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# The Ubiquity of Strange Frontiers: Minor Eschatology in Richard Powers's *The Echo Maker*

Zachary Tavlin

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- 1 What was truth, compared to survival ? Floating or broken or split or a third of a second behind, something still insisted : Me. Always the water changed, but the river stood still. – Richard Powers, *The Echo Maker*

The brain is just the weight of God,  
For, lift them, pound for pound,  
And they will differ, if they do,  
As syllable from sound. – Emily Dickinson, J632.
- 2 At the opening of Richard Powers's *The Echo Maker* (2006), Mark Schluter nearly dies on a deserted Nebraska road that could be mistaken for the end of the world if not for a rudimentary understanding of the place as part of America's "heartland." This essay will focus on the novel's parallax perspective on this very relationship : between the heartland, the supposed "heart" of American normalcy and the crossroads of the nation's frontier tradition, and the subtle apocalypse or minor eschatology of the strange. And there is no doubt that the turn the narrative takes is indeed strange, though certainly not supernatural : when Powers's protagonist awakes from a coma, he is convinced that his sister is a fake, and he is soon diagnosed with the rare Capgras delusion, a neurological disorder in which the subject is convinced that a close family member has been replaced by an impostor.
- 3 The philosophical investigation of the novel includes a psycho-phenomenological look at the most stable of forms (such as a place or a face) as they become unmoored along with the brain's interpretive system. Powers demonstrates how the typically mundane preconceptions that structure our lifeworlds can shift and bend with the slightest provocation, and re-conceives the self as made of various nodes in a scattered cognitive network rather than as a unified interior subject. To this end Powers subverts the major

eschatologies that populate American literary and cultural history, often stemming from Puritan typologies that assume a master spatial and temporal frontier separating civilization from the dark wilderness. Instead, we re-encounter the unknown as ubiquitous and circumambient, so that one can cross into unfamiliar territory when and where one least expects to. For nearly every character in Powers's novel as well as for the reader, passage into an unfamiliar here and now, where governing epistemic paradigms break down, can occur in the middle of nowhere, or even in the supposedly happy confines of the middle-class home.

- 4 I will set up my reading of Powers's novel by giving a brief account of the recurring epistemological frontiers in American culture, focusing on the scholarly American literary studies tradition that locate ever-present links between Puritan millennialism, American Romanticism, and the settlement of the American continent. I will then read *The Echo Maker* as one example of an equally rich (though often neglected) counter-tradition that attends to negative spaces of that unfamiliar "here and now" instead of sublime landscapes and untamed wilderness. Though this counter-tradition is hardly apolitical, it refocuses its politics on the everyday instead of the American millennium, and on the proximate instead of the distant, substituting the imperial appetites of the all-consuming settler subject for the embodied, proprioceptive confusions of the subject faced with what Powers himself called "the amorphous, improvised, messy, crack-strewn, gaping thing" ("Echo Maker Roundtable #5") beneath all forms of narration.

## The Mythic Scale of the Western Frontier

- 5 Zbigniew Lewicki writes that, when it comes to the concept of "apocalyptic fiction" in American literary history or in general, "no unequivocal definition can ever be formulated" (xiii). And it is not my design to provide one. From Frank Kermode to M.H. Abrams to Lewicki himself, precise definitions often give way to catalogues of (leit)motifs, tropes, identifiable moments, or "the presence and intensity of related images" drawn directly from the Book of Revelation or alternative mythologies (Lewicki xiii).<sup>1</sup> Rarely does a work of art contain the entirety of such a classical catalogue, even in secular form. Secularization, according to Lewicki and John R. May, was a key motor for the transformation of apocalyptic conceptions in the American nineteenth century, with "the change in meaning of apocalypse" taken as "an indicator of the direction of more fundamental changes in the American mind" (Lewicki xiv). In order to understand the "more fundamental changes" in the American late twentieth-century (literary) mind—the apocalyptic frontier I am interested in here—it is necessary to rehearse the quasi-secular background upon which its deviation can be marked as doubly meaningful.
- 6 In James Fenimore Cooper's *The Prairie* (1827), the Great Plains of the trans-Missouri are figured as an open stage—indeed, one recently opened by the Louisiana Purchase—upon which early American archetypes struggle for their proper place in the New World's chain of being. This stage, as several commentators have argued, takes on a traditional apocalyptic cast: the prairie is described as "bleak and solitary" (Cooper 11), a "meagre prospect [running] off in long, narrow, barren perspectives" (13), "an interminable waste" (74) with a landscape monotonous in its "chilling dreariness" (13). But, importantly, Cooper's dark prairies are not post-apocalyptic but *pre*-apocalyptic, what Henry Nash Smith has called the mythic desert that tenuously preceded, in America's optative historical consciousness, the millennium of the Western garden. Smith remarks

on the significance of the “vast treeless plains” described by several frontiersmen as “a sterile waste like the sandy deserts of Africa” in accounts that sounded like “an impressive warning to the prophets of continuous westward advance of the agricultural frontier” ; these plains were regarded by many, he notes, “as proof that the area was [...] uninhabitable by Anglo-Americans,” a doomed expanse (Smith 175). Sabri Mnassar, more pointedly, has registered the “almost total absence of trees and verdure” (Mnassar 92) on Cooper’s prairie, where the bareness of a solitary willow, for instance, “proclaimed the frailty of existence, and the fulfilment of time” (Cooper 356). But this tree, upon which Ishmael Bush hangs his brother-in-law (Abiram White), is not just a sterile, wind-blasted remnant of a prior fertility. Cooper’s theory of American settlement takes on a more complicated sense of futurity, one that *writes* onto concrete spatial forms and geographical sites the stages of society’s expansion and development :

The march of civilization with us, has a strong analogy to that of all coming events, which are known “to cast their shadows before.” The gradations of society, from that state which is called refined to that which approaches as near barbarity as connexion with an intelligent people will readily allow, are to be traced from the bosom of the States, where wealth, luxury, and the arts are beginning to seat themselves, to those distant and ever-receding borders which mark the skirts and announce the approach of the nation, as moving mists precede the signs of day (Cooper 66).

- 7 These shadows “cast before,” taking on the twisted forms both of a blasted willow and a depraved soul—Ishmael’s in particular, which is “incapable of maturing any connected system of forethought, beyond that which related to the interests of the present moment” (Cooper 14)—are like optical illusions in the slowly uncovering “mist” of historical transition. Their status as predictors of either a coming barbarism of violence and defiled nature or a rejuvenated national community of light and day that would leave the frontier’s moral restlessness behind depends upon the magnitude of man’s spirit of humility in the face of God’s creation (a drama which is played out on the pages of Cooper’s novel).
  
- 8 Of the several theories<sup>2</sup> that posit monolithic logics of the historical unfolding of American literature, two somewhat opposed patterns tend to recur: the material significance of the American continent for the native aesthetic imagination (which has been transmuted into theories that privilege other national materialist infrastructures, such as the open road), and the allegorical Puritanism of metaphorical typologies that work and re-work the terms of an “errand into the wilderness” that binds the social to the spiritual through the covenant of text. Cooper is often figured as a linchpin for both accounts, since his novels (especially *The Prairie*) can be easily read either way. The premise behind Myra Jehlen’s influential *American Incarnation* is that, in the era of its exploration and settlement, “America did not connote society or history, but indeed in its natural parameters, geography” (5). According to Jehlen, “the decisive factor shaping the founding conceptions of ‘America’ and of ‘the American’ was material rather than conceptual; rather than a set of abstract ideas, the physical fact of the continent” (3). Popular early republic geographers like Jedediah Morse were influential in recasting history as geography, and the sense of American progress as inherently geographical. When historical progress was conceived as primarily spatial rather than temporal, settlement and national development took on the character of an organic entelechy or the natural and inevitable unfolding of an enormous organism.

- 9 Although Jehlen argues against the primacy of an allegorical America detachable from the hard “matter” of the landscape, the supposed “entelechy” of the continent—figured through novels and romances that attempted to articulate America’s latent potentials and the paths of America’s inevitable unfolding in a westward vector—still supported a millennial, apocalyptic interpretation of the American cultural frontier not totally dissimilar from that pushed by the likes of Sacvan Bercovitch. According to Bercovitch, the dominant Puritanical mindset, with its seat in New England but its historical influence unchecked, held that historical events in the New World were types of actions that had occurred already, in scripture. But they also came to be seen as fulfillments of scriptural *promises* which would lead in turn to the ultimate fulfillment of Apocalypse. Typology was extended to include not only major historical crises; the Puritan must “ratify his every experience, all his thoughts and feelings, by the infallible standard of holy scripture” (Bercovitch 28). This became an ordinary “way of seeing” that extended in American letters and literature beyond the nation’s several crises of faith, secularized in content but not in form by Transcendentalism and the nineteenth-century American Renaissance.
- 10 With admirable explanatory power, Bercovitch claims that if the “intermediary between the Puritan and God was the created Word of scripture,” and the “intermediary between the Romantic and God was the creating imagination,” then the “intermediary between the Transcendentalist and the Oversoul was the text of America” (165). Apocalypse in America, whether conceived as a consummation of the marriage between the Old World immigrant and the fecund and spectacular New World garden, or as the fulfillment of Christian civilization for the rest of the world to behold and admire, was to occur on a grand scale. And thus, inevitably, there would be much pre-apocalyptic violence, as Cooper certainly foretold, but it would be a violence that cleansed the earth of all inessential actors or annoying obstacles, whether the parts of the landscape that were recalcitrant to possession or the Satanic non-believers who stood in the way of millennium. The frontier became a monolithic (and imaginary) epistemological wall separating (American) Self from Other, running unimpeded through discontinuous regions, dwellings, and communities.
- 11 At a sufficient enough distance, these stories can appear to account for all the basic rhetorical structures of American settlement, Manifest Destiny, westward expansion, and cultural exceptionalism. They work quite well when told *in medias res*, with an open future tense à la *The Prairie*, narrating events that occurred before the closing of the American frontier. They also operate on large scales of time and space, tying the narrative structures of representative texts to moments in theological or geological history, reporting what M.H. Abrams has called a “right-angled” history proper to Biblical canon (36). The significant events in a “right-angled” history are few and far between, with extended plateaus where nothing really happens (in Biblical history, there’s creation, fall, incarnation, crucifixion, resurrection, and millennium, for instance, with the intervening time of the everyday a stretched-out duration for mere reflection, for man to work out his relationship with the divine). Key events “are abrupt, cataclysmic, and make a drastic, even an absolute, difference” (Abrams 36)—including, here, the moving of the frontier, which is a rather unwieldy thing when taken to be a single conceptual-cartographical behemoth—while most of man’s allotted time is spent preparing for those cataclysms. This is also true of secular historical accounts of a religious historical mindset (or of mass-scale settlement) that apportions corresponding literary or cultural activity according to

its place in a meta-history of national self-consciousness, always in reference to central antitypical New World events.

- 12 At the end of the nineteenth-century, when the Western frontier had reached the Pacific and the America's spatial "safety valve" had closed, Frederick Jackson Turner predicted that America would continue its dynamic process of growth only by transmuting the continental frontier into a global one, extending it through "the demands for vigorous foreign policy, for an interoceanic canal, for a revival of our power upon the seas, and for the extension of American influence to outlying islands and adjoining countries" (296). Hsuan L. Hsu has argued that "scale jumping" like this was a vital tactic for nineteenth-century social movements, and that mid-to-late century American literature contributed to the production of apparently distinct scales (like the nation) that function to "compartmentalize spatial relations," or express "anxieties, contradictions, and possibilities situated on the boundaries between different scales" (a common example is Whitman's "Passage to India," but Hsu extends this logic through powerful readings of Poe, Melville, and Jewett) (14-15). There is a more general feeling among critics that the failures of theologico-cultural projects predicting apocalypse, millennium, or permanent American ascendance with the settlement of the continent led to the American imaginary heading elsewhere, typically "scale jumping" upward in time and space into global geopolitical history (or, as certain eco-critics might argue, into global environmental history). Amy Kaplan and Donald Pease's *Cultures of United States Imperialism*, for instance, seeks to demonstrate how "the multiple histories of continental and overseas expansion, conquest, conflict, and resistance [...] have shaped the cultures of the United States and the cultures of those it has dominated within and beyond its geopolitical boundaries" (4).
- 13 As informative as these critical accounts have been, there is a competing literary strategy on the part of writers accounting for the effects of the waning of the frontier's optative mood: acts of "scale shrinking" (for lack of a better term) that retreat back into the personal or inter-personal, the subjective or the communal, and re-articulate eschatology on such a diminished scale. Though on the one hand a frontier novel engaged with the meta-narrative of Western settlement, Willa Cather's 1918 *My Ántonia* primarily describes several overlapping micro-economies of gift exchange associated with semi-insular immigrant communities comprising topologically complex contact zones on the Nebraska plains. The apocalypse this novel portends is the steady elimination of these micro-economies by a spreading capitalist logic of usury and cyclical debt, a cultural diminishing rather than a grand consummation of American historical spirit (whether through mass violence or the final flowering of national democracy as a beacon to the Old World). As Reginald Dyck has argued, Cather's song of the American plains "was a part of a social milieu, symbolized by Frederick Jackson Turner's thesis of an America in decline as it entered a postfrontier era" (37), which often sent the cultural critic back from her analysis of social structures to an emphasis on "the relationship between individuals and their environment" (27)—a scale that appeared more appropriate to those questioning the tenability of the nation's eschatological meta-narratives. When Jim Burden finds himself, at the end of the novel, walking out over what's left of the "rough pastures," searching for the tracks on the old road to the north country that "were mere shadings in the grass" (Cather 358-9), he is tracing the worn marks of the past just as Cather is, registering the fading of the promise of the end of American history (a melancholic whimper articulated too in Mr. Shimerda's suicide, Wick Cutter's attempted rape, and Ántonia's fall from pre-sexual innocence).

- 14 Almost a century later, in *The Echo Maker*, we are not geographically far from Cather's Black Hawk and its surrounding farms, but the spatial logic of the American frontier has closed so forcefully here that we find the Nebraska plains as the mere backdrop for a drama of the mind. With the frontier so thoroughly commodified that one can take it all in at the Great Platte River Archway Monument off I-80—complete with a “simulated buffalo stampede” and a “life-size Pony Express station” (*The Echo Maker* 39) for the pleasure of tourists who descend upon the area to witness the sandhill cranes' annual migration—, the wide open spaces of American futurity and grand historical passage become bounded in the dense, complex nutshell of a damaged brain that, in Emily Dickinson's parlance, is indeed “wider than the sky” (J632). In Powers's novel, epistemological frontiers between subjects become frontiers *within* subjects, and the apocalyptic sublimity one finds throughout American literature is translated into a neurological sublime that de-centers and re-orient's one's view of the everyday, estranging it from us just as a misfiring neuron can estrange us from ourselves. But in order to get there, artful pioneer as I hope to be, I must first bridge these frontiers and contextualize the neurological sublime's development in twentieth-century literature. For even apocalyptically-minded writers had to learn to accommodate a growing (and popularizing) neuroscientific discourse that was upending centuries' worth of presuppositions about the mind and human life and challenging traditional and corresponding assumptions about the rightful domain of literary activity.

## Interlude : Literature's Brain Age

- 15 In “The Meaning of a Literary Idea,” an essay first read at Rochester in 1949, Lionel Trilling wrote, “A specter haunts our culture—it is that people will eventually be unable to say, ‘They fell in love and married,’ let alone understand the language of *Romeo and Juliet*, but will as a matter of course say ‘Their libidinal impulses being reciprocal, they activated their individual erotic drives and integrated them within the same frame of reference’” (285). By the time Powers wrote *The Echo Maker*, reality had outpaced Trilling's satire. Philosophers Paul and Patricia Churchland are not joking one bit when they happily predict a future devoid of folk psychological concepts, with our propositional thinking, speaking, and writing about the mind reduced to sentences like Trilling's, but backed by up-to-date neuroscience and without the superstitious attribution of impulses and drives to individual selves. Their influential (but by no means uncontroversial) position, “eliminative materialism,” holds that “our commonsense conception of psychological phenomena constitutes a radically false theory, a theory so fundamentally defective that both the principles and the ontology of that theory will eventually be displaced, rather than smoothly reduced, by completed neuroscience” (Churchland 67). In other words, eventually, whenever we write about people and their psychologies we will be doing nothing more than describing—in as economical a way as possible—the neurochemical activity underlying their feelings and behaviors.
- 16 We have arrived at the Churchlands and their intellectual milieu through literature as much as analytic philosophy and the underlying neuroscience (even if the last, by indeed “underlying,” makes up the discursive base of what Nikki Skillman calls the literary-cultural “age of the brain”). Although many writers resisted the impoverished language of eliminative accounts of the subject, several saw the necessity of integrating it into their world, for it was likely there to stay. In the mid twentieth century, epistemic



frontiers newly articulable by the propositions of brain science came to be associated with lyrical intimations of apocalypse—less and less of immortality, no doubt—in American poetry. Skillman argues that poets (like Robert Lowell, Robert Creeley, A.R. Ammons, James Merrill, John Ashbery, and Jorie Graham) “who came of age as artists in the 1950s or later and bore witness to the proliferation of empirical discourses that addressed themselves with increasing optimism to investigation of the ‘mind,’ [became] more vividly conscious of the biological systems that mediate inner life than the poets of any other era” (5). In her reading of Ashbery’s *Self-portrait in a Convex Mirror*, for instance, Skillman links traditional apocalyptic tropes—from “environmental chaos” to “voices [...] gone mute, relinquish[ed] to oblivion”—to the “epistemological troubles” of the “finite, reflective organ of the mind itself,” no longer the Romantic egotistical sublime in league with transcendental idealism but a “portrait of consciousness [where] there is no soul,” a biological substrate “subject to entropy and decay” (186 ; 191). Even the most speculative lyric poets could no longer ignore or completely oppose the scientific and philosophical consensus particular to the twentieth century’s “cognitive revolution,” a fully post-Cartesian presupposition that the mind is wholly physical and embodied, that its origin and limits can be found in non-intentional brain matter. Such empirical and metaphysical consensus on what had seemed, throughout the history of Western philosophy and literature, like one of our great intellectual mysteries, an intractable problem of mind and body, ruptures the long “continuum of transcendental representations of human mentality that extends from Romanticism through the twilight of high modernism” (Skillman 4). Both a discursive obstacle and an open field for poetic experimentation, the age of the brain marks an omnipresent struggle for the development of new themes and forms adequate to a corresponding (or supervening) inner life ultimately physiological rather than spiritual.

- 17 If the question of the subject’s possible reduction to brain chemistry challenges still fiercely held Romantic assumptions about the spiritual character of inner life, the writer’s task becomes reconfiguring literary form and text to reflect and comment upon “the natural mechanisms whence they issue” (Skillman 267). Skillman reads Lowell, for instance, as a poet of “lost connections,” a phrase from “Memories of West Street and Lepke” whose internal structure is modeled “on the damaged physiological circuitry that makes imperfect sense of the given” (58). Lowell’s *Notebook 1967-68* is structured by several “cognitive mutation[s]” in its stages of directionless revision, a series of minor neural apocalypses that irretrievably alter the paths of thought, that articulate thought’s movement as a series of physical thresholds or frontiers that thoroughly erase one’s “before” in the passage to “after.” Lowell—along with several others, particularly Merrill and Ashbery—thus produces through form an ethics for the brain age, a “philosophically exhausted, impassioned solidarity” with the mentally ill that puts “epistemological failure to emotional ends,” that registers pathos in the horrifying experiences—even more so when better understood—of aphasia, agnosia, and basic memory loss (Skillman 81 ; 82). “[T]he experiences of loss that riddle the phenomenology of thought,” as Merrill emphasizes in the aptly titled “Losing the Marbles,” are “symptomatic of concrete, physical conditions that are beyond the administration of human will” (Skillman 161).
- 18 So what Marco Roth described in 2009 as an emergence of “the last dozen years or so,” a “strain within the Anglo-American novel” he calls the “neuronovel” (“wherein the mind becomes the brain”), has a much longer back history (139). Outside of a specifically American context, Suzanne Nalbantian draws a line “from Rousseau to neuroscience” in



her study on memory in literature, arguing even more comprehensively (though far less deeply) than Skillman that “literary writers” at least from the Romantics onward—citing memory’s sensory pathways in French symbolist poetry, associative memory in stream of consciousness modernism, automatism in surrealist writing, and more—“provide beacons particularly into the dark corridors of unconscious memory yet to be explored” even by contemporary neurology (Nalbantian 152). Roth constructs his own literary category, specific to prose, within the same general neuroscientific age Skillman posits, but particularly after the “exhaustion of the ‘linguistic turn’ in the humanities, in the 1980s” and “with the discredit psychoanalysis suffered, around the same time,” coinciding with the boom in psychiatric drugs “that began to flow through the general population’s bloodstream” (Roth 140). Along with *The Echo Maker*, Roth cites Ian McEwan’s *Enduring Love* (1997), Jonathan Lethem’s *Motherless Brooklyn* (1999), Mark Haddon’s *Curious Incident of the Dog in the Night-Time* (2003) and a few other novels as premier examples of a literary turn from narrative logics of “irony or fate or comeuppance” to “simple contingency; the etiology of a neurological condition is biological, not moral,” and so now must be the author’s craft of characterization (149).

- 19 Yet to be rigorously theorized, however, is the relationship between literature in the “brain age” and those longstanding national and cultural allegories. Elisa New argues that American literary studies, with its “penchant for projections of national selfhood and precursor forms of self-as-nation (the Election Day sermon; the spiritual biography; the how-to; and finally, the romance) is especially liable to find its methods symbiotically bound up with the endemic self-enlargements of the literary objects it studies” (7). Thus it retains, even in spite of itself, the “mythic scale” associated with Manifest Destiny, the frontier, continental (cognitive) mapping, and Puritanical system. But as Skillman, Roth, and others have noted, destiny is no longer Manifest, and certainly no longer written with a capital D. That goes for personal history and narrative—which in the era of identitarian politics (in addition to neuroscience) are only growing in importance—as well as socio-cultural critique. As the working relationship between literature, literary studies, and cognitive science becomes more and more urgent,<sup>3</sup> revisions in our outstanding literary histories will become more and more necessary. Though I can foreground only one example here, in the context of American literary myth and frontier eschatology, I have no doubt a master study awaits in our near future.

## Neural Apocalypse in the Heartland

- 20 In an essay on *The Echo Maker* and “eco-sickness,” Heather Houser makes the case that Powers’s novel is one example of several contemporary “experiments with affect” that work to conceptualize “the troubled interdependence of the individual body and large-scale environmental change” (382). While the novel undoubtedly deals with environmental crisis and the complicated entanglements between our everyday *habitus* and deep ecological flows like species migration and extinction—and Houser takes great pains to show how the novel’s “neurological plot and its theories of the interdependence of systems forges the link between ecological relations and brain function” (390)—there is another sense in which the logic of the text *struggles* to connect the scale of natural history to the human mind. This difference is most obviously apparent in the distinction between the prosaic expository sections of the novel, constituting the vast majority of the text and including the basic plot events concerning characters Mark and Karin Schluter,

popular neurologist Gerald Weber, and everyone else in their lives, and the short, lyrical, aphoristic sections of “unfocalized narration” (Houser 388) centered on the sandhill cranes that flit in and out of the story’s background. Houser calls this oscillating form the “generator of a series of dialectics—between familiarity and strangeness, connection and disconnection, freedom and restriction—that aim to defamiliarize the everyday and activate perception” (383). This dialectic also inverts the textual scale nature writing often associates with each respective phenomenon: while the *longue durée* of environmental change is collapsed into short, poetic vignettes, the relatively infinitesimal span of an individual human consciousness (itself already splintered and fragmented, its unity repeatedly called into question by the narrative) is drawn out in long, precise passages of narratorial reflection and analysis.

- 21 Much like in Mark Schluter’s brain, the novel’s two main registers—the trans-individual ecosystem made up primarily of pre-phenomenological affective relationships and the hyper-individual phenomenon of self-reflexive ego-attachments—split and intertwine in alternating fashion. While Karin Schluter eventually throws herself into work with the Buffalo County Crane Refuge, an outfit fighting on behalf of local ecosystemic health against corporate developers, she appears to do so for deep personal reasons: the Refuge becomes her own psychological refuge from her struggle for recognition by her damaged brother, and she puts herself back in a position between her two lovers (returning, in a sense, to the same embattled position she had experienced years before). The novel’s conservationist figure, Daniel Siegel, believes with the strength of ideological certitude that he must save nature from man even as he (like everyone else around him) struggles to comprehend what “man” truly is. The inexorable joining that these narrative registers—of interior mental and exterior natural transformation—by the end of the novel leads to the reader’s recognition that there is no apocalypse in nature, only in the finite and affective mind, even as the former indeed mutates due to human involvement and destruction:

Something in [the crane’s] brain learns this river, a word sixty million years older than speech, older even than this flat water. This word will carry when the river is gone. When the surface of the earth is parched and spoiled, when life is pressed down to near-nothing, this word will start its slow return. Extinction is short; migration is long. Nature and its maps will use the worst that man can throw at it (*The Echo Maker* 443).

- 22 All the neuroscience presented in the novel suggests that we are like the cranes, but that we conceal from ourselves this fact through dreams of unity and self-consistency. The creatures enmeshed in their environments “heard *humans* and knew them as just part of the wider network of sounds” (325), while humans themselves project their own fears of loss and death onto a nature they foolishly separate themselves from. What the case of Mark Schluter seems to tell everyone who witnesses its mysteries is that the brain is the center of a dense, complicated ecology of the subject—immensely fragile but armed with defenses that serve to conceal that fragility from ourselves—whose disturbances and traumas reveal the lie of any default epistemological map of the world, any static diagram of the relation between self and other. These “disturbances” are literally self-shattering, minor apocalypses, but we find by witnessing them that underneath the personality we thought was somehow “ours” are natural processes, nodes in ecological systems that underlie both our sense of the normal *and* our sense of the unusual, of equilibrium and disequilibrium, of life and death.

- 23 Through extensive free indirect neuropsychological musings under the guise of Weber's reflections upon his research and Mark's case, Powers presents an extended case for distributive consciousness shot through with disturbing consequences for the illusive self-identical ego. The most banal of daily activities, like the feeling of hot water running down Weber's body in the shower, provoke near-Cartesian doubt about the simple ownership of sensation: "The cortex's body maps were fluid at best, and easily dismantled [...] The smallest warping could distort the map [...] Even the intact body was itself a phantom, rigged up by neurons as a ready scaffold. The body was the only home we had, and even it was more a postcard than a place" (258-60). Examples of patients with phantom limbs provoke anxiety about the self's "border wars," wherein "the brain maps of the amputated part" are "invaded by nearby maps" (260). Feinberg's concept of "personal confabulation" becomes a sort of master key underlying what is essentially the reader's own case study (Mark's Capgras), a *narrative* structure shared by both the novel and every human mind, a "story to lift the shifting self back to the senseless facts," where the fracturing of any particular phenomenological map of one's own body leads to a redistribution of one's "own indisputable parts in order to make a stubborn sense of wholeness true again" (164). Much like the novel itself, with its central plot fractured by lyrical passages of endless dispersal and re-combination in nature, in every psyche "a single, solid fiction always beat the truth of our scattering" (164).
- 24 One characteristic of the mind's neural apocalypse that distinguishes it structurally from the major eschatologies of traditional epic is the impossibility of narrating its passage from the inside. Instead of a community of prophets, scholars, and poets who can speak for the larger society they belong to, the damaged brain destroys the individual's "inner, generalizing map" and splits the new world of the self from the old, in essence vacating the only person who could adequately compare *this* phenomenological experience to *that* one (*The Echo Maker* 205). Though Mark's Capgras is the central—though hardly the only—crisis of the novel, his accident and resulting trauma the big event that brings the novel's characters together in the theater of small town Nebraska, the primary readers of this apocalyptic text are Karin and Weber (and, perhaps, the curious nurse's aid Barbara Gillespie). Hence the mind-bending difficulty Karin herself has with understanding her brother's misrecognition of her personhood: "Mark saw differences that were not there... [for Mark] every change in expression could split into a new and separate person" (150). Karin does not *feel* herself to be a different person now than she was one year ago. But witnessing this splintering world in another—rather than experiencing it oneself, which is conceptually impossible—estranges one's own inner life in the end anyway. Karin eventually gives up—or at least loses her dogged grip on—the identity she had sustained over time (the very thing she measures Mark's condition against). "Whoever that was," she finally thinks, in the past tense (208).
- 25 The point is that Mark's condition, while rare and unusual in its specifics (for most of us go our entire lives, at least until the very end, sure in our convictions that our loved ones are at bottom the same people they have always been), reveals a truth about the way we "normally" process the sense data offered by the world as we engage our surroundings in ordinary time and space. David Milner and Melvyn Goodale's influential "two-stream hypothesis," which remains widely accepted due to compelling empirical data<sup>4</sup>, distinguishes the neurological pathway or visual processing stream of sensorimotor activity from that of conscious perceptual experience. On this view, separate ventral and dorsal streams (also called the "what" and "where" pathways) contribute different

elements to a subject's visual experience : as Andy Clark glosses succinctly, "the dorsal stream, projecting to the posterior parietal cortex, is said to support the kinds of visuo-motor transformation in which visual input leads to fluent actions such as reaching and grasping, while the ventral stream, projecting to the temporal lobe, seems to be especially implicated in the recognition and identification of objects and events" (1460). According to Goodale and Milner, "[b]oth systems have to work together in the production of purposive behavior—one system to select the goal object from the visual array, the other to carry out the required metrical computations for the goal-directed action" (100). Impairment to one of the two streams thus produces inconceivable perceptual responses (from the perspective of the unimpaired), including as one possible example Mark Schluter's peculiar sort of visual agnosia, not quite face-blindness but the seeing of "differences that were not there" (*The Echo Maker* 150).

- 26 One's ability to move seamlessly through the world, to unconsciously match faces to personalities and to comport one's body appropriately in order to complete common tasks, is constitutively fragile because perception and sensorimotor attunement—and thus basic object-experience and basic subject-embodiment—are in principle detachable. This is but one example (albeit a very important one) of the way our neuro-anatomy is the domain of minor apocalypse : great, fundamental changes in our lifeworlds depend upon some of the smallest factors we can imagine. In fact, apocalypse happens not just *out there* but *in here*, in the crossing or re-direction of neural pathways rather than well-defined borders or frontiers, and in the temporality of brain activity rather than world history or spirit. The sort of writing Powers performs to uncover this diminished eschatology of the self—and the "pathway" this writing takes—mimics the characteristic of the case study, which Weber demonstrates so often throughout the novel : first, contextualize the individual's life ; then bore into and *reproduce* his interior life through narrative. "Consciousness works by telling a story, one that is whole, continuous and stable," Weber reads for his television audience. "When that story breaks, consciousness rewrites it. Each revised draft claims to be the original. And so, when disease or accident interrupts us, we're often the last to know" (*The Echo Maker* 185). In the post-Freudian world of Dr. Weber, someone else needs to write our psyche's story, but each translation gets us further and further from the phenomenological source of that story : from Mark to Karin to Weber to Powers to the reader (with a number of intermediate filters besides), each link in the chain of transmission contains its own micro-narrative of self that, distributed as it is among various persons and objects, bleeds into the next and changes it.
- 27 "What did it feel like to be Mark Schluter ?" we all ask along with Weber, to "see the person closest to you in this world, and feel nothing" (*The Echo Maker* 301). A non-starter of a question, of course, because "nothing *inside* Mark felt changed. Improvising consciousness saw to that. *Mark* still felt familiar ; only the world had gone strange" (301). "Inside" the self is experienced continuity, "outside" the self is strangeness and conspiracy, but the real trick of consciousness is that the latter is really a result of the illusion of the former. The self is a palimpsest that erases the traces of its former iterations : Mark's accident "broke up his story, he tried to rewrite it and considers the rewritten version as the original one. The 'original' original therefore is lost" (Herman and Vervaeck 408). Luc Herman and Bart Vervaeck argue that *this* process is the whole story of *The Echo Maker*, but not just in the mind of Mark Schluter : "the case of Mark restructures and rebuilds the whole world around him. His Capgras infects his whole

world and turns his sister, his friends, his aide and his doctor into some sort of fellow-sufferers. *The Echo Maker* is not just about Capgras, it is about 'mimetic Capgras'" (410). Each mimetic act, each narrative mirror involves a micro-delusion, a sense of unwarranted assurance in one's own mirroring capabilities—a central task in psychological diagnosis and psychoanalytic cure—and the stability of one's subject-position as the author of the story at hand.

- 28 Parallel to Karin's belated revelation of her own fractured self ("She is nothing, as toxic as anything with an ego. A sham ; a pretense. Nothing worth recognizing" [*The Echo Maker* 408]), is a retrospective revelation about her brother's transformation : initially searching for an explanatory foundation for his supposed decline in an eschatological narrative of the heartland, she finally locates it in an anti-foundational insight about the ordinary human brain. In the novel's first act Karin "cut through downtown Kearney, a business district hosed for as far into the future as anyone could see. Falling commodity prices, rising unemployment, aging population, youth flight, family farms selling out to agribusiness for dirt and change : geography had decided Mark's fate long before his birth" (28). That is, she thinks, Mark's Capgras is ultimately secondary in importance to the long, historical decline that has turned their hometown into the dustbin of late capital and the Midwest from the once promising herald of American greatness to a signal of the end times. But not until she sees for herself the political deadlock between business developers and conservationists—led on each side by her lovers Robert Karsh and Daniel Siegel, each a stand-in for split aspects of her desiring self—does she take "the combat inside herself, all possible positions banging around the loose democracy in her skull" :

How many parts had Weber's books described ? A riot of free agents ; five dozen specialties in the prefrontal bit itself [...] Too many parts for her brain to remember. Even a part named the *unnamed substance*. And they all had a mind of their own, each haggling to be heard above the others. Of course she was a frenzied mess ; everyone was [...] [T]he whole race suffered from Capgras. (*The Echo Maker* 347 ; italics in the original)

- 29 This feeling comes to be shared by Karin, Weber, and the reader, as Herman and Vervaeck conclude : "*The Echo Maker* suggests that any search for meaningful integration and coherence does not drastically differ from paranoia, Capgras and similar forms of misreading that are considered deviant. The reader of the novel cannot escape this predicament" (428), one that also applies to the reader of grand eschatological narratives *tout court*.

## Conclusion

- 30 That Powers is indeed breaking the coherence of the grand meta-narrative in favor of a diminutive apocalypse, however, is not an obvious position to hold. In her widely read review of the novel in *The New York Review of Books*, Margaret Atwood suggests exactly the opposite :

*The Echo Maker* is a grand novel—grand in its reach, grand in its themes, grand in its patterning. That it might sometimes stray over the line into the grandiose is perhaps unavoidable : Powers is not a painter of miniatures. Of the two extremes of American mannerist style, the minimalist or Shaker chair (Dickinson, Hemingway, Carver) and the maximalist or Gilded Age (Whitman, James, Jonathan Safran Foer), Powers inclines toward the latter. He gets his effects by repetition, by a Goldberg Variation-like elaboration of motifs, by cranking up the volume and pulling out all the stops. (Atwood 60)

- 31 Perhaps even a minor eschatology can never be a true miniature, since by definition it involves passage, transformation, and narrative. But Bach's *Goldberg Variations* are not sonatas, and Powers's metaphysical repetitions appear as lyrical notes that conceal an expansiveness only *felt* through a new in-fold in the brain. If the inaccessible Keatsian birdsong of the sandhill cranes is our song too, it is only heard in snatches like "the kinds of sounds [Mark] made, crawling out of his coma [...] This was the song [Karin] would have to learn, if she wanted to know Mark again" (56). The self is indeed everywhere and thus quite large, "wider than the sky" in that maximalist Dickinsonian sense of widening Circumference, "spread thin on everything it looked at, changed by every ray of the changing light" (*The Echo Maker* 384). Nevertheless, we come to understand our scattering and the scatterings of nature—grand themes, no doubt—only through the case study, through the one nagging hitch in a Capgras patient's recovery, through speculations on a single misfiring synapse, through the irreparable domestic life of a family of two in a declining Midwestern suburb.
- 32 *Pace Atwood*, the reference to Dickinson in Weber's book title (*Wider Than the Sky*<sup>5</sup>) might suggest that, as we find so often in the Amherst poet's peculiar short lyrics, all correspondence between self and world for Powers is at least filtered through consciousness, and that if the brain is wider than the sky, the sky must fit inside of the brain. But this is a problem, not a source of easy self-affirmative solace, in part because we normally look to places like Nebraska (in American literature, at least) for its big sky and the optative promise seemingly held in its deep receding horizon. The juxtaposition is the thing: the final transmutation of frontier landscape into a network of sensorimotor maps and of the romance into the "neuronovel" is nowhere more striking than in *The Echo Maker*. The challenge for a neuronovelist like Powers (at least in this case) is no less daunting than that which meets the epic apocalyptic novelist—to construct an intelligible narrative within the operating space of "the novel's diminishing purview" (Roth 151). But as when enlarging one's field of vision through a microscope, limit produces great wealth, and like applying a microscope to—or, more appropriately, producing an electroencephalogram of—characters otherwise ripe for a domestic melodrama or illicit romance story, Powers shows us how a ubiquity of strange frontiers appear everywhere we over-read and over-look.

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## NOTES

1. R.W.B. Lewis identifies ten "moments" or phases of apocalypse in the Biblical tradition : "(1) periodic natural disturbances, earthquakes and the like ; (2) the advent and the turbulent reign of the Antichrist or the false Christ or false prophet (sometimes called the period of the Great Tribulation) ; (3) the second coming of Christ and (4) the resultant cosmic warfare (Armageddon) that brings in (5) the millennium—that is, from the Latin, the period of one thousand years, the epoch of the Messianic Kingdom upon earth ; thereafter, (6) the gradual degeneration of human and physical nature, the last and worst apostasy (or falling away from God), featured by (7) the second and briefer 'loosening of Satan' ; (8) an ultimate catastrophe, the end of the world by fire ; (9) the Last Judgment ; and (10) the appearance of the new heaven and earth" (196-7).
2. In addition to those considered below—Jehlen's continental geography, Miller's and Bercovitch's rhetorical progresses of Puritanism, Smith's Manifest Destiny narratives—one might add Richard Slotkin's analysis of frontier violence, Lauren Berlant's "anatomy of national fantasy," and Robert Weisbuch's transatlantic influence model (to name only a few).
3. There are many recent examples beyond the few secondary texts I have highlighted. 2013 was a watershed year for reflections on literature and narrative in the age of neuroscience, including but hardly limited to several book length studies : H. Porter Abbott's *Real Mysteries*, Paul B. Armstrong's *How Literature Plays with the Brain*, Christopher Collins's *Paleopoetics*, David Herman's

*Storytelling and the Sciences of Mind*, Patrick Colm Hogan's *Ulysses and the Poetics of Cognition*, Sue Kim's *On Anger*, Barbara Simerka's *Knowing Subjects*, and G. Gabrielle Starr's *Feeling Beauty*.

4. Several demonstrations with both impaired and unimpaired subjects have been made in support of the "two-stream hypothesis." An example of the latter includes Aglioti, Goodale, and DeSouza's 1995 experiment involving "a graspable version of the famous Ebbinghaus or 'Titchener Circles' visual illusion in which two central circles are presented, each surrounded by a ring of other circles. In one case, the surrounding circles are larger than the central one. In the other, they are smaller" (Clark 1461). As an optical illusion, subjects routinely misjudge the relative size of the two central circles. However, with a "graspable" version of this set-up, subjects succeeded at forming grips that "perfectly anticipate the true size of the centre discs" (1461). Goodale and Milner later explained that "the conscious scene is computed by the ventral stream in ways that are at liberty to make a variety of assumptions on the basis of visual cues, e.g. attempting to preserve size constancy by treating the smaller circles as probably further away than the larger ones. The dorsal stream, by contrast, uses only the kinds of information that are metrically reliable and that thus present specific opportunities for elegant, fast, metrically accurate diagnosis" (Clark 1461).

5. This is also the title of neuroscientist Gerald Edelman's 2004 book on consciousness (*Wider Than the Sky: The Phenomenal Gift of Consciousness*), which was likely Powers' immediate inspiration.

## ABSTRACTS

Frontiers are ubiquitous in Richard Powers's *The Echo Maker* (2006). This essay first considers the recurring epistemological frontiers in American literature and culture, including within the scholarly American Studies tradition that located ever-present links between Puritan millennialism, American Romanticism, and the settlement of the American continent. Powers's novel can be read as one example of an equally rich (though often neglected) counter-tradition that attends to negative spaces of that "unfamiliar here and now" instead of sublime landscapes and the untamed wilderness. Though this counter-tradition is hardly apolitical, it refocuses its politics on the everyday instead of the American millennium, and on the proximate instead of the distant, substituting the imperial appetites of the all-consuming settler subject for the embodied, proprioceptive confusions of the domestic subject. I argue that Powers re-conceives the major American literary-cultural eschatologies that assume a spatial and temporal frontier separating the known from the unfamiliar. Here, unknown space is re-encountered as ubiquitous and diffusive, so that one can cross such a frontier into strange, unfamiliar space and time virtually anywhere. In the novel, the passage into an unfamiliar here and now, where governing epistemic paradigms break down, can occur in the middle of "nowhere," or even in the supposedly happy confines of the middle-class home.

Cet essai aborde *The Echo Maker* de Richard Powers par le biais de la problématique récurrente des frontières épistémologiques dans la littérature et la culture américaines, notamment à travers la tradition universitaire des *American Studies* qui ont mis au jour les liens permanents reliant le millénialisme puritain, le romantisme américain et la conquête de l'Ouest. Il suggère que le roman de Powers propose un exemple de la contre-tradition, tout aussi riche mais pourtant souvent peu étudiée, qui s'intéresse aux espaces négatifs de ce que l'on pourrait appeler

« l'étrangeté de l'ici et maintenant » plutôt qu'aux paysages sublimes et à la nature sauvage et indomptée. Cette contre-tradition est loin d'être apolitique, mais elle recentre son attention sur le quotidien – en laissant de côté l'exceptionnalisme américain –, sur ce qui est proche et non lointain, remplaçant ainsi l'appétit impérialiste et dévorant des premiers colons par la confusion cognitive, proprioceptive du sujet empêtré dans la domesticité. Powers, ainsi que le montre cet article, envisage d'une nouvelle manière les principaux mouvements eschatologiques américains, littéraires et culturels, et leur postulat de l'existence d'une frontière spatiale et temporelle entre ce qui est familier et ce qui ne l'est pas. Dans ce roman, l'inconnu devient à nouveau omniprésent de telle façon que les personnages peuvent pénétrer virtuellement n'importe où dans un temps et un espace qui ne leur sont plus familiers. Ce passage dans cet « ici et maintenant » où les repères habituels s'effondrent peut donc se produire au milieu de « nulle part », et même au sein du foyer supposément harmonieux de la classe moyenne américaine.

## INDEX

**Mots-clés:** apocalypse, littérature de la frontière, Richard Powers, épistémologie, l'esprit

**Keywords:** apocalypse, frontier literature, Richard Powers, epistemology, mind

## AUTHOR

ZACHARY TAVLIN

University of Washington