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The Great Reversal: Fast Geology and Slow Humanities

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Periodization has left the ivory tower. It is now a reality into which, as humans living on and with an endangered planet, we have been hurled. Concretely, and personally, I mean as follows: all of my ancestors whom I can identify by name — going back to a certain Daniel Usher, born in Braintree, Essex, in 1660 — were, like myself, born in the Holocene, a geological epoch that began circa 9700 BCE. That is a fair bit of continuity. In 2018, however, I watched my daughter, be born in the Anthropocene.¹ My daughter and I are not just of different generations but born of and in different *periods*. Geology and its timelines have seemed, throughout their history, pretty stable and slow. And now, all of a sudden, there is a leap between seasons that impacts — whether or not the term gets officially ratified by the ICS² — every single human being on the planet. Any number of front-page news stories could be recalled to epitomize the acceleration of geology. Take, for example, East Antarctica's Totten glacier, formed some thirty-four million years ago on the border of the Eocene and Oligocene epochs. [These are timelines that, in their vastness, always functioned for the humanist that I am in a manner similar to large numbers in lyric poetry (Catullus's "da mi basia mille"), i.e. they gestured towards the indeterminate.³] And then, in 2016, the Totten glacier suddenly detached itself from bedrock due to warming ocean waters.⁴ Abruptly, the indeterminate collapsed into the now. *We*, humans alive in the first decades of the twenty-first century, are witnessing events that had precisely *not* happened for millions of years, thus now upsetting timelines and periodizations that had — including in their indeterminacy — served as a calm backdrop for a very very long time indeed. Such events are characteristic of the Great Acceleration, which certain scholars locate as beginning after the end of the second

¹ Much has been written on this term. As a starting point, see my own "Untranslating the Anthropocene," *Diacritics* 44:3 (2016): 56-77. Since that piece, many new books and articles have appeared that further nuance and expand upon the Anthropocene concept, among which I mention in particular Kathryn Yusoff's *A Billion Black Anthropocenes or None* (Minneapolis, MN: University of Minnesota Press, 2018).

² The International Committee on Stratigraphy (ICS) is a body of the International Union of Geological Sciences.

³ See Ullrich Langer, "'Fleur mille fleurs ravissant': Le déterminé et l'indéterminé dans la poésie amoureuse (Ronsard et Pétrarque)," in Bernd Renner and Phillip John Usher, eds., *Illustrations inconscientes. écritures de la Renaissance. Mélanges offerts à Tom Conley* (Paris: Classiques Garnier, 2014), 329-342.

⁴ As I write this short article in 2022, it is striking to return to a 2007 newspaper article that states how "[the] Pine Island and Thwaites glaciers on the western Antarctic ice sheet, and the Totten and Cook glaciers on the eastern Antarctic ice sheet are now sliding into the water between 20% and 100% faster than in recent decades, the researchers report. As the glaciers flow into the surrounding ocean, they begin to melt, together accounting for around 12% of global sea level rises, or 0.35mm per year. 'Although the amounts of water aren't yet that large, the concern is that we simply don't know what's causing this acceleration of these glaciers. It may be that warm ocean water is getting underneath them and making them flow more easily,' said Dr [Duncan] Wingham." Ian Sample, "Arctic ocean may lose all its ice by 2040, disrupting global weather," *The Guardian*, March 16, 2007. <https://www.theguardian.com/environment/2007/mar/16/climatechange.climatechange>. Accessed September 2, 2022.

world war.⁵ Carolyn Fornoff, Patricia Eunji Kim, and Bethany Wiggin take up the example of the Totten glacier as a starting point for their collection of essays, *Timescales: Thinking Across Ecological Temporalities*, which calls for a “future-oriented practice of environmental humanism” that is also “mindful of the difficult legacies and inhuman exclusions in each of those terms.”⁶ They as well as many other scholars, artists, and activists are actively engaged in asking questions about and in curating new tools for making sense-able the new timescales with which, as humans, we must grapple in the Anthropocene. As Elizabeth Ellsworth and Jamie Kruse have put it:

The timescales that once belonged to the science of geology are now with all of us in a wholly new way. The geologic now happens “now”: “the existence, and nature, of earth dynamics were once the specialized interest of scientists and infrastructure designers. Today, they are topics of breaking news about *tectonic plate movements, travel-disrupting volcanic eruptions, deep time, slow accumulations and metamorphoses of the world’s materiality, erosion and displacement of landforms, dramatic earth reshaping events, and geo-bio interactions.*”⁷

As humans, we are now aware of being both “increasingly vulnerable to the geologic” and “agents of planetary geologic change.” The stakes are indeed far from academic, but they are also, urgently and simultaneously, scholarly. In a much read and much discussed article, the historian Dipesh Chakrabarty argued that, in our new era defined by anthropogenic ecological collapse, “the age-old distinction between natural history and human history” equally collapses.⁸ Disciplines and periods that belonged to quite different spheres of knowledge and expertise now call out to each other in myriad new ways.⁹ But if it is true that we can no longer parse out what belongs to “human history” and what to “natural history” in the same, relatively confident way, as before, what are we to *do* with the finer grain periodizations that count out chunks of time in decades or centuries, rather than millennia or geological epochs? I still recall, as a graduate student, being introduced to “Marian, who works on the year 1540.”¹⁰ The fact that we now live in the *geologic now* surely makes the periodizations of literary history seem irrelevant or quaint — but I would argue otherwise.

⁵ The defining articles on the Great Acceleration are Will Steffen, Wendy Broadgate, Lisa Deutsch, Owen Gaffney, and Cornelia Ludwig, “The Trajectory of the Anthropocene: The Great Acceleration,” *The Anthropocene Review*, 2: 1 (April 2015): 81–98; and Will Steffen, Paul J. Crutzen, and John R. McNeill, “The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?,” *Ambio* 36: 8 (December 2007): 614–621.

⁶ Carolyn Fornoff, Patricia Eunji Kim, and Bethany Wiggin, “Environmental Humanities Across Times, Disciplines, and Research Practices,” the introduction to their *Timescales: Thinking Across Ecological Temporalities* (Minneapolis, MN: University of Minnesota Press, 2020), vii–xxviii, here ix.

⁷ Elizabeth Ellsworth and Jamie Kruse, “Evidence: Making a Geological Turn in Cultural Awareness,” the introduction to their *Making the Geologic Now: Responses to Material Conditions of Contemporary Life* (Brooklyn, NY: Punctum Books, 2013), 6–26, 7.

⁸ Dipesh Chakrabarty, “The Climate of History: Four Theses,” *Critical Inquiry*, 35 (Winter 2009): 197–222, here 201.

⁹ See also Dipesh Chakrabarty, *The Climate of History in a Planetary Age* (Chicago, IL: University of Chicago Press, 2021), in which the author makes a call for thinking about history in terms *both* of the global (i.e. human-centered histories) and the planetary (i.e. non-human-centric perspectives).

¹⁰ This is how I was introduced to Marian Rothstein back at the Renaissance Society of America (RSA) conference in Miami, in 2007. She had just published a highly regarded edited volume titled *Charting change in France around 1540* (Selinsgrove, PA: Susquehanna University Press, 2006), a truly interdisciplinary collection with chapters focused on the key changes taking place in and around 1540 in on music, global travel, religion, and epistemology.

The academic position that I currently occupy was originally advertised in the 2013 MLA job list, which announced that New York University was seeking to hire a specialist of “sixteenth-century French literature,” to replace Michel Beaujour.¹¹ This past year, we hired a medievalist, Ariane Bottex-Ferragne, to replace Sarah Kay.¹² This year we will, “pending final budgetary approval,” be hiring a specialist of “eighteenth-century French literature” to replace Lucien Nouis.¹³ In the past two decades humanity has stumbled into the Anthropocene, but — in larger so-called language departments in the United States — the teaching and study of French literature remains, in many ways, divided into the same periods as it has been for a long time, and there is clearly, in addition to and alongside more interdisciplinary commitments and attempts to redefine the discipline in productive and compelling ways, a certain logic of replacement. For all intents and purposes, I have pretty much the same job title and period remit as my Doktorvater (Tom Conley) and Groß-Doktorvater (Alfred Glauser).¹⁴ Likewise, the graduate students with whom I work most closely generally have an intellectual commitment to the early modern period.¹⁵ Much else in academia has changed and is changing, and the state of sixteenth-century French literary studies continues to evolve in dynamic and exciting ways. I can only hypothesize about what Alfred Glauser would have made of my most recent book, about early modern extractivism!¹⁶ What I want to underscore in this brief piece is that — building around the Great Acceleration, the Great Derangement, and related terms — there is happening, I believe, something that might be called the Great Reversal.¹⁷ By this, I mean the following: while geology used to look slow compared to the humanities, the reverse is now undoubtedly true. Geology has accelerated at a rate that the humanities cannot — and probably should not — imitate.

To tease out this point, I turn to a book that does not receive much attention these days. In 1939, the French writer Antoine de Saint-Exupéry published a memoir, *Terre des hommes*, whose title was originally translated into English as *Wind, Sand and Stars*. Therein, the author of *Le Petit Prince* details various episodes of his life as a navigator, including his

¹¹ Michel Beaujour was the author of numerous works, most importantly perhaps is his book about writing the self: *Miroirs d'encre: rhétorique de l'autoportrait* (Paris: Seuil, 1980). See also my preface to his posthumously published Michel Beaujour, *De la poétologie comparative* (Paris: Classiques Garnier, 2017), 7-10

¹² Ariane Bottex-Ferragne is the author of *Essai de poétique hélinandienne. Lire autour du Reclus de Molliens (XIIIe-XVe siècles)* (Paris: Classiques Garnier, 2023). Sarah Kay likely needs no introduction here — I note merely that her latest book is *Medieval Song from Aristotle to Opera* (Ithaca, NY: Cornell University Press, 2022).

¹³ Lucien Nouis is the author, notably, of *De l'infini des bibliothèques au livre unique. L'archive épurée au XVIIIe siècle* (Paris: Classiques Garnier, 2013). He is also a writer of *romans policiers* involving the commissaire Émile Bordarier: *Nous ne négligerons aucune piste* (Paris: Le Masque, 2020) and *Jusqu'au dernier chapitre* (Paris: Le Masque, 2021).

¹⁴ For a certain history of sixteenth-century French literary studies in the United States, especially the bifurcation between some main schools of thought, see Hassan Melehy, “La carte cinématographique du XVIe siècle. Sur la route interdisciplinaire,” in Renner and Usher, *Illustrations inconscientes*, 31-44 and “Off the Human Track: Montaigne, Deleuze, and the Materialization of Philosophy,” in Pauline Goul and Phillip John Usher, eds., *Early Modern Écologies* (Amsterdam: Amsterdam University Press, 2020), 23-50. See also Tom Conley’s thoughts on the matter in the opening section of his *A fleur de page* (Paris: Classiques Garnier, 2015), 9-28.

¹⁵ Most recently Elizabeth Kirby (who now teaches at Saint John’s College in Annapolis) defended a dissertation titled “*Je m’y fusse peint tout entier et tout nud*” : *Writing the Naked Self in Montaigne’s Essais* (New York University, 2021).

¹⁶ Phillip John Usher, *Exterranean: Extraction in the Humanist Anthropocene* (New York, NY: Fordham University Press, 2018).

¹⁷ Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable* (Chicago, IL: Chicago University Press, 2016).

friendship and professional *connivence* with fellow pilots, his crash in the Sahara Desert in 1935, and the ever-present threat of death. In the third chapter, titled simply “L’Avion” (“Planes”), Saint-Exupéry pauses to discuss the slowness of human adaptation to new things:

Si nous croyons que la machine abîme l’homme c’est que, peut-être, nous manquons un peu de recul pour juger les effets de transformations aussi rapides que celles que nous avons subies. Que sont les cent années de l’existence de la machine en regard des deux cent mille années de l’histoire de l’homme? C’est à peine si nous nous installons dans ce paysage de mines et de centrales électriques. C’est à peine si nous commençons d’habiter cette maison nouvelle, que nous n’avons même pas achevé de bâtir. Tout a changé si vite autour de nous: rapports humains, conditions de travail, coutumes. [...] Pour saisir le monde aujourd’hui, nous usons d’un langage qui fut établi pour le monde d’hier. Et la vie du passé nous semble mieux répondre à notre nature, pour la seule raison qu’elle répond mieux à notre langage.¹⁸

If we believe that the plane is the ruin of man, it is perhaps because we lack the necessary distance for judging the effects of transformations as rapid as those we have undergone. What are the hundred or so years that the plane has existed when sat next to the two hundred thousand years of human history? We’re barely getting settled in this landscape made of mines and electric power stations. We’re barely starting to inhabit this new house of ours, which we have not even finished building. Everything has changed around us so quickly: human relationships, working conditions, customs. [...] To apprehend today’s world, we are using a language that was established for yesterday’s. And the life in the past seems to respond better to our nature, we think, for the simple reason that it better responds to our language.

In these few lines, somewhat buried within a text whose interest is largely autobiographical, Saint-Exupéry grasps pretty accurately at what I understand to be our present situation. A world in which East Antarctica’s Totter glacier has detached itself from the bedrock, an untying that several generations ago would have been inconceivable, a world in which — as was announced in the days I finalized this short essay — the melting of the Greenland ice cap will *inevitably*, whatever results from efforts such as Joe Biden’s flagship climate bill, cause an “absolute minimum sea-level rise of 27 centimeters (10.6 inches),” with absolutely catastrophic consequences for the billions of people who live in coastal regions,¹⁹ this world — and many other events could, of course, be adduced — is indeed, in Saint-Exupéry’s terms, a very “new house,” which we have not finished building and which we struggle to represent and to usher into discourse precisely because we still speak a language forged for yesterday’s world. There is evidence of what we might call *language strain* all around us, both in manifold academic debates, such as what to call our present period — the Anthropocene, the Capitalocene,²⁰ the Chthulucene,²¹ the New Climatic Regime,²² etc. — and in the popular media, where journalists (sometimes according to political stripe, but not

¹⁸ Antoine de Saint-Exupéry, *Terre des hommes* (Paris: Gallimard, coll. Folio, 2021), p. 50.

¹⁹ Damian Carrington, “Major sea level rise caused by melting of Greenland ice cap is ‘now inevitable’,” *The Guardian*, August 29, 2022. (<https://www.theguardian.com/environment/2022/aug/29/major-sea-level-rise-caused-by-melting-of-greenland-ice-cap-is-now-inevitable-27cm-climate>) Accessed August 29, 2022.

²⁰ See *Anthropocene or Capitalocene?: Nature, History, and the Crisis of Capitalism*, ed. Jason W. Moore (London: Verso, 2015)

²¹ Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press, 2016).

²² Such is Bruno Latour’s preferred nomenclature, notably in his *Down to Earth: Politics in the New Climatic Regime*, trans. Catherine Porter (New York, NY: Polity Press, 2018).

always) bandy about terms like “Nature,” “Act of God,” and countless others when trying to discuss what is happening on and to the planet. Caught as we are in correlationism, i.e. the need to apprehend so-called exterior reality via human words, sudden changes to the former (the invention of the plane, the Anthropocene, etc.) pose a serious problem — or opportunity — for the timelines of the latter.²³

But the slowness of language is not, in and of itself, a problem. It just *is* — and is, as Donna Haraway would put it, something we can *stay with*. Recent work in one particular subfield of early modern studies has done much to respond to the rapidity of planetary change with just such poise, persistence, and philology. In a recent special issue of *Modern Language Notes (MLN)* about climate theories — an amorphous set of ideas that reach us from Parmenides (the idea that there are five terrestrial zones), Ptolemy (the system of seven bands or *climes*), and Hippocrates (the deterministic influence of place and *milieu* on human life), and subsequently through a whole host of early modern and modern authors²⁴ — Sara Miglietti has argued against (in terms borrowed from Nietzsche) both *antiquarian* history (i.e. the past is completely other) and *monumental* history (i.e. the search for analogies with the present, in preference for an acceptance of, and appreciation of the affordances offered by, the past’s difference. Commenting in her introduction on Jean-Patrick Courtois’s contribution to the issue (on transactional environmentalism in the Enlightenment), Miglietti emphasizes “the methodological imperative of studying climate theories on the authors’ own terms, through careful philological analysis, rather than through the deforming lens of contemporary categories,” adding that, building on Courtois, “[if] we want to understand early modern climate theory [...] we must pay special attention to linguistic and conceptual variations across individual thinkers.”²⁵

To put it somewhat simply, the careful re-reading of two or more early modern authors, as they grapple with inherited traditions (Parmenides, Ptolemy, Hippocrates), with an ear and an eye to the philological nuances and slippages, has the potential to yield a richness that, precisely in its difference from the vocabularies of our present time, might allow us to make more of this language fashioned for “yesterday’s world.” As Miglietti concludes, the “value of studying early modern climate theories rests in the fact that they belong to a conceptual and material world that is far removed from ours and yet somehow located at its point of origin: the worldview that these theories represent is at once distant and close, and it speaks to us in a language that we can still fully understand, if we are patient enough to listen.”²⁶ It is this call for patience that I should like to second and to appropriate for the slowness side of the Great Reversal: geological and planetary change is speeding up; in response, the humanities might do well to accelerate its deceleration, so that — to take up again Saint-Exupéry’s words — the language created for yesterday’s world, the only language we have, might cope with the challenge of articulating today’s world.

While I am sympathetic to various calls for slowness — the Slow Food movement,²⁷ the Slow Science Movement (“We are scientists. We don’t blog. We don’t twitter. We take our

²³ Correlationism is a term coined by Quentin Meillassoux in his *Après la finitude: Essai sur la nécessité de la contingence* (Paris: Seuil, 2012).

²⁴ See in particular the recent (and authoritative) study of climate theories by Dorine Rouiller, *Des airs, des lieux et des hommes. Les théories du climat à la Renaissance* (Geneva: Droz, 2021).

²⁵ Sara Miglietti, “Introduction: The Past and Present of Climate Theories,” in: *MLN*, 132: 4 (September 2017): 902-911, 909 (French Issue).

²⁶ Miglietti, “Introduction,” 910.

²⁷ https://www.slowfood.com/wp-content/uploads/2015/07/Manifesto_Quality_ENG.pdf Accessed September 2, 2022.

time”),²⁸ the idea of “Slow History”,²⁹ the need to be a “slow professor,”³⁰ to name but a few — my focus here is less on cultivating slowness *per se* than on the reversal (geological timelines now becoming faster than those of the periodizations we use and constantly revise in the humanities), a reversal whose consequences we have yet to realize, but which we must take on board lest periodizations of the century or millennium seem purely parochial. At the same time, deep time cannot be the *only* time with which we think and try to make sense of things. Just as Dipesh Chakrabarty calls for us to think in terms of both the global and the planetary, so likewise we must grapple with the timelines that pertain to both, namely the human and the un-human, time measured in days, months, and years, as well as time measured in epochs.³¹

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²⁸ <http://slow-science.org>. Accessed September 2, 2022. See also Isabelle Stenger’s important *Another Science is Possible: A Manifesto for Slow Science*, trans. Stephen Muecke (Newark, NJ: Polity Press, 2018).

²⁹ Mary Lindemann, “Slow History” (*American Historical Association Presidential Addresses*), *The American Historical Review*, 126: 1 (March 2021): 1-18.

³⁰ Maggie Berg and Barbara Karolina Seeber, *The Slow Professor: Challenging the Culture of Speed in the Academy* (Toronto: University of Toronto Press, 2016).

³¹ As already noted, such is the central claim of Chakrabarty, *The Climate of History in a Planetary Age*.