Winter 2015

Modernism, Time Machines, and the Defamiliarization of Time

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"We do not all of us inhabit the same time."
—Ezra Pound, "Dateline"

"History is no entity advancing along a single line . . . it is a poly-
  rhythmic and multi-spatial entity."
—Ernst Bloch, *Heritage of Our Times*

Modernism and Time Machines

Many works of modernist literature and art aspired to the condition
of time machines. While the early phases of modernism's history
contain the first appearance of such a device in H. G. Wells's *The
Time Machine: An Invention* (1895), the aesthetic experiments that we
typically associate with the singular noun *modernism* have not been
considered in relation to this foundational science-fiction trope or
its numerous offshoots burgeoning through our cultural landscape
today. Yet, if we reflect on what many of the most famous texts and
paintings were doing in form and theme, it is clear that the modern-
ist aesthetic called attention to itself not only as a vehicle for expe-
riencing and moving in time, but also as a technique for rethinking
that experience and movement. Moreover, modernist experiments
often sought self-consciously to question and reconceptualize time
by foregrounding the ways in which their own devices, often in con-
cert with psychological, social, and historical mechanisms, struc-

tured and produced time. Modernism was itself, in many hitherto-unconsidered senses of the phrase, a time machine.

By reading modernism as a peculiar kind of time machine, I would like to expand our sense of both the well-known obsession with time at the beginning of the twentieth century and the popular trope of the time machine. The fascination with time in canonical works of literature and art should be reframed alongside the rise of time-travel narratives and alternate histories because both modernism and this cardinal trope of science fiction (SF) have been able to produce a range of effects and insights that go beyond the exhilarations of simply sliding back and forth in history.[1] Together, these strands of "high" art and "low" popular culture form part of a larger network whose primary function is the defamiliarization of time itself. Running throughout the twentieth century, this network includes not just literary tropes, formal techniques, and SF themes, but also technological, cultural, and historical conditions, as well as disciplinary formations like critical geography and postcolonial historiography. Drawing, in part, on Gilles Deleuze and Félix Guattari's sense of the term, this essay envisions a larger machine comprising these disparate components, a heterogeneous assemblage whose "identity" resides in what it does.[2] This kind of time machine, which I also refer to as a "heterochrony machine" or "alternate-history maker," is not just the standard aesthetic artifact featured in our critical narratives—an instrument that symptomatically picks up and perhaps processes the shifting spatiotemporal conditions of modernity; it is rather a set of connections that construct and reveal a multiplicity of nonstandard times and strange timespaces and a variety of ways of imagining history otherwise.

1. The time machine is a cardinal trope of SF because, as Sean Redmond points out, "[s]cience fiction is in essence a time travel genre. Events either open in the altered past, the transformed present or the possible future, transporting the reader to another age, place, dimension or world"; see Redmond, "The Origin of the Species: Time Travel and the Primal Scene," in *Liquid Metal: The Science Fiction Film Reader*, ed. Sean Redmond (New York: Wallflower, 2004), pp. 114–115.

2. See Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1983), and *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987). For them, a machine is an assemblage of connections among parts that, when plugged into one another, produce new lines of becoming. While I do not share his hostility to discursive networks, Levi Bryant's recent *Onto-Cartography: An Ontology of Machines and Media* (Edinburgh: Edinburgh University Press, 2014) usefully clarifies how machinic configurations help us to expand definitions of entities based on the outputs they produce and the operations they perform.

In studies of literary modernism, the relations among these elements of the network have been construed most often as the familiar oppositions between high and low, aesthetic and historical, internal and external, modernism and modernity. For instance, the heightened preoccupation with time that emerged in the late nineteenth and early twentieth centuries is usually treated as a poignant turn away from clock-time in favor of subjectivity and lived experience. In the face of capitalism's standardization and regulation of time, the acceleration of changes in social life, and the vertiginous elongation of human and planetary history by evolutionary theory and geology, writers and artists are said to have moved inward to explore the workings of memory, the pathos of finitude, and the intensities of fugitive moments. As Adam Barrows puts it in *The Cosmic Time of Empire: Modern Britain and World Literature*, "the dominant critical tendency has been to treat modernist time as a purely philosophical exploration of private consciousness, disjointed from the forms of material and public temporality that standard time attempted to organize."[3] For Sara Danius in *The Senses of Modernism: Technology, Perception, and Aesthetics*, the assumption that modernism responds to "the growing hegemony of homogeneous time" simply by turning to "explorations of subjective time" does not allow us to see how literature actually internalized the new technologies of perception in ways that made private experience itself already a composite expression of modern conditions.[4]

Much has been done to complicate these divisions, for the most part by demonstrating the historical nature of what once seemed unhistorical. But if we take seriously the period's interrogations of the form of time and history, then modernism's engagement with history (inclusive of SF) cannot mean simply that the interpenetration of modernism and modernity is reassuringly historical. Like Danius, I think that modernist art and literature did not succumb to the purely "external" and luddite dualism pitting aesthetic modernism and its expressions of organicism against technological modernity. However, rather than rereading subjective "time-consciousness" for its internalizations of technology, I want to argue, like Barrows,

3. Adam Barrows, *The Cosmic Time of Empire: Modern Britain and World Literature* (Berkeley: University of California Press, 2011), p. 7.

4. Sara Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca, NY: Cornell University Press, 2002), p. 10. Danius argues that "[c]onditions of possibility can be traced internally; that is, they are to be understood as a matter of constitution. . . . Stated differently, technology and modernist aesthetics should be understood as internal to one another" (pp. 10–11).

that modernist time machines critique the imperial and commercial "one, true, 'cosmopolitan' time of modernity," but that they do so by revealing or constructing an external multiplicity of material, social, and geographical times and histories.[5] Thus, in addition to Barrows's postcolonial treatment of temporal difference, I want to argue for a kind of "science-fictionalization" of time and the temporal pluralization characteristic of recent work in human geography. In other words, the heterochrony machine of which modernism is a part questions and estranges time not only in terms of geographical and political location, but also with regard to its rate, scale, and number. The modernist time machine complicates the dualism of modernism and modernity not just by treating literature as itself a technology of temporal perception, but by revealing the alternative temporality and historicity that make for as many modernisms as there are modernities. Indeed, in this essay, *modernism* functions as shorthand for a pluralization of time's speed, shape, and lines of occurrence; modernism is the name for its own multiplication of itself and that which underwrites it.

As a result of the critical tendencies toward anti-technological interiority that Barrows and Danius describe, many of modernism's strangest reconfigurations of time, such as Ezra Pound's claim that "We do not all of us inhabit the same time," have come to sound like self-evident descriptions of purely subjective differences.[6] But what if we were to take Pound literally? What if modernism could be read as the strangest exploration of a plurality of different times and kinds of time? Perhaps the possibility of walking halfway down the block and into another epoch or of occupying zones constituted by the overlap of varying rates, rhythms, and scales is not just an SF scenario. Indeed, in my argument, the radical rethinking of the shapes of time, the consistency of timespace, and the nature of history are first fully undertaken by texts that seem to have hardly any relation to SF at all. Think, for instance, of T. S. Eliot's *The Waste Land* in which the simultaneous presence of different undead eras constitutes a heterogeneous timescape and redefines "classicist" modernism as anachronism. Or consider the "Wandering Rocks" episode of James Joyce's *Ulysses* in which the precise timing and mapping abilities of chronophotography—a series of snapshots tracking movement—call attention to parallax between not only points of view but Dublin's various spaces, each elapsing at different rates.

5. Ibid., p. 4; Barrows, *The Cosmic Time of Empire* (above, n. 3), p. 102.

6. Ezra Pound, "Dateline," in *Literary Essays of Ezra Pound*, ed. T. S. Eliot (London: Faber and Faber, 1954), pp. 74–87, quote on p. 87.

Similarly, Virginia Woolf's *Mrs. Dalloway* critiques the modern nation as a synchronized, well-proportioned whole by emphasizing, in theme and form, a multiplicity of clocks (of which subjectivity is but one), each running differently on a day distended by many forces, not least of which is the daylight saving time that is literally manipulating the clock. Finally, recall the strange way that William Faulkner's *The Sound and the Fury* maps temporal disjuncture onto US social history by juxtaposing a disenfranchised racial "timelessness," a lagging Mississippi, and a progressive, industrialized north. If the science-fictionalization of time involves literalizing the disorienting experience of modernity, the distortions of memory, and the singularity of individual perception in modernist texts, as well as treating psychological experience as indices of other times and ways of thinking about time, then the well-worn modernist "time-obsession" can be made newly astonishing again.[7] Perhaps even more surprisingly, modernist time culture and the time-travel trope enter into direct conversation with critical geography's multiplication of material, social, and geographical rhythms, with postcolonial treatments of temporal difference and alternative historical tracks and with the humanities' recent speculative turn toward inhuman scales and deep time.

There has not been any substantial treatment of the positive links between the modernist time fixation and either the science-fictional or the alternate-historicist aspects of twentieth-century culture. Indeed, the prevailing wisdom holds that the earlier interest in time was ultimately a way of ignoring history or maintaining the dominant, progressivist version of it. Thus, modernist time experiments—in the now-too-familiar forms of conservative pastism, ruptural futurism, timeless spatial form, and epiphanic or everyday momentousness—have often become negative examples for the other parts of the century, particularly the far end: they have often become forms of escape from the regulatory and standardizing forces of modern life into unhistorical zones of temporality and subjectivity, or fortifications of the unilinear time of the dominant capitalist order. Famously, Fredric Jameson has constructed important links between modernism and SF, but they seem to be one-way streets: he sees SF as a radical modernist practice, but does not consider modernism as a kind of SF.[8] Recently, several excellent

7. For general accounts of modernism's "time-obsession," see Wyndham Lewis, *Time and Western Man* (London: Chatto and Windus, 1927); A. A. Mendilow, *Time and the Novel* (New York: Humanities Press, 1965); and C. A. Patrides, *Aspects of Time* (Manchester: Manchester University Press, 1976).

8. As Phillip Wegner says of Jameson's *Archaeologies of the Future*, one of the study's "most original contributions is that it enables us to understand science fiction itself as

scholarly works have appeared that call on postcolonial and materialist positions to problematize the prevailing view of literature's retreat to interior temporalities—by emphasizing, for instance, modernism's engagement of global standard time as an imperial instrument, its awareness of the technological constitution of aesthetic experience, and its exploration of uneven development in novels of arrested growth.[9] To add SF to this critique would build on this work by linking it to unexpected components of heterochronic culture. Scholars who focus on SF and time travel are almost by definition invested in imagining the present and future otherwise, but the intermittent connections drawn by critics between time travel and modernism have focused less on alternative visions of time and history and more on logical paradox, self-reflexivity, and playful narrative forms.[10] Finally, postcolonialists have done a great deal in theorizing historical multiplicity and heterogeneity, but postcolonialism's alternative historicism is usually in opposition to both modernism and modernity; and generally, critics apply these concepts to broad cultural differences elided by imperialist history and Western historiography, rarely to timespace itself.[11]

While this essay seeks only to connect the modernist time-fixation to the SF trope of the time machine, it is worth articulating the stakes of thinking together all of the above discourses. Over the

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a *modernist* practice"; see Wegner, "Jameson's Modernisms, Or, the Desire Called Utopia," *Diacritics: A Review of Contemporary Criticism* 37:4 (2007): 2–20, quote on p. 7 (emphasis in original).no. 4 (2007) The connection between modernism and SF is built on Russian formalism's "*ostranenie*," which modernist scholarship usually translates as "defamiliarization." Darko Suvin incorporates *ostranenie* into his influential definition of SF as "the literature of cognitive estrangement"; see Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven, CT: Yale University Press, 1979), p. 4. But for Jameson, "[t]he classics of high modernism . . . achieve these estranging effects through violations of formal expectations. . . . Science fiction, on the other hand, estranges through its 'realistic' content" (Wegner, "Jameson's Modernisms," p. 9).

9. See Barrows, *The Cosmic Time of Empire* (above, n. 3); Danius, *The Senses of Modernism* (above, n. 4); and Joshua Esty, *Unseasonable Youth: Modernism, Colonialism, and the Fiction of Development* (Oxford: Oxford University Press, 2012).

10. See George E. Slusser and Danièle Chatelain, "Spacetime Geometries: Time Travel and the Modern Geometrical Narrative," *Science Fiction Studies* 22:2 (1995): 161–186; and David Wittenberg, *Time Travel: The Popular Philosophy of Narrative* (Bronx, NY: Fordham University Press, 2013).

11. See, for instance, Dilip Parameshwar Gaonkar, ed., *Alternative Modernities* (Durham, NC: Duke University Press, 2001); and Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference* (Princeton, NJ: Princeton University Press, 2000).

course of the century, the work of producing and tracking the otherness and multiplicity of time has come to seem less and less desirable in direct proportion to the political need for "simultaneous contradiction"—for concrete opposition in a straightforward dialectic in an urgently (but falsely) simplified *Now*. However, as Ernst Bloch reminded other utopian thinkers in the 1930s, "[n]ot all people exist in the same Now. They do so only externally, through the fact that they may all be seen today. But they are thereby not yet living at the same time with others."[12] Insofar as modernism can be shown to explore this "nonsynchronous" condition and the strange and uneven coexistence of different times, its "time-cult," as Wyndham Lewis disparaged it, enters not only into a surprising constellation with time-travel and alternate-history narratives, but also with the engaged or potentially engaged interrogations of history in recent academic discourses. Modernism's reworking of the nature of time and modernity itself as something other than a single line of just-nows strung together "like the beads of a rosary" (in Walter Benjamin's simile) connects not only to SF's fantasy of undoing time and the nature of history's line, but also to the impulse of "historiographic-metafiction" that Linda Hutcheon identified with postmodernism, and to the postcolonial desire, in Dipesh Chakrabarty's words, "to reconceptualize the present . . . to think . . . the 'now' that we inhabit as we speak—as irreducibly not-one."[13] To sketch the outlines of the full heterochrony machine is to begin to see how the political desire to revise history and envision other histories connects to the century-wide imaginative contestation of historical progress and the earlier interest in history's irregular rhythms, its dense divarication of branches, its variety of scales and bundles of nonparallel lines.

The Time(s) Machine

The heightened interest in temporality from the end of the nineteenth century onward is most often characterized by a rapid and precipitous fall into time (which I describe in the next section). This interest is also marked from the beginning by a new attention to the speeds, shapes, and number of times. Modernism is said to have engaged the new pace of railways, automobiles, the telegraph and wireless communication, mass production, and urbanization

12. Ernst Bloch, *Heritage of Our Times*, trans. Neville Plaice and Stephen Plaice (1935; reprint, Cambridge: Polity Press, 1991), p. 97.

13. Walter Benjamin, "Theses on the Philosophy of History," in *Illuminations* (New York: Harcourt, Brace, 1968), pp. 253–264, quote on p. 263; Chakrabarty, *Provincializing Europe* (above n. 11), p. 249.

by developing an aesthetics of temporal experience that opposed the spatialized time of scientific rationality. Wells's landmark SF text *The Time Machine* appears to go in the opposite direction: it embraces spatialized time, investigates the progressive or degenerative direction of history, and reaffirms the model of a single, universal, physical time. In this view, not only does modernism seem unable to handle heterochrony except in terms of the subject's lived experience, but his trope of the time machine appears ill-equipped to help defamiliarize time, illuminate other times, or produce alternate historicities. However, rereading Wells's work is crucial to a reconception of modernism as part of a larger heterochrony machine.

To show how his trope is part of the redefinition of modernist timespaces, I want to rehearse briefly what time machines usually signify and accomplish, and how they typically operate within the historicist machine rather than the heterochronic one. The obvious cultural significance of this technology is that its ability to move a traveler backward or forward in time, like narrative itself, expresses the fantasy of revising the past and previewing the future. Backward time travel expresses the desire to alter history for a better future, to "undo" the present, as Catherine Gallagher describes this type of plot, "by subtracting a crucial past event"; or it aims to highlight in a cautionary way the unintentional revisionary effects on the future of what we do in the past and present.[14] Forward time travel generally foregrounds a vision of historical progress, a culture's extrapolation of its future from its present, or a critique of the present by its imagined consequences. As Jameson's work on utopian SF shows, what many consider the genre's defining feature of *cognitive estrangement* is, in fact, an effect of the temporal operation of forward time travel: SF not only works to "defamiliarize and restructure our experience of our own *present*," but it provides a preview or negative outline of the virtually unimaginable corrective sequence that ought to happen in the future, which calls into consciousness and question the historical sequence that produced the current state of affairs.[15] While there are certainly time-travel narratives that suc-

14. Catherine Gallagher, "Undoing," in *Time and the Literary*, ed. Jay Clayton, Marianne Hirsch, and Karen Newman (New York: Routledge, 2002), pp. 11–29, quote on p. 11.

15. Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (New York: Verso, 2005), p. 286 (emphasis in original). As Patrick Parrinder puts it, "the essence of Suvin's theory of cognitive estrangement . . . [is] that by imagining strange worlds we come to see our own conditions of life in a new and potentially revolutionary perspective"; see Parrinder, ed., "Introduction," in *Learning from Other Worlds: Estrangement, Cognition, and the Politics of Science Fiction and Utopia* (Durham, NC: Duke University Press, 2001), pp. 1–18, quote on p. 4. Jameson's work on SF

cessfully explore conceptions of time like the loop or the forking path, by and large, the ordinary time machine transports us in a way that depends on and reinforces the conception of history as a tight, straight, and unilinear sequence and that reflects and inspires a cultural present's imagination of its own (butterfly) effectuality, responsibility, and progressivist solicitude.[16]

Time travel's affective and epistemological functions—what it allows us to feel and know—are likewise often tied to unilinearity. The thrill of revision, of going back to see, whether in the time machines of museum villages, theme parks, or literary texts, is the thrill of witnessing something no longer present, of understanding what is absent. Conversely, the enjoyment of speculative or predictive preview is the pleasure in imagining what the future will be like or in tracking positive or negative outcomes. While in both cases, as Philip Rosen points out, the fantasy provides the sensation of a godlike power to rise above history, of "a transcendence of [one's own] temporal location and determinations," time travel also serves, and returns us to, the present, lodged rectilinearly between the past and

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stresses the temporalization of cognitive estrangement, showing that defamiliarization provokes not only a simple comparison or critique of our present, but also a sense of the causal trajectory of current social and material arrangements that could be disrupted by a new and revolutionary vision. As Jameson's title *Archeologies of the Future* suggests, there is, buried in the present, an unimaginable trace of something to come, a utopia ready to be unearthed whose ethical necessity—the feeling that it must follow next—matches with equal force and appeal (but without equal effectiveness) the deep determination of the world as it has come to be.

16. For an account of "tales of the loop, tales that reaffirm the fixity of events on this continuum," "stories of alternate timelines and temporal disjunction," and the "solipsism model," see George Edgar Slusser and Robert Heath, "Arrows and Riddles of Time: Scientific Models of Time Travel," in *Worlds Enough and Time: Explorations of Time in Science Fiction and Fantasy*, ed. Gary Westfahl, George Edgar Slusser, and David Leiby (Westport, CT: Greenwood Press, 2002), pp. 11–24. Many of the loop and forking-path stories do not feature any change in the form of time itself: "alternate history" usually means just a different and unexpected series of events. After the surge of time-cop stories in the 1950s dedicated to protecting the one true timeline, temporal form does get reconceptualized more and more and seems to yield, as Brian Stableford argues, the "multiversal chaos [that] was the inevitable ultimate consequence of the premise [of using a time machine]," perhaps because the alternate-history model often functioned simply as the "escape route from the logical paradoxes arising from time travel." But SF's signature method of extrapolation, he writes, "is most powerful when it conveys a sense of inexorable inevitability." See Stableford, *Science Fact and Science Fiction: An Encyclopedia* (New York: Routledge, 2006), pp. 534, 533, 175. Also, from the point of view of critical reception, even when the trope seems to be doing something else, such as collapsing history or trapping us in a never-ending present or sending us off on an alternate branch, the time machine tends to become a lesson about the dangers of forsaking that sequence.

future. To journey into the past may be to express the "ambition to have something of the past available to perception in the present . . . to freeze time at the service of a beholder or spectator," but it is also, according to Rosen, an expression of historicism and the nineteenth-century heritage project that aligns time's dimensions into a unity, such that the past is always somehow *our* past, the past of our present.[17] Similarly, the journey to the future may be accused of the Olympian overview—a reproach that both Wells's novel and his ambitious nonfiction *The Outline of History* (as well as its amusingly condensed version, *A Short History of the World*) have rightly received—but its excitements and anxieties about what the future holds bring the touristic or imperial flight back down to the more pedestrian understanding of time. The utopian or cautionary imagination of how things could or will be relies upon parsimonious consecution *within* the singular causal chain: whatever will be depends on what is bequeathed.

Finally, overlapping with these functions, the time machine's movement back and forth tends to have a pedagogical use. Because it presupposes (and produces) the integral role of the past in the constitution of our present and future, the figure can be found in the discourses of many academic fields, not just history, but also archaeology, museum studies, genetic anthropology, and cognitive psychology.[18] The television show *Doctor Who* was, in fact, originally an educational program designed to promote science, as well as take viewers back to famous events in history.[19] The ordinary time machine is an effective rhetorical and conceptual device that transforms the unfamiliar and hard-to-imagine past or future into a well-furnished present; it immerses our faculties in the exciting range

17. Philip Rosen, *Change Mummified: Cinema, Historicity, Theory* (Minneapolis: University of Minnesota Press, 2001), pp. 80, 83.

18. For instance, in history, see Daniel Rosenberg and Susan Friend Harding, eds., *Histories of the Future* (Durham, NC: Duke University Press, 2005); in archaeology, see Michael Shanks and Christopher Tilley, *Re-Constructing Archaeology: Theory and Practice* (Cambridge: Cambridge University Press, 2005); in heritage studies, see Robert Lumley, ed., *The Museum Time-Machine: Putting Cultures on Display* (London: Routledge, 1988); in genetic anthropology, see Spencer Wells, *Deep Ancestry: Inside the Genographic Project* (Washington, DC: National Geographic, 2006); and in cognitive psychology, see Endel Tulving's work on episodic memory in "Memory and Consciousness," *Canadian Psychology* 26:1 (1985): 1–12, and Thomas Suddendorf and Michael C. Corballis, "Mental Time Travel and the Evolution of the Human Mind," *Genetic, Social, and General Psychology Monographs* 123:2 (1997): 133–167.

19. Paul Kincaid, "Time Travel," in *The Greenwood Encyclopedia of Science Fiction and Fantasy: Themes, Works, and Wonders*, vol. 2, ed. Gary Westfahl and Neil Gaiman (Westport, CT: Greenwood Press, 2005), p. 820.

of perceptual and imaginative conditions for understanding something absent. But its epistemological power derives primarily from its unification of time, which allows us to track a current state of affairs to its prior cause and vice versa—a cause to its consequence. Even if the traveler cannot see it, the end of the trip is most often an articulated, genealogical now: the goal of the pedagogical time machine is to be returned to the present or present object, with a happy appreciation of how we arrived here or wherever we are headed.

There is no denying the diagnostic and prognostic powers of the time machine in its dominant form, or the contexts that call forth images of these powers from culture. The trope in this form is a part of the historicist machine, doing valuable and compelling work. However, I want to argue that revision, pleasure, and pedagogy are not all there is to the time machine and the modernist discourse of which it is a part. Indeed, for me, the most interesting use of the trope is the defamiliarization of the very model of time that underlies the prevailing understanding of time machines. This temporal estrangement produces the opposite of pedagogy and pleasure: time-travel narratives and twentieth-century time machines, from cubist painting and modernist writing to postmodern alternate history and SF film, often feature the undoing of the lean rectilinearity of historiographic revision and the bewildering of any pleasure we might take in riding the one time that culminates in or follows from us. The defamiliarization of time seeks in instances of anachronism that which is covered up by the singular noun: differential rates of passage; a variety of scales and shapes of timespace; and a plurality of timelines and histories.

There is, as it were, a heterochrony machine hidden in the idea of the time machine, as if in the pedestal of Wells's colossal sphinx. Its liberation requires noticing that the very first time machine to appear in literature was not just a vehicle of imperial adventure and prognostication, but a potential producer of unfamiliar temporalities in its nascent questions about the interrelated qualities of time's speed, form, and number. Wells's *The Time Machine* helped to make strange the very medium in which we live by featuring a device able to manipulate, outstrip, and negate the putatively universal pace of one second per second, the common-sense rate of temporal passage itself.[20] In his novel, the speed of the Traveller's machine, relative

20. As Harry Turtledove points out: "We're all time travelers, whether we know it or not. We go into the future at a steady rate of one second per second"; see "Introduction," in *The Best Time Travel Stories of the 20th Century*, ed. Harry Turtledove, with Martin H. Greenberg (New York: Del Rey, 2005), p. ix. Physicists use this formulation also: "We are all time travelers. Do nothing, and you will be conveyed inexorably into

to the rate at which his late-nineteenth-century dinner guests' experience elapses, varies from "over a year a minute," to a pace so fast that "the thousands [of days] hand [on his dial] was sweeping round as fast as the seconds hands of a watch," to the unimaginably "great strides of a thousand years or more." The critical and imaginative power of such an ability, as Wells's Traveller points out on the first page of the story, consists in the fact that it can "controvert . . . ideas that are almost universally accepted."[21] Whereas for the Traveller's parlor audience this controversion meant undermining the assumption of the unidirectionality of time and the inescapability of the present, for me, the more important challenge posed by the machine's imaginative exploration of the spatial qualities of the fourth dimension is its desynchronization of our experience from the steady flow of a single, uniform, natural time and the resynchronization of it with variable temporal speeds that are explicitly produced. More than a decade before Albert Einstein, Wells's novel shows that a second does not always elapse in a second, as a second.

In addition to its crucial role in modernism's repudiation of one-second-per-second regularity and all that the public clock had come to stand for—capitalist discipline, bourgeois values, modernity itself—Wells's novel is an early example of the modernist push against time's standard scale. The text suggests that the shape and form of time can no longer be thought of as an absolute container or rectilinear line for measuring the duration of things and parsimoniously explaining their emergence. This is why his protagonist constantly revises his "interpretation" and "theory" of the history that brought about the future of the Eloi and Morlocks. In the stretching of human history onto multiple scales of deep time (Darwinian and astronomical), time's shape and internal consistency changes in several ways: the stable entities of the nineteenth century, such as a narrativizable history or the category of the human itself, are distended beyond recognition; the significant intervals, phases, and period units necessary for defining phenomena, as well as the histories in which they have identities, are possibly of varying length; and the multiplicity of potential genealogies interferes with a singular, scientifically constructed lineage.

the future at the stately pace of one second per second"; see Paul Davies, *How to Build a Time Machine* (New York: Penguin, 2002), p. 5.

21. H. G. Wells, *The Time Machine: An Invention*, ed. Nicholas Ruddick (Peterborough, ON: Broadview Press, 2001), pp. 78, 144, 147, 59.

Traveling at different speeds in the machine shows a world "melting and flowing under [his] eyes," and this melting indicates not only the limits of the human sensorium—our physical inability, as the Psychologist says, to perceive "the spoke of a wheel spinning, or a bullet flying"—but the limits of the Traveller's historiographical scale. Almost 801,000 years into the future and then 30 million years beyond, the Traveller cannot determine if "the modification of the human type" and Elois' and Morlocks' ways of life are the products of Victorian "social triumphs" that have eliminated "the grindstone of pain and necessity" on which "we are kept keen" or if the "gradual widening . . . between the Capitalist and the Labourer was the key."[22] And between the three-dimensional "section" of the late nineteenth century from which he comes and the slice of timespace at 802,701, there is a vast four-dimensional corridor filled with many possible strands. Do the Elois and Morlocks descend from lemurs or apes or any of the other animals the Traveller uses to figure them? While he thinks he has drawn some plausible conclusions, and although the text seems to deliver its social admonitions in a steady voice, the Traveller also admits that he "had no convenient cicerone in the pattern of the Utopian books."[23]

If, according to Jonathan Bignell, time-travel texts provide "fairground thrills," the different temporal speeds and scales in Wells's novel disrupt these pleasures by dissolving time's historiographically manageable shape.[24] The "hysterical exhilaration" that the Traveller and consumers of imperialist romances feel is generated by what Paul Cantor and Peter Hufnagel identify as a typically Victorian "journey to the imperial frontier," where European explorers, including modernist protagonists like Conrad's Marlow, encounter exotic "cultures at very different stages of historical development."[25] But this exhilaration of going-forward-to-go-back on the progressive line of history is countered in Wells by a disorientation that is "excessively unpleasant," by a "sickness and confusion."[26] The dissonance seems to exceed any imperialist distaste for the colonized and their often unheard claim to coevalness. The Traveller's confusion is,

22. Ibid., pp. 77, 67, 111, 91–92, 109.

23. Ibid., p. 111.

24. Jonathan Bignell, "Another Time, Another Space: Modernity, Subjectivity, and The Time Machine," in *Liquid Metal* (above, n. 1), pp. 136–144, quote on p. 139.

25. Wells, *The Time Machine* (above, n. 21), p. 78; Paul A. Cantor and Peter Hufnagel, "The Empire of the Future: Imperialism and Modernism in H. G. Wells," *Studies in the Novel* 38:1 (2006): 36–56, quote on pp. 36, 37.

26. Wells, *The Time Machine* (above, n. 21), pp. 77, 144.

in fact, an index of the disintegration of the imperial universal time underwriting the diagnosis and prognosis of both self and other.[27] In its place is the intimation that the shape of time, in addition to irregular tempos, cannot be represented by the straight line uniformly segmented.

The impossibility of thinking time as a unified, rectilinear, punctual form whose instants are ever disappearing into an irrevocable past leads to the final aspect of the alternative conception of time in which *The Time Machine* is a crucial early text: its number. While Wells does not explicitly engage the issue of the number of timelines produced by the machine, his novel contains the seed of a whole subgenre of SF—alternate history—whose proliferation of timelines is a consequence of the agency (and the paradox-avoidance) of time travel. His plot does not extend to the possible consequences of his Traveller's intervention in the Elois' and Morlocks' histories or the aftereffects of his preemptively moralizing tale about Victorian class divisions, and yet the structure of his novel, as Elana Gomel argues, pits the implication of alternate history against the block universe presupposed by forward time travel. The embedding narrative, told by the unnamed narrator, contains the "deterministic chronotope of time travel" in which all of past and future time is spatialized and traversable. But the embedded narrative, told by the Traveller himself, employs the "chronotope of alternative history" in which history is contingent and the future unknowable.[28] This second understanding of the way that time and space are connected reconfigures the progressive/regressive line, at the very least, into a random, open-ended process that the time machine's journey has, in fact, shaped and altered. Wells left the implications to our imagination, but his novel's utopian investment in evaluating Victorian indus-

27. I agree with Cantor and Hufnagel that "the imperialist expansion of Europe in the nineteenth century opened up the imaginative possibility of time travel," and that the machine itself is constructed out of "the raw materials of empire . . . ivory and crystal"; see "The Empire of the Future" (above, n. 25), pp. 37, 54. But the ultimate effect of coming into contact with a primitive past is not only and always a strengthening of the historiographic or evolutionary line stretching from exotic Other to civilized self; it very often produced the sense of coevalness, and, more importantly, a sense of multiple historical tempos whose coevalness is an effect of a specific kind of cross-sectioning.

28. Elana Gomel, "Shapes of the Past and the Future: Darwin and the Narratology of Time Travel," *Narrative* 17:3 (2009): 334–352. Summarizing Stephen Jay Gould's *Wonderful Life*, Gomel argues that "the opposition between Darwin's branching tree and the straight line of progress (or regress) embodies the most fundamental issue regarding the nature of history: the choice between determinism and contingency" (p. 348).

trial capitalism suggests very strongly and tantalizingly a timescape in which alternate histories are not only possible, but already cutting across the present.[29] While many SF plots allow the alternate timeline to take the place of the former "official" timeline and thus reaffirm the prison house of singular sequence, the point of going back to Wells's first deployment of the time-machine trope is less to suggest that the world's one history could have gone a different way than to prepare for texts that see how history is composed of different ways already going. As Bloch pointed out about the non-synchronous remnants of different parts of the past coexisting simultaneously around one another, "[h]istory is no entity advancing along a single line . . . it is a polyrhythmic and multi-spatial entity."[30]

Toward a Little Alternative History of the Modernist Time-Cult

In the decade following World War I, according to Michael Levenson, "time became such a dominant concern that it can be taken as a cultural signature."[31] This obsessive thematization of time—its movement into the spotlight from the quiet background for plot or the "invisible medium" of history—had, of course, begun to surge in the decades before, a current well-documented by Stephen Kern and Tim Armstrong, among others.[32] By the postwar years, this concern seemed to culminate in modernism's distinctive "Time-consciousness": the lived experience of the "extra-literary historical realm of novelty . . . rapid modernisation in technologies, social relations, religious

29. There are more than a dozen sequels to *The Time Machine*, but as far as I know only a few are alternate-history extrapolations in which the next text tries to determine what changes to our history (and those of the Elois and Morlocks) that Wells's Traveller has put in motion. For instance, in Stephen Baxter's *The Time Ships* (London: Harper-Collins, 1995), the "official" sequel authorized by the Wells estate, the Traveller discovers that his original voyage and the publication of his story have altered history and produced a new timeline, making it impossible to return to 802,701 to save Weena.

30. Bloch, *Heritage of Our Times* (above, n. 12), p. 62.

31. Michael Levenson, "The Time-Mind of the Twenties," in *The Cambridge History of Twentieth-Century English Literature*, ed. Laura Marcus and Peter Nicholls (Cambridge: Cambridge University Press, 2004), pp. 197–217, quote on p. 197.

32. In addition to Stephen Kern's *The Culture of Time and Space, 1880–1918* (Cambridge, MA: Harvard University Press, 2003) and Tim Armstrong's *Modernism: A Cultural History* (Cambridge: Polity Press, 2005), see also Peter Galison's *Einstein's Clocks and Poincaré's Maps: Empires of Time* (New York: W. W. Norton, 2003) and Michael O'Malley's *Keeping Watch: A History of American Time* (New York: Viking, 1990).

beliefs, philosophic principles."[33] Levenson's identification of "Time-consciousness as an inescapable topos of Modernism" agrees with the majority of critical accounts of early-twentieth-century literature and art, including Lewis's contemporary, disagreeable antipathy: in the 1920s, Lewis had connected the "'time'-notions which have now . . . gained an undisputed ascendancy in the intellectual world" to the period's "time-mind."[34] In the period after the war, this emphasis on the subjective experience of temporal dynamism and the ubiquitous phenomenologies of flux slowly receded, says Levenson, so that eventually "time . . . was absorbed back into history."[35]

If we bear in mind what Wells's text accomplished at the end of the nineteenth century, a constellation of texts begins to appear around it that suggests an alternative reading of the modernist time-cult, or at least a way of highlighting an unacknowledged aspect of the time obsession in which poignant interior landscapes are not the ends of the story, but the registers and extensions of newly conceived topographies of timespace itself. In this section, I want to offer a brief rereading of aestheticism and impressionism, which have long been treated as the starting point of modernism's "fall into time": its fall away from timeless values, from the stabilities of the inherited past and into a medium that makes newness not only possible, but inevitable and inevitably short-lived. However, if modernity, according to Zygmunt Bauman, is "more than anything else, [the] *history of time*: the time when time has history," that history contains not just a variety of ways of experiencing, marking, and telling time, but an exploration of a variety of times per se generating new experiences, markers, and tales.[36] That is, in the prevailing history of modernism's engagement with the pathos and problems of historical being, which repudiated the clock, there is a strand of alternate historicity that proliferated clocks and transformed the "aesthetics of transitoriness" and the immersion in "the transient, the fleeting, the contingent" into an aesthetics of heterochrony.[37]

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33. Levenson, "The Time-Mind of the Twenties" (above, n. 31), pp. 207, 198. The capital "T" in "Time-consciousness" indicates not only the grandeur of the topic, but also the way in which times have been construed as a proper noun.

34. Ibid., p. 207; Lewis, *Time and Western Man* (above, n. 7), p. xviii.

35. Levenson, "The Time-Mind of the Twenties" (above, n. 31), p. 217.

36. Zygmunt Bauman, "Time and Space Reunited," *Time & Society* 9:2–3 (2000): 171–185, quote on p. 172 (emphasis in original).

37. Matei Calinescu, *Five Faces of Modernity: Modernism, Avant-Garde, Decadence, Kitsch, Postmodernism* (Durham, NC: Duke University Press, 1987), p. 3; Charles Baudelaire, "The Painter of Modern Life," in *Charles Baudelaire: Selected Writings on Art and*

One of the early quintessential formulations of the aesthetics of brevity and temporal passage is Walter Pater's *Studies in the History of the Renaissance*, a text that famously celebrates the fall into time as an "outbreak of the human spirit" liberated from the eternal truths and stable solidities of the Middle Ages.[38] Like Wells's description of moving through time, Pater's representation of this freedom relies upon the trope of melting: not only social and moral "habits" of a "stereotyped world," but also objects themselves delineated by those habits, dissolve into "the whirlpool," breaking down into a flood of "impressions, unstable, flickering, inconsistent."[39] "While all melts under our feet," on "this short day of frost and sun" with no afterlife in reserve, Pater urges us to join this flood of sensuous liberation, availing ourselves of as many "pulsations" as we can get in our brief interval. In the beautiful final sentences of *Studies*, this aesthetic receptiveness is supposed to yield "a quickened, multiplied consciousness. . . . For art comes to you proposing frankly to give nothing but the highest quality to your moments as they pass, and simply for those moments' sake."[40] When confronted with the onset of accelerated social change and commercial regulation of ever smaller durations of life, it is poignant to read Pater's exhortation as the valiant transformation of the linear drama of precisely subdivided temporal passage into powerful instances of existential fulfillment. The aesthetics of transitoriness produces one of modernism's most familiar tropes: the moment. As Matthew Beaumont writes, "Pater attempted to reclaim, and redeem, the moment. He confronted the sense of instantaneousness characteristic of life in an industrial society through passionate attention to the instant itself."[41]

The familiar and moving formulation of the modernist time story involves the acceleration and elongation of a single time, which together account for the range of modernist temporal orientations, from the pathos of the present located in structures of loss, heroic finitude, or dilated instantaneity to the consequent desire for a more primordial, mythic substructure undergirding a temporally

Literature, trans. P. E. Charvet (Harmondsworth, UK: Penguin, 1992), pp. 390–435, quotes on p. 403.

38. Walter Pater, *Studies in the History of the Renaissance*, ed. Matthew Beaumont (Oxford: Oxford University Press, 2010), p. 5.

39. Ibid., p. 119.

40. Ibid., pp. 120–121.

41. Matthew Beaumont, ed., "Introduction," in ibid., pp. vii–xxix, quote on p. xx. For a study on nineteenth-century "figures of brevity," see Sue Zemka, *Time and the Moment in Victorian Literature and Society* (Cambridge: Cambridge University Press, 2011).

fractioned world. However, latent in this story from the beginning is something altogether more strange. In *Studies*, Pater implies that the meditation on the relativity of beauty should be extended to the very moments in which perception is situated and determined; that is, the text also hints at the nonconcurrence of times "within time," the dissolution and melting of the everyday conception of time itself. In the "fruit" of Pater's aesthetic passion is an ontological instability that applies to moments themselves. For instance, in the "delicious recoil" of "water in summer heat"—where to divide up the flux of elements and processes according to our needs, past conventions or fixed ideas, would be to rest arbitrarily with the mere "concurrence, renewed from moment to moment, of forces parting sooner or later on their ways"—the spectrum of becoming and "perpetual motion" extends not only from water to steam, but to "the elements of which we are composed" and, sooner or later, "beyond us": "the action of these forces . . . rusts iron and ripens corn."[42] By paying attention to the differential rates of oxidation, organic maturation, and human perception, as well as the molecular recoil of kinetically energized water or the chemical processes of the human body, we get not only a "quickened, multiplied consciousness," but a quickened consciousness of multiplicity. The relations of this multiplicity allow us to see, for instance, the present as a finely delineated sequence or as a cross section of a plurality of times.

To go from the subject's *being-in-time-as-a-singular-noun* to *being-among-times* requires one to open the momentary ecstasy of the impression to a different sense of time whose multiplication is not simply the result of milking extra pulsations from "the splendour of our experience and of its awful brevity."[43] Doing so is a matter not so much of resisting as adding to the prevailing view, since the condition of transitoriness is not eliminated, but compounded. In the disintegration of the barrier between subject and object, in the erotic confluence that breaks things down and also leads to "that strange, perpetual, weaving and unweaving of ourselves," the moment gives way to multiplicity and heterogeneity and reveals different strands of elemental processes. Beneath the solid surface of the subject, object, *and* the present also, there lurks the "unstable, flickering, inconsistent" strands of differently paced processes fluctuating through water, iron, corn, the human, and time as such. If modernity, as Marx and Engels described it, is a situation in which

42. Pater, *Studies in the History of the Renaissance* (above, n. 38), p. 118.

43. Ibid., p. 120.

"[a]ll fixed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions are swept away. . . . All that is solid melts into air," it is not just because the flow of modernity is uniformly linear and efficiently single-minded in its erosive force or because history moves on to new stages.[44] It is also because temporal multiplicity exposes that which appears to be unitary or static, even space and time themselves, to be composed of a variety of rates and rhythms, a transverse section of many threads.

Aestheticism's theme of transitoriness becomes a matter of method and form very clearly in impressionism. In the visual arts, the repudiation of the timeless and the traditional becomes a literal fracture of the world into short-lived perceptual fragments by a subjectivity whose location in time affords it access to the intensities of the sensuous present. At the level of subject matter, the fall into time entailed a departure from the traditional religious subjects and enduring historical scenes of the Académie des Beaux-Arts' annual salons, and an attempt, by contrast, to render fleeting moments from ordinary lives. But the "core narrative," as Jonathan Crary calls it, is its formal "break with several centuries of another model of vision, loosely definable as Renaissance, perspectival, or normative."[45] The obvious analog in literature is the break with realism's god's-eye clarity and its well-structured plots by emphasizing the limitations of seeing, the fluid and complex play of consciousness, and the treatment of life as a contingent flux rather than as "a series of gig lamps symmetrically arranged."[46] The rejection of formulaic illusionism—for the innovative impasto of atomized, unblended color, often *en plein air* for the dramatic shifts of light and atmosphere—seems to rest on the standard narrative of time-consciousness in obvious ways. For impressionist form implied not only that the scene was in time, but that the painterly eye and observer were likewise located squarely in the midst of the same temporal flux. The subject of impressionism was, therefore, as Ronald Bernier points out, both the raw materials of perception and experience and our deprivileged "variable perception in nature"—namely, the temporally situated process of subjective seeing itself, as opposed to an idealized

44. Karl Marx and Friedrich Engels, *The Communist Manifesto: A Modern Edition* (London: Verso, 1998), p. 38.

45. Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA: MIT Press, 1990), pp. 3–4.

46. Virginia Woolf, "Modern Fiction," in *Common Reader*, ed. Andrew McNeillie (New York: Harvest, 2002), pp. 146–154, quote on p. 150.

and static point of view.[47] Likewise, in literature (whose analogous features would be atmospheric and subjective distortion, "delayed decoding," and situated transmissions of sense), impressionism is said to have played "a decisive role in . . . the long process whereby in every domain of human concerns the priority passed from public systems of belief . . . to private views of reality—what the individual sees."[48]

As in the case of Pater's *Studies*, it is not difficult to delight in Monet's compelling dramatizations of "in-timeness." For instance, in his series of paintings of Rouen Cathedral, he juxtaposes most conspicuously and ironically these temporal themes and forms with an imposing Gothic structure, a symbol of spiritual eternity, historical permanence, and nationalist pride that dominates the entire canvas. At the top of each of the pictures is what one might be tempted to call the site of the paintings' real subject: a small patch of sky, which seems to be not only a synecdoche for the very cause of the cathedral's shifting appearances, an index of the weather, but also a figure for impressionist technique itself and Monet's serial method. Between 1892 and 1894, Monet made over thirty paintings of the façade of the cathedral by setting up outdoors a number of canvases (often ten or more). He moved from one to the other as the light continued to change and then brought them back to his studio for completion. In its composition, this most numerous of Monet's series seems to register temporality as atmospheric fluctuation, the impossibility of a complete capture or record, and, as indicated by his return to the studio and reliance upon memory, the limitations of the extemporaneous point of view. While John Klein writes that "the artist's vision, will, and personal experience generate the variations on the single unifying motif" and, therefore, assisted by the fictional unity of "sequential structure," provides "the counterbalancing weight" to the incompleteness and ephemerality for which impressionism had so often been criticized, these weights—including the stone face of religious immutability—only seem to accentuate the marks of being in time within each painting and across the series.[49]

47. Ronald R. Bernier, *Monument, Moment, and Memory: Monet's Cathedral in Fin de Siècle France* (Lewisburg, PA: Bucknell University Press, 2007), p. 13.

48. The description of the shift from the external to the internal, the consensual to the sensory, is E. H. Gombrich's, qtd. in Ian P. Watt, *Conrad in the Nineteenth Century* (Berkeley: University of California Press, 1979), p. 171.

49. John Klein, "The Dispersal of the Modernist Series," *Oxford Art Journal* 21:1 (1998): 121–135, quote on p. 124. For Klein, the failure of the unity of the series perfectly satisfied the demands of the art market, which wanted to sell individual works that were

But is the painting's meaning centered solely on the fragility and inconstancy of time in modernity relative to an older order, or on the tension between precious moments of individual experience and the larger record of time passing? Or is the Rouen Cathedral series, as Rebecca Stern says of the Charing Cross series, "a new way of telling time"? For Stern, this new way asks us "to conceive a tale that recorded the machinations of reverie more than the precision of synchronized time that (also) marks modernity," but there seems to be another way, beyond the subjective meditation on moments before they advance unremittingly into nothingness, in which Monet is reckoning, recounting, or revealing time.[50] Consider that, from Rouen in 1893, as a result of the openness to the temporal variety discovered over the last three years in his serial explorations, Monet remarks in a letter to his wife Alice: "Everything changes, even stone."[51] This provocative insight, by intensifying the transitory *everything* via a figure of solidity, goes beyond the realm of immediate appearances to a range of other processes that are too quickly book-ended by ontological tendencies. Side by side in the cathedral paintings, then, are the pathos of human being, the temporalities of perceptions and compositional processes, and the changes of stone, whose slow pace make the façade seem immobile and therefore able to take on the additional meanings of the time-lessness of religion and the indurate French nationalism propped up by Gothic architecture. Time, in other words, becomes relative times, rates of change in relation to one another. Monet's series foregrounds the aggregation of *different rates of transitoriness*, the bundle of times in which the objects of impressionism are obscured not just by time's dispersive force or subjectivity's distortions, but by the play of processes and reference frames.

validated by the coherence of something larger. For the criticism of incompletion, see Louis Leroy's infamous 1874 review of Monet's *Impression: Sunrise*, which gave impressionism its name: "Wallpaper in its embryonic state is more finished than that seascape"; see Leroy, "L'exposition des impressionnistes," *Le Charivari,* 25 April 1874, qtd. in Linda Nochlin, *Impressionism and Post-Impressionism, 1874–1904: Sources and Documents* (Englewood Cliffs, NJ: Prentice-Hall, 1966), pp. 10–14.

50. Rebecca Stern, "Time Passes," *Narrative* 17:3 (2009): 235–241, quotes on p. 236.

51. Daniel Wildenstein, *Claude Monet: Biographie et Catalogue Raisonné*, vol. 3 (Paris: La Bibliothèque des arts, 1974), p. 1208. Bernier reads these changes as part of the "building up" necessary in the representation and the viewing of Monet's series. Rather than allowing temporal difference to remain un-unified, Bernier thinks of the Monet's accretions and readjustments in terms of Bergson's "central thesis . . . the primordiality of experiential time—time as flux," which emphasizes "multiplicity continually unfolding in 'duration'"; see Bernier, *Monument, Moment, and Memory* (above, n. 47), pp. 73, 57.

In addition to engaging the remorseless erosive power of the clock, impressionism's melting world, like aestheticism's, is an effect of the emergence of a multiplicity of times, the assemblage of physical rhythms irreducible to the subject. A hundred years after Monet began his cathedral series, Henri Lefebvre would formulate a "rhythmanalysis" as the best way to understand this world, where

> nothing is immobile. . . . if [the rhythmanalyst] considers a stone, a wall, a trunk, he understands their slowness, their interminable rhythm. This *object* is not inert; time is not set aside for the *subject*. It is only slow in relation to our time, to our body. . . . An apparently immobile object, the forest, moves in multiple ways: the combined movements of the soil, the earth, the sun. Or the movements of the molecules and atoms that compose it.[52]

The move from timelessness or classical permanence to ephemerality and lived experience need not dead-end in the subject and its lonely surfing of unilinear progression/degeneration. At this early point in the alternative history of the twentieth-century time obsession, what appears to culminate in the quintessentially modernist experience of dissolution can also be read as an emerging recognition of the relations among many times. Time ceases to be an abstract, single, uniform medium or a phenomenological mode of appearances, fracturing instead into the play of relations among a variety of locally inflected sequences and lines of occurrence.

Many Clocks

While the narrative of the fall into time remains compelling, it is not by itself enough to capture the weirdness of radical heterochronic estrangements. Rather than attending to strange, uneven, and manipulable times that arise from the period's technologies of ever-faster production, transport, and communication and from new evolutionary, geological, and astronomical understandings of human and planetary history, the prevailing story plugs these familiar factors into the acceleration and elongation of a single time. If we continue to read the phenomenon of speed in terms of an abstract space divided by absolute time (rather than in terms of the relation of peculiar times to the particularities of space), then the time obsession becomes too easily and completely the failed attempt to break with the unitary time that economic modernity both needed and exploited.[53] This perception of modernism's failure is one of

52. Henri Lefebvre, *Rhythmanalysis: Space, Time, and Everyday Life* (London: Continuum, 2004), pp. 20–21 (emphasis in original).

53. According to Jon May and Nigel Thrift, the general account of modern timespace

the primary reasons it is so often abandoned: modernism was either thoroughly co-opted by the forces it meant to resist, or it was actually complicit with those forces. In this widely held account, the aesthetics of transitoriness could not outpace the thematics of loss or its underlying sense of time as ever-lengthening distance. It certainly could not outrun capitalism. As Paul de Man tells the story in "Literary History and Literary Modernity," the "authentic spirit of modernity" witnessed its own efforts at making it new fade from "an incandescent point in time into a reproducible cliché."[54] Modernism's "uniquely shaped flames of the fire" were washed out by the flow of time, and all attempts to be modern dead-ended in the sudden awareness of, or blindness to, being mired within an unsurpassable time.

However, modernism's reconceptualization of time, of which Wells must be counted as a crucial part, in fact transformed the singular noun into the relations among variable rates of change and spatiotemporal scales. This more complex picture of the period's time culture is characterized by what Jon May and Nigel Thrift describe as "a growing awareness of living within a multiplicity of times, a number of which might be moving at different speeds and even in different directions," or by what Lefebvre described as "heterogeneous rhythms," those relations "of a time with a space, a localized time, or if one wishes a temporalized place."[55] As Lefebvre goes on to say, these relative rhythms, which are themselves "concrete times," "are not measured as the speed of a moving object on its trajectory is measured, beginning from a well-defined starting point (point zero) with a unit defined once and for all. A rhythm is only slow or fast in relation to other rhythms."[56] But when we consider the twentieth-century's aesthetic repudiation of "the one, true time" of the public clock, key examples—Eliot's heterochronic cityscapes, Woolf's multiplicity of imperfectly synchronized clocks, Faulkner's jeweler's shop window filled with unregulated watches, as

inspired by Marx's insight about the annihilation of space by time focuses on "a significant acceleration in the pace of life concomitant with a dissolution or collapse of traditional spatial co-ordinates (changes usually expressed via some discourse on *speed*—or space divided by time)"; see May and Thrift, eds., *TimeSpace: Geographies of Temporality* (London: Routledge, 2001), p. 7.

54. Paul de Man, "Literary History and Literary Modernity," in *Blindness and Insight: Essays in the Rhetoric of Contemporary Criticism* (Minneapolis: University of Minnesota Press, 1988), pp. 142–165, quote on p. 147.

55. May and Thrift, eds., *TimeSpace* (above, n. 53), p. 12; Lefebvre, *Rhythmanalysis* (above, n. 52), p. 89.

56. Lefebvre, *Rhythmanalysis* (above, n. 52), p. 89.

well as more contemporary interrogations of jumbled geographies and historical unevenness—serve only as components of the historicity machine and the period's anti-rationalist retreat to the subject. The cultural response to the clock, as Barrows points out, seems to depend exclusively on the "familiar narrative of modernism's affirmation of private, interior time consciousness, which has largely depended on an application of the theories of Henri Bergson."[57]

One cannot ignore that the turn to Bergson's arguments for dynamic and interpenetrated *durée* against spatialized, uniform, and detemporalized simultaneities was a real and moving response to the threat of the public clock, its regulated instants, and their unyielding pace. As Jacques Le Goff recounts, the mechanical clock, invented in the thirteenth century, began its rise when public and commercial time-reckoning overtook the cyclical schedules of monastic routine and rural life on its way to becoming "the measure of all things."[58] By the nineteenth century, the advance of the clock culminated in the elision of local times in Britain and North America by railroad companies (1847 and 1883, respectively), and then on a global scale by the International Prime Meridian Conference (1884), which established a "universal day" that commenced from a prime meridian—the Royal Observatory at Greenwich—and allowed for the precise parceling-out of the time zones of the earth in longitudinal segments of fifteen degrees.[59] In Lewis Mumford's well-known account, "[t]he clock, not the steam engine, is the key-machine of the modern industrial age," since its products—seconds and minutes—move us away from "eternity . . . as the measure and focus of human actions" and toward the single metric necessary for the coordination of nation and empire, as well as for the quantification, regulation, and "work-discipline" of capitalism.[60] So clearly had the clock become the means and "symbol of the process of European modernization" that Joseph Conrad built a novel, *The Secret*

57. Barrows, *The Cosmic Time of Empire* (above, n. 3), pp. 8–9. Barrows cites Kern's "Bergsonian reading of modernist time [as] the only rigorous attempt to theorize a relationship between standard time and modernist literature"; that is, as "the touchstone for studies of standard time and aesthetics," Kern's book construes modernism as pure resistance to the clock; see *The Culture of Time and Space* (above, n. 32), chaps. 1–2.

58. Jacques Le Goff, *Time, Work, and Culture in the Middle Ages*, trans. Arthur Goldhammer (Chicago: University of Chicago Press, 1980), p. 52; see also pp. 29–42.

59. Ian R. Bartky, *One Time Fits All: The Campaigns for Global Uniformity* (Palo Alto, CA: Stanford University Press, 2007), pp. 35–47.

60. Lewis Mumford, *Technics and Civilization* (New York: Harcourt, Brace, 1934), p. 14; E. P. Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past and Present* 38 (1967): 56–97.

Agent, around Martial Bourdin's failed anarchist plot in 1894 to blow up the Royal Observatory, "the first meridian" and the first tick of the planet-as-clock.[61]

   But the problem that emerged in modernist writing and painting was not only that the modern world had come to rely increasingly upon the technological fractioning of time for the purposes of measurement and coordination in ways that had an impact on everything from the structure of human perception to social organization; it was equally that the clock was part of a larger machine, producing the belief that there was only one thing to measure and coordinate. For instance, the coercive power of the public clock in Woolf's *Mrs. Dalloway*—its "shredding and slicing, dividing and subdividing," which "counselled submission, upheld authority, and pointed out . . . a sense of proportion"—derives from its allegiance to the oneness of time.[62] The clock converts the times of bodies, individual wills, and local histories not only in "the purlieus of London," but "the heat and sands of India, the mud and swamp of Africa," and elsewhere into a single universal history.[63] As Barrow explains, the standardization of time and the fiction of the universal day at the International Prime Meridian Conference in Washington, D.C., were actually site-specific imperial practices that established England's "authority to measure, regulate, and delimit the uneven temporalities of global modernity."[64] The modern clock, when plugged into the larger network that included imperial coordination, progressive history, and the work-discipline and timetables of industrial capitalism, forcefully asserts time's independent unity, its absolute rate, and its universality. One might say that just when Einstein, Minkowski, and aesthetic modernism were beginning to reconceptualize the nature of physical and social timespaces, the world was witnessing the aggressive institutionalization of the Newtonian conception of "absolute, true and mathematical time, [which] of itself, and from its own nature flows equably without regard to anything external."[65]

61. Gerhard Dohrn-van Rossum, *History of the Hour: Clocks and Modern Temporal Orders* (Chicago: University of Chicago Press, 1996), p. 3; Joseph Conrad, *The Secret Agent* (London: Methuen, 1907), p. 62.

62. Virginia Woolf, *The Mrs. Dalloway Reader* (Orlando, FL: Harcourt, 2003), p. 286.

63. Ibid., p. 284.

64. Barrows, *The Cosmic Time of Empire* (above, n. 3), p. 19.

65. Isaac Newton, *Mathematical Principles of Natural Philosophy*, trans. Andrew Motte (1729; reprint, Berkeley: University of California Press, 1934), p. 6.

Wells's time machine stands among modernism's earliest challenges to the independence of this empty time measured by the clock. The machine initiated a questioning of the way that modernity drained time of spatial specificities and local practices—not simply by traveling inward, but by preparing the way, in Einstein's words, for "as many clocks as we like."[66] If the expansion of modernity involved, as Anthony Giddens claims, the separation of time and space and the emptying from both of local specificity (such as where the sun appears in the sky at a particular locale), the time machine, by contrast, required that there be "no difference between Time and any of the three dimensions of space," as Wells's Traveller says, and it also anticipated that the unevenness of timespace and our various velocities across it allow for clocks to diverge and time to change pace.[67] As W. M. S. Russell points out, Wells's treatment of time as a spatialized fourth dimension anticipates Einstein's rejection of Newtonian time and space in his 1905 theory of special relativity "by showing that different observers have different timelines," as well as Hermann Minkowski's 1908 reformulation of "special relativity in terms of a space-time continuum, with time as the fourth dimension."[68] Moreover, Wells's device does not just rewrite the ontology of things and moments as "sections . . . Three-Dimensional representations of . . . Four-Dimensioned being"; it shows us a fourth dimension whose speed and scale vary.[69] Modernism would later connect this variability not only to technology, but the unevenness of literal and figurative topographies to which

66. Albert Einstein and Leopold Infeld, *The Evolution of Physics: The Growth of Ideas from Early Concepts to Relativity and Quanta* (New York: Simon & Schuster, 1938), p. 181.

67. Wells, *The Time Machine* (above, n. 21), p. 60. In the humanities, perhaps the most well-known figuration of time's emptiness—that is, as an absolute container—is Walter Benjamin's critique of the "homogenous, empty time" through which humanity is thought to progress. However, it is Anthony Giddens who specifies this emptiness as an evacuation of local solar time and "localised activities" and as time's disembedment from space: "The invention of the mechanical clock and its diffusion to virtually all members of the population . . . were of key significance in the separation of time from space. The clock expressed a uniform dimension of 'empty' time, quantified in such a way as to permit the precise designation of 'zone' of the day, [which] cut through the connections between social activity and its 'embedding' in the particularities of contexts of presence." See Benjamin, "Theses on the Philosophy of History" (above, n. 13), p. 261; and Anthony Giddens, *The Consequences of Modernity* (Palo Alto, CA: Stanford University Press, 1990), pp. 17, 20.

68. W. M. S. Russell, "Time Before and After *The Time Machine*," in *H. G. Wells's Perennial Time Machine*, ed. George Edgar Slusser, Patrick Parrinder, and Danièle Chatelain (Athens: University of Georgia Press, 2001), pp. 50–61, quotes on pp. 50, 54.

69. Wells, *The Time Machine* (above, n. 21), p. 61.

times are tied, weaving relativity into the smaller reference frames of social space.

By recasting the fall into time as the exploration of temporal multiplicity we set the stage for a deeper investigation into the relations among the most popular SF figure of the time machine, contemporary historiographic interventions, and the bewildering array of nonnarrative temporal orientations in modernism—for example, the deep pastism of "paleomodernism," the epiphanic moment, streams of consciousness, or the hyperopic perspectives of far futurism. The time machine comes in many forms—a nickel, ivory, and crystal contraption, a blue British police box, a plutonium-powered Delorean—but some of them, when powered correctly, can function as a controversion technology that overturns our common-sense understanding of time by revealing or producing other times and alternative senses of historical multiplicity. Beyond its typical uses for delight and instruction, the time machine manipulates the putatively universal rate of one second per second, questions the size and evenness of time's periodic units, problematizes the timeline's scale, and clarifies and pursues a plurality of histories and epochs that are not integrated, as imperialist historiography conceived it, as phases on a larger progressive line. If temporal plurality can be assembled in what Johannes Fabian describes as "radical contemporaneity," the time machine reminds us that this "coevalness" is not a more fundamental here-and-now, but a momentary and constructed constellation.[70] As such, this "present" would evince "the fragmentary, irreconcilable multidimensionality of the historical," as Srinivas Aravamudan puts it in his examination of the anachronism of "multiply coexisting temporal orders."[71] Or it might appear as a strange configuration generated by cross-sectioning many timelines as a certain strain of SF develops it.

As my story suggests, modernism's literary and painterly experiments are likewise a controversion technology. Toward the end of his career, Fernand Braudel emphasized, as Bill Schwarz recounts, that his one "great problem," "the only problem I had to resolve," had been "to show that time moves at different speeds."[72] Well be-

70. Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (New York: Columbia University Press, 1983).

71. Srinivas Aravamudan, "The Return of Anachronism," *MLQ: Modern Language Quarterly* 62:4 (2001): 331–353, quotes on pp. 345–346.

72. Bill Schwarz, "'Already the Past': Memory and Historical Time," in *Regimes of Memory*, ed. Susannah Radstone and Katharine Hodgkin (London: Routledge, 2003), pp. 135–151, quote on p. 135.

fore the Annales approach became synonymous with the imperturbable *longue durée*, Braudel's early breakthroughs in reconceptualizing time and history, as Schwarz notes, had "few conventions in the historiography of the period that could serve as a model. But if the historiography was deficient in this respect there was . . . an entire tradition of high modernist literature which devoted its greatest energies to devising narrative forms which could reproduce time moving at different speeds."[73] Those narrative forms were, of course, famously anti-narrative or nonnarrative, and moreover they explored not only timing, but also timescales and timelines. If Perry Anderson rightly criticized monolithic modernism as an empty "portmanteau concept whose only referent is the blank passage of time itself," the irony is that its time fixation produced precisely what Anderson argued that modernism-in-the-singular elides: a "multiplicity of modernisms."[74] This multiplicity is not only the embodiment of the "diversity founded on the far greater plurality and complexity of possible ways of living"—the site-specific "alternative modernities" that have, as Dilip Parameshwar Gaonkar says, "different starting points . . . [and] lead to different outcomes"—but also the various responses within aesthetic modernisms to the uneven and various times informing their own unevenly distributed and multifarious modernity.[75] The desire to get outside of singular, uniform time con-

73. Ibid., p. 146. Schwarz claims that Braudel never mentioned modernist experiments because he misunderstood the literary explorations to be "historically 'weightless,' capable of understanding subjective time only at the expense of temporalities located socially and externally."

74. Perry Anderson, "Modernity and Revolution," *New Left Review* 144 (1984): 96–113, quote on p. 102. In this critique of Marshall Berman's *All That Is Solid Melts into Air,* Anderson identifies modernism completely with the aesthetics of transitoriness: "Modernism as a notion is the emptiest of all cultural categories. . . . There is no other aesthetic marker so vacant or vitiated. For what was once modern is soon obsolete" (pp. 112–113).

75. Ibid., p. 113; Dilip Parameshwar Gaonkar, ed., "Introduction," in *Alternative Modernities* (Durham, NC: Duke University Press, 2001), pp. 1–23, quote on p. 17. Gaonkar's brilliant introduction argues that a "site-based reading [of the global plurality of modernities] decisively discredits . . . the inexorable logic that is assigned to each of the two strands [societal and cultural] of modernity. The proposition that societal modernization, once activated, moves inexorably toward establishing a certain type of mental outlook (scientific rationalism, pragmatic instrumentalism, secularism) and a certain type of institutional order (popular government, bureaucratic administration, market-driven industrial economy) irrespective of the culture and politics of a given place is simply not true. Nor does cultural modernity invariably take the form of an adversary culture that privileges the individual's need for self-expression and self-realization over the claims of community" (p. 16).

tinues to power the heterochronic machine at the far end of the twentieth century.

Acknowledgments