ignoring the dome. To live in the Anthropocene necessarily means to live in denial, to live with a certain idea of time, the future, perhaps even normative reproductive futurity. The alternative might resemble a psychopathological form of anti-sociality and perhaps the breakdown of writing itself. So writing—even, say, critical theory or novels that in some way engage directly with climate change—necessarily exists as bad faith. ²

Re-Search for a Language

Baucom forces us to confront a question: What kind of writing—literary and/or critical—might be appropriate for this new world? In many ways, "our" dominant critico-theoretical methods, those of the last century, of the period just before general consciousness of the Anthropocene, functioned ideally in relation to certain types of literary production. Because we have mentioned Althusser, we could refer to a critic whom he virtually commissioned to write a work of (anti-humanist) literary criticism, Pierre Macherey. Macherey's *Theory of Literary Production*—with its focus on the work of the reader—achieves its greatest clarity around a decidedly "colonialist" writer, Jules Verne.³

A group of Americans, four Abolitionists and a freed slave, are cast away on a deserted Pacific Island in Verne's 1874 *The Mysterious Island*. There are no negative "ecological" consequences to their actions. On the contrary: The novel is a primer about how to exploit everything nature yields up, including sources of energy. One reason such a novel functions well for/through Macherey's method is because Verne's

- 1 Vladimir Verdansky's 1926 work, *Biosphere* is central to the establishment of the dome theme. Many domes have arisen in its wake.
- $2\,$ I am very grateful to Matthew Schneider-Mayerson for helping me think about the genre of "climate change fiction."
- 3 The book was published in France in 1966 and translated into English in 1978. It was important for my own training, but I'd virtually forgotten it, while in the meantime, I had been teaching and thinking a great deal about *The Mysterious Island*. I picked up *Theory of Literary Production* looking for something in another context, and I was surprised to find—as I had forgotten—that Verne played such a crucial role.
- 4 I cannot deal with the complex racial and evolutionary consequences of this book here.
- 5 As Macherey notes, *Robinson Crusoe*—the only book that Diderot recommends to Emile—represents one crucial point of origin of the "genre" that he defines as adventure story, survival story, or Island story.

primary readers were boys who consumed his serialized adventure stories without any apparent critique. This fact leaves open a space for the professional (feminist? Marxist?) critic to discover gaps in what presents itself as a seamless and irreducible literary product because she possesses an objective sense of history. For Macherey, through a close reading that respects the linguistic and narrative irreducibility of a literary text considered in relation to previous examples of a genre from which it differs, the professional reader uncovers a rift in the text between a certain bourgeois idea of progress (could we say the "unsustainable," for our times?) and the moral limits of humanity. There is nothing particularly startling so far because this general deconstructive mode of reading has been absorbed into our critical DNA.

Such a method might well work for the most thoughtful postcolonial text as well. We can, however, see how it has a special function in relation to a nineteenth-century European novel about human ingenuity and to an author who "actually intends to summarise all the knowledge—geographical, geological, physical, astronomical—accumulated by modern science, and to recast in an appropriate and attractive form, the history of the universe" (Hetzel [Verne's editor and father figure] cited in Macherey 162).

Now, without delving into the details of the critical method or Verne himself, we can say that in a broad sense his novel represents the most coherent form of a narrative of an origin of the Anthropocene. The "Crusoes" of *The Mysterious Island* anticipate resource depletion, intensified fossil fuel usage, rapid industrialization, and even globalization while they, along with reader, operate without any thought that their hyper-activity—the group leader, engineer Cyrus Smith, undertakes projects just because he can, to satisfy the "encyclopedic" thrust of Verne's prose—could lead to massive global disruptions. It is not that catastrophic events do not occur—continental bodies do shift, Smith teaches; the eruption of the apparently extinct volcano at the novel's end wipes out everything the men have built as well as "their" animals—domesticated and not—but they are the work of God.

Macherey reads the ending of the novel to suggest—SPOILER ALERT—that when Captain Nemo, whose relation to British colonial history is too complex to discuss here, dies, the colonialist project is undone with him. I am not certain that I can get to this conclusion except by the most difficult critical contortions. As a reader in the postcolonial period, I find it more likely that the new Lincoln Island of the American Midwest, established by the colonizers (yes, that is what Verne calls them!) in a brief coda, is simply a repetition of the same narrative. One could even imagine a sequel, an opportunity for Verne to introduce a whole new set of flora, fauna, and obstacles for which Smith could invent solutions.

Even if the brief ending (the establishment of the new colony after the revelation of a "secret") bears no significant relation to the body of the text, and even if it were an editorial rather than authorial addition, continuity "under the dome" is implied; a continuity, that is, of a certain way of thinking about industry, progress, and energy. Of course, the novel was written "before oil," but it does contain an important—and

⁶ In the context of my forthcoming work on fuel, I explore the question of the textual "secret" in more detail. For now, it is enough to note that Macherey follows quite a number of possible secrets or moments of *décalage* in Verne's novel, leaving it up to the critic to identify the "one" that she (with the caveat that middle-aged females are not the book's target) feels is central to the work of reading.

emblematic, considering Macherey's method—passage. The colonists are discussing the fact that coal might someday disappear. The engineer, Cyrus Smith, predicts that ever more efficient machines for drilling, and then, extraction in Australia and America, will yield coal for the world for at least 250 to 300 years (until approximately 2174 A.C.E., that is), by which time it will have been replaced with another fuel. "Let us hope so," the journalist says, "for without coal, no more machines, and without machines, no more railways, no more steamships, no more factories, no more of anything that the progress of modern life requires" (Verne 326). Not to worry, though—Smith promises that a clean and free solution will come from a combination of technology and logistics mixed with can-do optimism. Sound familiar? We can no more fault Verne for failing to realize that greenhouse gas emissions will rise to an unthinkable degree before the engineer's "future fuel" will be scalable than we can fault Macherey for failing to make the new biogeochemical realities of our present the primary apparatus of his criticism.

Under the dome, a new genre of climate change fiction has begun to emerge. To be sure, some works in this category are set in a world of unrecognizable and dystopian geopolitical complexity. For all that they may describe an altered planet, they still tend to employ familiar, middlebrow literary language and narrative lines. Can they be read for what they do not say? Or would such works foreclose the possibility of Macherey's Althusserian method because of their transparency?

Kim Stanley Robinson's Forty Signs of Rain (2004) narrates intertwined lives of a suburban NSF scientist, her climate-policy wonk husband, and others, including a group of diplomatic envoys from Khembalung, an island nation threatened by sea level rise. Toward the novel's end, Washington, D.C. is besieged by a tropical storm named... Sandy!!!. We learn of its force through the diegesis of a local news channel:

A very cheerful woman was saying that a big tidal surge had been predicted.... She went on to say that the tide was cresting higher than it would have normally because Tropical Storm Sandy's surge was now pushing up Chesapeake Bay. The combined tidal and storm surges were moving up the Potomac toward Washington.... All of this the reporter explained with a happy smile. (Robinson 330-331)

Certainly, the for-pleasure reader would be expected to take a certain ironic distance from this prose; to place it in the context of the infotainment sphere, which includes weather news; to recognize a disjunction between the affect of the weather lady and the broader, unfathomable frame around her words. Yet one does not have to be a professional reader to make such a critique: it is built into the prose; a plain aperture on the surface rather than a tiny fissure visible only to the expert eye.

After a communications blackout of several days, the parents are reunited, together with their two young boys. Safe and sound, at home, vowing never again to let so long go by without the ability to text one another. The storm was so large, and it so transformed Washington, D.C., that now—finally, we hope, we cannot do otherwise because the novel does not contain the possibility of reading it otherwise—something will ... perhaps ... be done ... to begin ... to think about ... addressing greenhouse gas emissions. Even the saffron-robed Khembalis and the tigers they saved from the National Zoo are optimistic. Put down the book. On to the next.

Paolo Bacigalupi's The Windup Girl is set in a multicultural post-fossil-fuel Bangkok, fortified by huge seawalls and crawling with Chinese refugees ("yellow cards"), American biogenetic-prospectors, and "megadonts" (genetically engineered creatures with trunks, four tusks, and their own union!). Thai terms are mixed in with English and, compared with Robinson's Forty Signs, the reader must work hard to engage with the world. Following multiple characters in their attempts to survive a wild frontier town, the novel is certainly complex, decentered. The sovereign seems to have little to do but hide out in a palace placed well above sea level while chaos reigns below. And yet ... and yet ... in the end, after a mini-revolution, the levees broken ... a Japanese "windup girl," a sex toy imbued with instincts to obey her masters, or better, a New Person, survives in an upper floor apartment. She meets another survivor, an engineer who worked in the past on the development of New People. As they talk, Emiko, the windup, laments that she can never reproduce. The engineer replies, "I cannot change the mechanics of what you already are. Your ovaries are non-existent. You cannot be made fertile any more than the pores of your skin supplemented." When Emiko looks crestfallen, he continues: "Don't look so glum! I was never so enamoured of a woman's eggs as a source of genetic material anyway. Any strand of your hair would do. You cannot be changed but your children—in genetic terms, if not physical ones—they can be made fertile, a part of the natural world" (359). A city whose population has been devastated (or cleansed) by massive floods. A new beginning; an offer by the (male) scientist to help the obedient courtesan-automaton to reproduce; to actually, to do it for her-through his mastery—so that a race of New and perhaps redeemed people will come. Is the critic authorized—compelled—to find a crack in this edifice as Althusser/Macherey might have demanded in a past that is now distant?

To truly correspond to the chaos of History 4°, such narratives would have to be other. Any narrative fiction—and especially one that does not in any way directly reflect on climate change—could and should be subjected to the mechanisms of an ideology critique where what is not said is brought to light. Yet we may lack a language or a method adequate to the circumstances.

Border as Method?8

Certainly, climate change has already and will continue to bring about new, perhaps terrifying relations at the borders of geology and geography. Such disruptions might parallel what Mezzadra and Neilson term the multiplication of labor, that is a

7 True, there have been some works of immense geological/geographical complexity about oil like Pier Paolo Pasolini's 1975 *Petrolio* (a work does not begin or end) or Reza Negarestani's 2008 *Cyclonopedia: Complicity with Anonymous Materials* ("Events are configured by the superconductivity of oil and global petrodynamic currents to such an extent that the progression and emergence of events may be influenced more by petroleum than by time. If narrative development, the unfolding of events in a narration, implies the progression of chronological time, for contemporary planetary formations, history and its progression is determined by the influx and outflow of petroleum" [Negarestani 22]). Neither of these works fits precisely in the "climate change" genre, however.

8 The title of this section refers to the eponymous book by Sandro Mezzadra and Brett Neilson. They think about new methods opened through new forms of borders that have in turn been opened by new forms of labor, and this strikes me as a promising opening, in turn, for thinking History 4°.

series of human borders "more and more crisscrossed, divided, and multiplied by practices of mobility" (Mezzadra and Neilson x). We can also expect new lines of verticality and fluidity; eruptions from the subsurface (perhaps with anthropogenic causes); sink holes; shorelines erased; storms rearranging familiar landscapes; massive fissures resulting from desertification; and so on. Perhaps we may react to such disruptions by developing methods from the "resonances and dissonances produced by [the] encounters and clashes" (Ibid). To the distinction that the authors make between borders of capital and borders of political, legal, and social issues (Ibid 80), we might add borders of the Anthropocene. Perhaps this addition will, in turn, produce new methods, creative and destructive, inspiring and devastating.

I was recently reading precisely the kind of literature that helps to distract from, set itself utterly apart from, the thinking about climate change that I do for "work," that is, a detective fiction by Donna Leon. Our hero, Commissario Brunetti, is speaking with the plucky Signorina Elettra about some police matter unrelated to anything discussed in this essay. The Signorina happens to note a headline in the daily paper that reads Venice Condemned (Leon 166). Yes, Brunetti notes, and Bangledesh as well. Elettra agrees. Refugees will end up in Venice.

"Isn't your geography a bit imaginative here, Signorina?" Brunetti asks.

She replies, "I don't mean they, the Bangladeshis, will come here, but the people they displace will move west, and the ones that they in turn displace will." He seems slow to respond and she asks, "You've read history, haven't you sir?" (Fans of Leon know that Brunetti is a huge history buff.)

"Then you know that this is what happens." He changes the subject.

What does it mean that we find this sort of discussion inserted rather randomly in what could be best be described as an "unliterary" literary fiction whose geographical specificity (Venice) is what distinguishes it from other examples in a well-established genre?

Images of Death and Extinction

As Baucom writes, we will confront "images of death and extinction." He cites Zizek's "End Times" and Agamben's "ultra-history" as two key terms. We might, here, think back to the "nuclear moment" and the images of nuclear fear on screens and papers several decades ago.9 Certainly, the mediasphere has begun to take up—to project with its ever sped-up voracity—images that scientists warn should not be taken as immediate or unmediated representations of climate change. Certainly, spectacular pictures might be called upon to stir up activism. Yet it is precisely the lack of images or their substitution with other spectacular images in the same spaces (quasi psychogeographical charts of the trajectory of a missing plane; soldiers gathering on the Crimean border; children starving in Syrian refugee camps, and so on) or the slow moments, the moments of normalcy, that allow us to go on writing, making plans to write, saving for the future. These are the moments when we turn away from images or contemplate them in relation to a language that either describes them or

⁹ Spencer Weart, Nuclear Fear: A History of Images (Cambridge, Mass.: Harvard University Press, 1989) offers a cultural analysis of such images. It is significant, then, that his work on the history of climate change is not image-based.

translates them or narrativizes them. If writing is what occurs in these moments, it is a kind of writing in denial, a writing that takes cues and departures from known genres even when—especially when—the genres are "climate change related." The shell—patterns of narrative, use of language, modes of address—could not be more comforting. For that, we can either be grateful or we can somehow struggle against it with the greatest discomfort.

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How I Learned to Stop Worrying and Love the Term *Anthropocene*

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Not a day goes by in the 2010s without some humanities scholars becoming quite exercised about the term Anthropocene. In case we need reminding, Anthropocene names the geological period starting in the later eighteenth century when, after the invention of the steam engine, humans began to deposit layers of carbon in Earth's crust. Paul Crutzen and Eugene Stoermer's term has been current since 2000. In 1945, there occurred "The Great Acceleration," a huge data spike in the graph of human involvement in Earth systems. (The title's Kubrick joke stems from the crustal deposition of radioactive materials since 1945.) Like Marx, Crutzen sees the

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1 Paul Crutzen and Eugene Stoermer, "The Anthropocene," Global Change Newsletter 41.1 (2000): 17–18.